FOR REFERENCE ONLY. NOT YET ADOPTED BY WASHOE COUNTY.

2024 NORTHERN NEVADA CODE AMENDMENTS

2024 International Building Code
2024 International Existing Building Code
2024 International Energy Conservation Code
2024 International Residential Code
2023 National Electrical Code
2024 International Fuel Gas Code
2024 International Mechanical Code
2024 Uniform Mechanical Code
2024 Uniform Plumbing Code

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Nevada Builders Alliance	New Fields
PK Electrical	Plumbing Heating Cooling Contractors of Nevada
Raglen System Balance, Inc	RHP Mechanical Systems
Savage & Sons Inc	Southwest Gas Corporation
Summit Engineering Corporation	The Happy Outlet, LLC

Preface

This document contains amendments to the following codes published by the International Code Council, Inc., the National Fire Protection Association, and the International Association of Plumbing and Mechanical Officials. These amendments were made by the participating jurisdictions and industry members listed above, with support from the Northern Nevada Chapter of the International Code Council. The amendments apply to the following codes:

2024 International Building Code

2024 International Existing Building Code

2024 International Energy Conservation Code

2024 International Residential Code

2023 National Electrical Code

2024 International Fuel Gas Code

2024 International Mechanical Code

2024 Uniform Mechanical Code

2024 Uniform Plumbing Code

This document is hereafter referred to as the 2024 Northern Nevada Code Amendment and is prepared for adoption by reference by the local Authority Having Jurisdiction. These provisions shall not be considered enacted as part of the code unless they are formally adopted and codified by the local Authority Having Jurisdiction.

Notes: Deleted language in the base code has been ~~stricken through.~~

Added language to the code section has been <u>underlined.</u>

The entire section amended has been shown for context.

Table of Contents

International Building Code (IBC)

Section 202 Definitions

*Amend Section **202** to read as follows:*

High-rise building. A *building* with an occupied floor or occupied roof located more than ~~75~~ 55 feet (~~22 860~~ 16,764 mm) above the lowest level of fire department vehicle access.

International Electrical Code. The Electrical Code, whether the National Electrical Code or the International Electrical Code, as amended and adopted by the local jurisdiction.

International Mechanical Code. The Mechanical Code, whether the Uniform Mechanical Code or the International Mechanical Code as amended and adopted by the local jurisdiction.

International Plumbing Code. The Plumbing Code, whether the Uniform Plumbing Code or the International Plumbing Code, as amended and adopted by the local jurisdiction.

International Fuel Gas Code. The Fuel Gas Code, whether NFPA 54 or the International Fuel Gas Code, as amended and adopted by the local jurisdiction.

Surcharge. A vertical load imposed on the retained soil that may impose a lateral force in addition to the lateral earth pressure of the retained soil. Examples include:

- Sloped retained soil.
- Structure footings supported by the retained soil.
- Adjacent vehicle loads supported by the retained soil.

Section 305.2 Group E, day care facilities

*Amend Section **305.2** to read as follows:*

305.2 Group E, day care facilities. This group includes *buildings* and *structures*, or portions thereof occupied by more than ~~five~~ six children older than 2½ years of age who receive educational, supervision or *personal care services* for fewer than 24 hours per day.

305.2.1 Within Places of religious worship. Rooms and spaces within *places of religious worship* providing such day care during religious functions shall be classified as part of the primary occupancy.

305.2.2 ~~Five~~ Six or fewer children. A *facility* having ~~five~~ six or fewer children receiving such day care shall be classified as part of the primary occupancy.

