

ORDINANCE NO. 942

AN ORDINANCE REPEALING CHAPTER 9 OF TITLE IV OF THE MUNICIPAL CODE OF THE CITY OF LAS VEGAS, NEVADA, 1960, ENTITLED "REMOVAL OF DANGEROUS BUILDINGS"; PROVIDING FOR A NEW CHAPTER 9 OF TITLE IV OF THE MUNICIPAL CODE OF THE CITY OF LAS VEGAS, NEVADA, 1960, TO BE ENTITLED "FALLOUT SHELTERS"; PROVIDING FOR THE CONSTRUCTION, DEGREE OF PROTECTION, AND CLASSIFICATION OF SUCH SHELTERS; PROVIDING FOR THE ISSUANCE OF PERMITS THEREFOR AND INSPECTIONS THEREOF; PROVIDING OTHER MATTERS PROPERLY RELATED THERETO; PROVIDING PENALTIES FOR THE VIOLATION THEREOF; AND REPEALING ALL ORDINANCES IN CONFLICT HERewith.

The Board of Commissioners of the City of Las Vegas do ordain as follows:

SECTION 1. Chapter 9 of Title IV of the Municipal Code of the City of Las Vegas, Nevada, 1960, entitled "REMOVAL OF DANGEROUS BUILDINGS" is hereby repealed.

SECTION 2. There is hereby created a new chapter to be entitled Chapter 9 of Title IV of the Municipal Code of the City of Las Vegas, Nevada, 1960, entitled "FALLOUT SHELTERS" to read as follows:

SECTION 3. DEFINITIONS: For the purpose of this ordinance the following words or phrases shall be construed to mean as follows:

RADIOACTIVE FALLOUT or FALLOUT is particles of earth and debris drawn up into the fireball and resulting mushroom-shaped cloud of a nuclear explosion which becomes radioactively contaminated and later falls back to earth.

RADIOACTIVITY is the emission of radiant energy, alpha, beta, and gamma rays by the disintegration of the nuclei of atoms.

SHELTER OR FALLOUT SHELTER: Herein to mean a room, shed, house, accessory building or other covering device to protect occupants from fallout with a minimum protection factor of 100.

OCD: The Office of Civil Defense herein referred to as the local office, state office or national office.

ROENTGEN: The unit of measure of radiation.

BARRIER: An object placed between the fallout and any individual.

PROTECTION FACTOR: The relative reduction in the amount of radiation that would be received by an individual in a protected location, compared to the amount he would receive if he were unprotected.

REDUCTION FACTOR: The reciprocal of the protection factor.

SHELTER CATEGORIES: The letter designation of shelters with a certain protection factor as listed below:

A - 1,000 or greater

B - 250 to 1,000

C - 100 to 250

HIGH-RISE BUILDINGS: Buildings of ten stories or more

MULTISTORY BUILDINGS: Buildings with 3 to 10 stories.

LOW BUILDING: Building with less than 3 stories

CITY
CLERK'S
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SHIELDING: The mass of a barrier expressed in pounds per cubic foot, or it may be expressed as "mass thickness" which would be shown as pounds per square foot.

PUBLIC SHELTER: A shelter available to the general public.

PRIVATE SHELTER: A shelter built for the use of an individual and his family.

CODES: Other Codes referred to herein will be the local Codes of the City of Las Vegas governing buildings, electrical, plumbing, heating, air conditioning, etc.

SECTION 3. BUILDING PERMIT REQUIRED

a. It shall be unlawful for any person, firm, association or corporation to construct, alter, remove or demolish or to commence the construction, alteration, removal or demolition of a fallout shelter without first obtaining a building permit from the Building Official.

b. An application for such permit shall be submitted in such form as the Building Official may prescribe. Such application shall be made by a contractor holding a valid State and City license or the owner who will do his own construction after obtaining the required owner/builder permit. Such application shall contain the full names and addresses of the applicant and/or the owner, and if the owner is a corporate body, of its responsible officers. Such application shall describe the proposed work and shall give such additional information as may be required by the Building Official for a proper understanding of the proposed work.

c. Applications for permits for fallout shelters shall be accompanied by one copy each of calculations and specifications and two copies of the plans which shall be sufficient in detail to show the following:

1. Plot Plan: Showing all buildings on the property and location of the shelter from these buildings and the property lines.
2. Shelter dimensions, footings, walls, roof, floor and the types of material to be used.
3. Waste disposal system.
4. Ventilating system.
5. Water system.
6. Power system.