305.2.3 ~~Five~~ Six or fewer children in a dwelling unit. A *facility* such as the above within a *dwelling unit* and having ~~five~~ six or fewer children receiving such day care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code.*

Section 308.2 Institutional Group I-1

*Add Section **308.2.5** to Section **308.2** to read as follows:*

308.2 Institutional Group I-1. Institutional Group I-1 occupancy shall include *buildings*, *structures* or portions thereof for more than 16 *persons*, excluding staff, who reside on a *24-hour basis* in a supervised environment and receive *custodial care*. *Buildings* of Group I-1 shall be classified as one of the occupancy conditions specified in Section 308.2.1 or 308.2.2 and shall comply with Section 420. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living *facilities*
Congregate care *facilities*
Group homes
Halfway houses
Residential board and care *facilities*
Social rehabilitation *facilities*

308.2.1 Condition 1. This occupancy condition shall include *buildings* in which all *persons* receiving *custodial care* who, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

308.2.2 Condition 2. This occupancy condition shall include *buildings* in which there are any *persons* receiving *custodial care* who require *limited verbal or physical assistance* while responding to an emergency situation to complete *building* evacuation.

308.2.3 Six to 16 persons receiving custodial care. A facility housing not fewer than six and not more than 16 persons receiving custodial care shall be classified as Group R-4.

308.2.4 Five or fewer persons receiving custodial care. A *facility* with five or fewer persons receiving *custodial care* shall be classified as Group R-3 or shall comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code.*

308.2.5 Board of Health. All portions of a care facility which houses patients or residents which is classified by the State Board of Health as ‘Category 2,’ and which has an occupant load of more than 10 residents, is classified as an ‘I-1’ occupancy classification.

Section 308.5 Institutional Group I-4, day care facilities

*Amend Section **308.5** to read as follows:*

308.5 Institutional Group I-4, day care facilities. Institutional Group I-4 occupancy shall include *buildings* and *structures* occupied by more than ~~five~~ six *persons* of any age who receive *custodial care* for fewer than 24 hours per day by *persons* other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the *person* cared for. This group shall include, but not be limited to, the following:

Adult day care

Child day care

308.5.1 Classification as Group E. A child day care *facility* that provides care for more than ~~five~~ six but not more than 100 children 2 ½ years or less of age, where the rooms in which the children are cared for are located on a *level of exit discharge* serving such rooms and each of these child care rooms has an *exit* door directly to the exterior, shall be classified as Group E.

308.5.2 Within a place of religious worship. Rooms and spaces within *places of religious worship* providing such care during religious functions shall be classified as part of the primary occupancy.

308.5.3 ~~Five~~ Six or fewer persons receiving care. A *facility* having ~~five~~ six or fewer *persons* receiving *custodial care* shall be classified as part of the primary occupancy.

308.5.4 ~~Five~~ Six or fewer persons receiving care in a dwelling unit. A *facility* such as the above within a *dwelling unit* and having ~~five~~ six or fewer *persons* receiving *custodial care* shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code.*

Section 310.2 Residential Group R-1

*Amend Section **310.2** to read as follows:*

310.2 Residential Group R-1. Residential Group R-1 occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily *transient* in nature, including:

Boarding houses (transient) with more than 10 occupants
Brothels
Congregate living facilities (transient) with more than 10 occupants
Hotels *(transient)*
Motels *(transient)*
Lodging houses with more than five *guestrooms*

Group 311.2 Moderate-hazard storage, Group S-1

*Amend Section **311.2** to read as follows:*

311.2 Moderate-hazard storage, Group S-1. Storage Group S-1 occupancies are *buildings* occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

Aerosol products, Levels 2 and 3, aerosol cooking spray, plastic aerosol (PA3)
Aircraft hangar (storage and repair)
Bags: cloth, burlap and paper
Bamboos and rattan
Baskets
Belting: canvas and leather
Beverages over 20-percent alcohol content
Books and paper in rolls or packs
Boots and shoes
Buttons, including cloth covered, pearl or bone
Cardboard and cardboard boxes
Clothing, woolen wearing apparel
Cordage
~~Dry boat storage (indoor)~~
Furniture
Furs
Glues, mucilage, pastes and size
Grains
Horns and combs, other than celluloid
Leather
Linoleum
Lithium-ion or lithium metal batteries
Lumber
Motor vehicle repair garages complying with the maximum allowable quantities of hazardous materials specified in Table 307.1(1) (see Section 406.8)
Photo engravings
Resilient flooring
Self-service storage facility (mini-storage)
Silks
Soaps
Sugar
Tires, bulk storage of
Tobacco, cigars, cigarettes and snuff
Upholstery and mattresses
Vehicle *repair garages* for vehicles powered by lithium-ion or lithium metal batteries
Wax candles

Section 403.5.4 Smokeproof enclosures

*Amend Section **403.5.4** to read as follows:*

403.5.4 Smokeproof enclosures. Every required *interior exit stairway* serving floors more than ~~75~~ 55 feet (~~22 860~~ 16,764 mm) above the lowest level of fire department vehicle access shall be a *smokeproof enclosure* in accordance with Sections 909.20 and 1023.12.

Section 906 Portable fire extinguishers

*Delete to Section **906**:*

Refer to the 2024 Editions of the International Fire Code and the 2024 Northern Nevada Fire Amendments.

Section 910.2 Where required

*Amend Section **910.2** to read as follows:*

910.2 Where required. Smoke and heat vents or a mechanical smoke removal system shall be installed as required by Sections 910.2.1 and 910.2.2.

Exceptions:

1. Frozen food warehouses used solely for storage of Class I and II commodities where protected by an *approved automatic sprinkler system.*
2. ~~Smoke and heat removal shall not be required in areas of *buildings* equipped with early suppression fast-response (ESFR) sprinklers.~~ Automatic smoke and heat vents are not required within areas of buildings equipped with early suppression fast-response (ESFR) sprinklers unless the area of Group F-1 or S-1 occupancy protected with the ESFR sprinklers has an exit access travel distance of more than 250 feet (76 200mmn).
3. Smoke and heat removal shall not be required in areas of *buildings* equipped with control mode special application sprinklers with a response time index of 50 $(m \times S)^{1/2}$ or less that are *listed* to control a fire in stored commodities with 12 or fewer sprinklers.

Section 1210.4 Baby changing tables

*Add Section **1210.4** to Section **1210** to read as follows:*

1210.4 Baby changing tables. Diaper changing tables are required to be installed in both male, female and other restrooms, in permanent buildings that contain public restrooms as defined in Chapter 29 of the 2024 IBC. Changing tables are required when any of the following occur: new buildings, tenant improvements, new restrooms, alteration of existing restrooms, new additions, change of uses that require updating existing restrooms with additions to those facilities. Shall meet the guidelines of 603.5, 309 and 902 of ANSI/ICC A117.1-2017.

Exceptions: A building or facility that does not have public restrooms or has been issued a permit or license which restricts the admission of children on the basis of age, shall be exempt from this requirement.

Section 1503.6 Snow shedding and impact areas

*Add Section **1503.6** to Section **1503** to read as follows:*

1503.6 Snow shedding and impact areas. Snow shedding onto adjacent properties is prohibited. Snow shed impact areas shall be designed to contain shedding snow from structures and prevent snow from encroaching onto adjacent properties when ground snow loads exceed 154 p_g when located in Washoe County or Carson City or exceeds 69 p_g when located in Storey County. The roof and eaves of all structures shall be designed so that snow shed impact areas will not occur in or on required exits, parking areas, driveways, LPG storage tanks, walkways, and public areas.

Exception: The snow shed impact area may be reduced provided an engineered snow restraint system, designed in accordance with this code, is incorporated into the roof design and the roof drainage system.

Section 1608.2 Ground snow loads

*Amend Section **1608.2** to read as follows:*

Section 1608.2 Ground snow loads. The ground snow *loads* for structures shall be determined in accordance with the reliability-targeted (strength based) ground snow load values in Chapter 7 of ASCE & or Figures 1608.2(1) through 1608.2(4) for the contiguous United States and Table 1608.2 for Alaska. Site-specific case studies shall be determined in accordance with Chapter 7 of ASCE 7 and shall be approved by the building official. Snow loads are zero for Hawaii, except in mountainous regions as approved by the building official. The snow loads for elevations above 4500 feet shall be taken from Table 1608.2.1.