d. If, after examination, the Building Official finds the application to be in compliance with the law and ordinances applicable and the proposed construction or work will be safe and adequate, he shall approve such application and issue permit for the proposed work as soon as is practicable. If his examination reveals otherwise, he shall reject such application noting his findings in a report to be attached to the application.

e. The Building Official may revoke a permit issued under the provisions of this ordinance in the event he finds that there has been any false statement or misrepresentation as to a material fact in the application or plans on which the permit was based.

f. All work performed under a permit issued by the Building Official under this ordinance shall conform to the approved application and plans. It shall be unlawful to reduce or increase the area or construction provided in an application hereunder.

g. Any plans not showing all the requirements of the granting of

a permit upon plans submitted shall not be construed as constituting a waiver of any provision of this ordinance or of sanctioning of any violation thereof.

SECTION 4. FALLOUT SHELTERS IN VIOLATION HEREOF PROHIBITED

Whenever the Building Official finds that construction or work in connection therewith, the erection or construction or alteration, execution or repair of which is regulated, permitted or forbidden by this ordinance, is being erected, constructed, altered or repaired in violation of the requirements of this ordinance, or in violation of a detailed statement or plans submitted and approved hereunder, or of a permit issued hereunder, he may serve a written notice upon the responsible person directing discontinuance of such illegal action and the correction of the condition which constitutes a violation of the provisions of this ordinance. In the event that within the specified time to comply, the notice has not been complied with, the Building Official shall institute an appropriate action or proceeding at law to restrain, correct, or remove such violation or the execution of work thereon.

SECTION 5. GENERAL CONSTRUCTION REQUIREMENTS:

a. Building Code Group and Type:

Fallout shelters, under the Building Code, shall be considered as a Group "J" occupancy when they are under 1000 square feet in area. If the shelter is over 1000 square feet, it shall be considered a Group "I" occupancy. The type of construction shall conform to the requirements of the particular fire zone in which it is located. All other requirements of the building code shall be met except for doors and windows which shall be as listed in this code.

b. Electrical Wiring:

The electrical wiring shall conform to the electrical provisions set forth in the electrical code.

c. Plumbing:

All piping and appurtenances, including emergency potable water and emergency waste systems shall conform to the provisions set forth in the plumbing code, except chemical toilets may be used in any type shelter.

d. Ventilation:

The ventilation equipment, duct work and allied piping shall conform to the provisions set forth in the Heating, Ventilating, Air Conditioning and Refrigeration Code, except the ventilation requirements shall be as listed in this code.

e. Locations:

All shelters built above ground shall conform to the provisions of all Zoning Ordinances pertaining to main buildings or accessory buildings whichever shall apply. All shelters built below ground, other than those in an existing basement, shall be no closer to a building line or a property line than the depth of the shelter's footing below grade except the shelter may be moved closer to a building line, or property line, if satisfactory evidence is submitted to show that no damage to the building or adjacent buildings will occur, or any other hazardous or unsafe condition will be created.

f. General Design:

All structural parts of the shelter, including footings, walls, floors, columns, beams, and roof shall be designed in accordance with the building code using the required dead load and

and live load as to the building type or its use. The various detail drawings as issued by the local OCD showing installation details of particular fallout shelters shall be considered as meeting the intent of this code.

g. Area Requirements:

In private family shelters the gross floor area of the shelter shall be figured at a minimum of fifteen (15) square feet per person. In public shelters, or those for short term occupancy, the gross floor area shall be figured at a minimum of twelve (12) square feet per person.

h. Ventilation Requirements:

To maintain an acceptable concentration of carbon dioxide and oxygen in any shelter, a minimum amount of three (3) cubic feet of air per minute per person should be introduced into the shelter based on the area requirements. If this is not practicable one of the following shall be used:

- (1) If no mechanical ventilation is available, a net volume of 500 cubic feet per person shall be used for estimating the capacity of any shelter.
- (2) If the mechanical ventilation does not supply the three cubic feet per minute the following table shall be used to determine the capacity of the shelter by a volume space basis.

Air Supply	Volume per person
2.95 cfm	65 cu. ft.
2.86 "	100 " "
2.5 "	150 " "
2.0 "	200 " "
1.5 "	300 " "
1.0 "	400 " "
0.75 "	450 " "
0.5 "	500 " "

All others use 500 cubic feet as in (1) above.

i. Stairways and Steps:

1. Public Shelters:

The minimum width of stairways shall be as in the table below:

Occupant Load of Shelter	Width of Stairway
10 or less	30"
10 to 50	36"
More than 50	44"

The handrails may extend into the width listed. The rise of every step shall not exceed 8" and the tread shall not be less than ten (10) inches. There shall be no

more than twelve (12) feet vertically between landings. Headroom on the stairway should be not less than six feet six inches measured vertically from the nose of a step. Ramps may be used in lieu of a stairway when practical.