Table 1608.2.1 Ground snow loads for Northern Nevada locations

*Add Table **1608.2.1** to read as follows:*

Table 1608.2.1

GROUND SNOW LOADS, Pg, FOR NORTHERN NEVADA LOCATIONS [1,2,3,4]

Elevation (feet)	West of U.S. 395, Eastern Sierra Slope, Carson City, Reno, Washoe County*, Douglas County and West of S.R. 88.[1]				East of U.S. 395 for Carson City, Reno, Sparks, Washoe County*, Douglas County and East of S.R. 88.[1]				Lyon County, City of Fernley				Storey County[1]				All Nevada Counties*, Lake Tahoe Basin, Western Sierra Slope			
	RISK CATEGORY																			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	Pg (Pounds Per Square Foot)																			
4500	35	43	48	52	35	43	48	52	12	15	16	18	12	15	16	18				
5000	35	43	48	52	35	43	48	52	35	43	48	52	12	15	16	18				
5100	47	59	65	71	36	45	49	54	36	45	49	54	12	15	16	18				
5200	60	75	82	90	38	48	52	57	36	45	49	54	12	15	16	18				
5300	74	92	101	110	39	49	54	59	39	49	54	59	12	15	16	18				
5400	86	108	118	129	40	50	55	60	40	50	55	60	12	15	16	18				
5500	99	123	136	148	43	53	59	64	43	53	59	64	58	72	79	86				
6000	163	203	224	244	50	62	68	74	50	62	68	74	80	100	110	120	252	315	346	378
6500	196	245	269	294	50	62	68	74	50	62	68	74	103	129	142	155	269	336	370	403
7000	229	286	315	343	66	82	90	98	66	82	90	98	103	129	142	155	286	358	393	429
7500	246	308	338	369	66	82	90	98	66	82	90	98	103	129	142	155	303	379	417	455
8000	262	328	360	393	99	123	136	148	99	123	136	148	103	129	142	155	320	400	440	480
8500	278	348	382	417	99	123	136	148	99	123	136	148	103	129	142	155	338	422	464	506
9000	310	388	426	465	131	163	180	196	131	163	180	196	131	163	180	196	378	472	519	566
9500	343	429	472	515	163	203	224	244	163	203	224	244	138	172	189	206	446	558	613	669
10000	408	510	561	612	163	203	224	244	163	203	224	244	163	203	224	244	480	600	660	720

Footnotes:

1. Final roof snow design load Ps or Pf shall not be less than 29 psf

2. Refer to local jurisdiction ordinances for other Ground Snow Load information S.R. = State Route

3. Intermediate values may be determined by interpolation U.S. = U.S. Highway

4. The City of Elko shall not have ground snow loads less than 30 psf and Churchill County shall not have ground snow loads less than 20 psf

* Ground snow loads in Washoe County shall be taken from Tables 1608.2.1 or the ASCE Hazard Tool. Ground snow loads from the ASCE Hazard tool shall use the ASCE/SEI 7-22 standard. The minimum ground snow load for a structure shall not be less than the lower of the two values from Table 1608.2.1 and the ASCE Hazard Tool.

Section 1609.1.1 Determination of wind loads

*Amend Section **1609.1.1** to read as follows:*

1609.1.1 Determination of wind loads. Wind *loads* on every *building* or *structure* shall be determined in accordance with Chapters 26 to 30 of ASCE 7. The type of opening protection required, the basic design wind speed, *V*, and the exposure category for a *site* is permitted to be determined in accordance with section 1609 or ASCE 7. The wind speed in the City of Reno, the City of Sparks, Douglas, and Washoe Counties shall be per the Special Wind Region Table 1609.3.2. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.

Exceptions:

1. Subject to limitations of section 1609.1.1.1, the provisions of ICC 600 shall be permitted for applicable Group R-2 and R-3 *buildings*.

2. Subject to the limitations of Section 1609.1.1.1, residential *structures* using the provisions of AWC WFCM.

3. Subject to the limitations of Section 1609.1.1.1 residential *structures* using the provisions of AISI S230.

4. Designs using NAAMM FP 1001.

5. Designs using TIA-222 for antenna-supporting *structures* and antennas, provided that the horizontal extent of Topographic Category 2 escarpments in Section 2.6.6.2 of TIA-222 shall be 16 times the height of the escarpment.

6. Wind tunnel tests in accordance with ASCE 49 and Sections 31.4 and 31.5 of ASCE 7.

7. *Temporary structures* complying with Section 3103.6.1.2.

The wind speeds in Figures 1609.3(1) through 1609.3(4) are basic design wind speeds, *V*, and shall be converted in accordance with Section 1609.3.1 to *allowable stress design* wind speeds, V_{asd}, when the provisions of the standards referenced in Exceptions 4 and 5 are used. The wind speed in the City of Reno, the City of Sparks, Douglas, and Washoe Counties shall be per the Special Wind Region Table 1609.3.2

Section 1609.1.1.1 Applicability

*Amend Section **1609.1.1.1** to read as follows:*

1609.1.1.1 Applicability. The provisions of ICC 600 are applicable only to buildings located within Exposure B or C as defined in section 1609.4. The wind speed in the Carson City, City of Reno, the City of Sparks, Douglas, Storey, Lyon and Washoe Counties shall be per the Special Wind Region Table 1609.3.2. The provisions of ICC 600, AWC WFCM and AISI S230 shall not apply to buildings sited on the upper half of an isolated hill, ridge, or escarpment meeting all of the following conditions:

1. The hill, ridge or escarpment is 60 feet (18288 mm) or higher if located in Exposure B or 30 feet (9144 mm) or higher if located in Exposure C.

2. The maximum average slope of the hill exceeds 10 percent.

3. The hill, ridge or escarpment is unobstructed upwind by other such topographic features for a distance from the high point of 50 times the height of the hill or 2 miles (3.22 km), whichever is greater.

Section 1609.3 Basic design wind speed

*Amend Section **1609.3** to read as follows*:

1609.3 Basic design wind speed. The *basic wind speed, V,* in mph, for the determination of the wind *loads* shall be determined by the Figures 1609.3(1) through 1609.3(4).

The *basic wind speed, V,* for use in the design of *Risk Category* I *buildings* and *structures* shall be obtained from Figure 1609.3(1).

The *basic wind speed, V,* for use in the design of *Risk Category* II *buildings* and *structures* shall be obtained from Figure 1609.3(2).

The *basic wind speed, V,* for use in the design of *Risk Category* III *buildings* and *structures* shall be obtained from Figure 1609.3(3).

The *basic wind speed, V,* for use in the design of *Risk Category* IV *buildings* and *structures* shall be obtained from Figure 1609.3(4).

Basic wind speed, V, for Hawaii, the US Virgin Islands and Puerto Rico shall be determined by using the ASCE Wind Design Geodatabase. The ASCE Wind Design Geodatabase is available at https://asce7hazardtool.online, or an approved equivalent. The *basic wind speed, V,* for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local *jurisdiction* requirements.

The *basic wind speeds, V,* determined by the local *jurisdiction* shall be in accordance with Chapter 26 of ASCE 7.

In nonhurricane-prone regions, when the *basic wind speed, V,* is estimated form the regional climatic data, the *basic wind speed, V,* shall be determined in accordance with Chapter 26 of ASCE 7. No altitude density reduction shall be taken.

Table 1609.3.2 Special wind region defined: minimum basic wind speeds

*Add Table **1609.3.2** to read as follows:*

TABLE 1609.3.2
SPECIAL WIND REGION DEFINED:
MINIMUM BASIC WIND SPEEDS

For Carson City, City of Reno, City of Sparks, Douglas, Lyon, Storey and Washoe Counties the design wind speed values shall be:

Risk Category	Ultimate Wind Speed V_{ult} (mph)	V_{asd} Wind Speed 3-sec gust (mph)
I	110	85
II & 2024 IRC	120	93
III	130	101
IV	135	104

Table notes:

a) Air density corrections to design wind pressures are prohibited. The conversions from Vult to Vasd are based on Table 1609.3.1

Section 1704.2 Special inspections and tests

*Amend Section **1704.2** to read as follows:*

1704.2 Special inspections and tests. Where application is made to the *building official* for construction as specified in Section 105, the *owner* or the ***owner's*** authorized agent, other than the contractor, shall employ one or more *approved agencies* to provide *special inspections* and tests during construction on the types of work specified in Section 1705 and identify the *approved agencies* to the *building official*. These *special inspections* and tests are in addition to the inspections by the *building official* that are identified in Section 110.