2. PRIVATE SHELTERS:

The stairways or steps used in private shelters shall be practically for the site and situation of the shelter with respect to other buildings. A ship's ladder or other type devise may be used to gain entry into the shelter, provided it does not create a hazard and can be used quickly and effectively.

j. Doors and Windows:

Doors within the shelter should be airtight and weatherproof. Outside doors leading to or from the shelter should be of an exterior type. Doors from public shelters leading to the inside of a building shall be at least a one-hour fire resistive door.

Windows shall not be allowed in the shelter area.

k. Entrances and Exits:

Entrances to public shelters shall be marked in such a manner that it can be easily discernable; such as by the use of a two-colored sign with an arrow showing the direction to the entrance and the letters to be three inches high. The exit from this shelter should be marked in a like manner.

The entryway to all shelters should be at right angles to the stairway and a baffle wall should be used to shield this entryway. The baffle wall shielding should be at least one-half the mass thickness of the exterior walls of the shelter.

l. Materials of Construction:

The materials used in the shelter may be of any type desired; however, these materials must meet the strength and protective requirements of the building code.

m. Water Proofing:

All shelters built in existing basements and those built underground shall be adequately protected against water seepage. This protection shall be by waterstops, exterior coatings or their equivalent and shall be used whenever groundwater or runoff water is known or found to be in the shelter site.

n. Barrier Shielding:

The mass thickness or weight of the material to be used in the shelter shall determine the protection factor of the shelter. This information may be obtained from the local OCD or the table that follows may be used as a guide. The protection factor of any fallout shelter shall be applied as its use requires. The mass thickness of various materials are to be as determined by the local OCD.

SHELTER Category	MASS THICKNESS (POUNDS PER SQUARE FOOT OF AREA)					
	Above ground line* (Inside or outside of buildings)		Below ground line (Inside Buildings) (Basements, etc.)		Below ground line (Outside buildings) (Underground shelters)	
	Roof	Walls	Roof	Walls	Roof	Walls
C from	130	210	120	120	130	120
to	180	255	165	165	180	165
B from	180	255	165	165	180	165
to	240	320	225	225	240	225
A from	240	320	225	225	240	225

*If the floor of the shelter is above the first floor of a building, the floor must have a mass thickness equal to the roof.

SECTION 6. PERMIT FEES

The fees charged for the issuance of a permit to construct a shelter in the City of Las Vegas shall be as stated in those codes governing the applicable portions of construction. The valuation of the shelter shall be as determined by the Building Official.

SECTION 7. INSPECTION

All portions of the construction of the shelter shall be inspected by the Building Official or his representative to insure compliance with the required codes of the City of Las Vegas. A final inspection to allow occupancy cannot be made until the shelter is complete and all operating parts are functioning correctly.

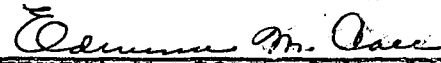
SECTION 8. PENALTY FOR VIOLATION

Any person, firm, association, or corporation, who shall violate the terms and provisions of this ordinance shall be guilty of a misdemeanor and upon conviction therefor shall be punished by a fine of not more than \$500.00, or by confinement in the City Jail for not more than six months or by a combination of both.

SECTION 9. All ordinances, parts of ordinances, chapters, sections, subsections, paragraphs, sentences, clauses or phrases contained in the Municipal Code of the City of Las Vegas, Nevada, 1960, in conflict herewith are hereby repealed.


ORAN K. GRAGSON, MAYOR

ATTEST:


EDWINA M. COLE, CITY CLERK

The above and foregoing ordinance was first proposed and read by title to the Board of Commissioners on the 6th day of December, 1961, and referred to the following committee composed of Commissioners _____ and _____ for recommendation; thereafter the said committee reported favorably on said ordinance on the _____ day of _____, 196____, which was a regular meeting of said Board; that at said regular meeting the proposed ordinance was read by title to the Board of Commissioners and adopted by the following vote:

VOTING "AYE": Commissioners

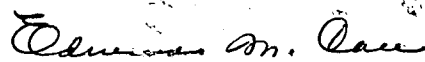
VOTING "NAY":

ABSENT:

APPROVED:


ORAN K. GRAGSON, MAYOR

ATTEST:


EDWINA M. COLE, CITY CLERK

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