Exceptions:

1. *Special inspections* and tests are not required for construction of a minor nature or as warranted by conditions in the *jurisdiction* as *approved* by the *building official*.

2. Unless otherwise required by the *building official*, *special inspections* and tests are not required for Group R-3 occupancies as applicable in section 101.2 and Group U occupancies that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.

3. *Special inspections* and tests are not required for portions of *structures* designed and constructed in accordance with the cold-formed steel *light-frame construction* provisions of Section 2206.1.2 or the *conventional light-frame constructions* provisions of Section 2308.

4. The contractor is permitted to employ the *approved agencies* where the contractor is also the *owner*.

Section 1803.2 Investigations required

*Amend Section **1803.2** to read as follows:*

1803.2 Investigations required. Geotechnical investigations shall be conducted in accordance with Sections 1803.3 through 1803.5.

Exception: The *building official* ~~shall be permitted to waive the requirement for~~ need not require a geotechnical investigation where satisfactory data from adjacent areas is provided by a licensed design professional ~~available~~ that demonstrates an investigation is not necessary for any of the conditions in Sections 1803.5.1 through 1803.5.6 and Sections 1803.5.10 and 1803.5.11.

Section 1803.6 Reporting

*Amend Section **1803.6** to read as follows*:

1803.6 Reporting. Where geotechnical investigations are required, a written report of the investigations shall be submitted to the *building official* by the *permit* applicant at the time of *permit* application. This geotechnical report shall include, but need not be limited to, the following information:

1. A plot showing the location of the soil investigations.

2. A complete record of the soil boring and penetration test logs and soil samples.

3. A record of the soil profile.

4. Elevation of the water table, if encountered.

5. Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement, and varying soil strength; and the effects of adjacent *loads.*

6. Expected total and differential settlement.

7. *Deep foundation* information in accordance with Section 1803.5.5.

8. Special design and construction provisions for foundations of *structures* founded on expansive soils, as necessary.

9. Compacted fill material properties and testing in accordance with Section 1803.5.8.

10. *Controlled low-strength* material properties and testing in accordance with Section 1803.5.9.

11. Where required by Section 1803.5.11, investigation of liquefaction hazards shall be performed in accordance with “Guidelines for Evaluating Liquefaction Hazards in Nevada;” investigation of hazards associated with surface displacement due to faulting or

seismically induced lateral spreading or lateral flow shall be performed in accordance with "Guidelines for Evaluating Potential Surface Fault Rupture/Land Subsidence Hazards in Nevada."

Section 1807.2.1.1 Rockery retaining walls

*Add Section **1807.2.1.1** to Section **1807.2** to read as follows:*

1807.2.1.1 Rockery retaining walls: Rockery retaining walls or rockery soil stabilization walls shall be placed against cuts in native soils and shall not be subject to surcharges, such as building foundations, adjacent retaining structures, slopes, or vehicle surcharge. All loads adjacent to rockery walls shall be set back a minimum distance equal to the height of the wall. Set back distances shall be measured at the top of the wall from to the back of the wall and at the bottom of wall from the front of the wall. Rockery walls shall be embedded below the frost line. For sloping toe conditions, rockery walls shall be embedded to a depth sufficient achieve a minimum lateral distance in front of the foundation/base rock equal to the width of the base rock, but not less than 6 feet (1829 mm). Rockery walls over two feet in height shall be engineered and any wall over three feet in height shall have special inspection. No individual wall or tiered wall section shall exceed 6 feet (1829 mm) in height. Wall height is measured from the exposed ground surface at the bottom of the wall to the adjacent grade at the top of the wall. Rockery walls shall be analyzed for bearing, sliding, overturning resistance, and global stability. Sliding resistance shall be analyzed at the bottom of each rock level. The maximum coefficient of friction between the rocks in the wall shall be 0.5. Passive resistance at the toe of the wall shall be neglected. Rockery walls shall be designed for dynamic seismic lateral earth pressures due to the design earthquake ground motion. For seismic loading conditions and global stability analyses, the design earthquake ground motion shall be determined per Chapter 11 of ASCE-7. Rockery walls shall be in a continuous alignment without abrupt changes in direction. Termination, intersections, and radii shall be included in the engineering analysis. Drainage shall be provided behind all engineered rockery walls.

Design documents shall be stamped by an Engineer licensed in the State of Nevada and include all engineering calculations including inputs and results. Special inspection documents shall verify all of items listed below which the design engineer shall include on the construction documents:

1. Type and quality of rock
2. Unit weight, if design exceeds 155 pcf
3. Rock size in approximate diameter
4. Rock placement
5. Voids greater than 3 inches (76 mm) shall be filled
6. Wall drainage system (i.e. drainage rock and geosynthetic filter fabric)
7. Surface drainage
8. Embedment depth and width
9. Wall face slope (batter 6 vertical to one horizontal maximum)
10. Maintenance and service access.

Any rockery walls exceeding 6 feet (1829 mm) in height or varying from these design requirements, including backslopes, or constructed to support fill soils, shall require a variance and engineering review to include the following:

1. Suitability evaluation of other alternative wall types
2. 3rd party review
3. Full-time inspection

In no case, shall a single wall exceed 10 feet (3048 mm) in height. All fill placed behind a rockery wall shall be reinforced and designed to eliminate any loads acting upon the wall.

Section 1808.6.1 Foundations

*Amend Section **1808.6.1** to read as follows:*

1808.6.1 Foundations. Foundations placed on or within the active zone of expansive soils shall be designed to resist differential volume changes and to prevent structural damage to the supported *structure*. Deflection and racking of the supported *structure* shall be limited to that which will not interfere with the usability and serviceability of the *structure*. Foundations placed below where volume change occur or below expansive soil shall comply with the following provisions:

1. Foundations extending into or penetrating expansive soils shall be designed to prevent uplift of the supported structure.

2. Foundations penetrating expansive soils shall be designed to resist forces exerted on the foundation due to soil volume changes or shall be isolated from the expansive soil.

Post-tensioned slabs shall not be utilized in place of frost depth footing design unless super structure deflection and differential movement calculations are provided. The deflection calculations would need to show that the maximum combined frost and expansive soil heaving, as localized at slab edges, with resultant non-uniformly distributed deflections, as well as whole slab deflections would not result in super structure racking or excessive truss, roof or wall frame movement.

Section 1809.5 Frost protection

*Amend Section **1809.5** to read as follows:*

1809.5 Frost protection. Except where otherwise protected from frost, foundations and other permanent supports of *buildings* and *structures* shall be protected from frost by one or more of the following methods:

1. Extending below the frost line of the locality. Refer to 2024 Northern Nevada Amendments Appendix Table R301.2 for requirements of local authorities having jurisdiction.
2. Constructing in accordance with ASCE 32.

3. Erecting on solid rock.

Exception: Free-standing *buildings* meeting all of the following conditions shall not be required to be protected:

1. Assigned to *Risk Category* I.

2. Area of 600 square feet (56 m^2) or less for *light-frame construction* or 400 square feet (37 m^2) or less for other than *light-frame construction*.

3. Eave height of 10 feet (3048 mm) or less.

Shallow foundations shall not bear on frozen soil unless such frozen condition is of a permanent character.

Section [P] 2901.1 Scope

*Amend Section **[P] 2901.1** to read as follows:*

[P] 2901.1 Scope. The provisions of this chapter and the ~~*International Plumbing Code*~~ *Uniform Plumbing Code* shall govern the design, construction, erection and installation of plumbing components, appliances, equipment and systems used in *buildings* and *structures* covered by this code. Toilet and bathing rooms shall be constructed in accordance with Section 1209. ~~Private sewage disposal systems shall conform to the *International Private Sewage Disposal Code*.~~ The *International Fire Code,* the *International Property Maintenance Code* and the ~~*International Plumbing Code*~~ *Uniform Plumbing Code* shall govern the use and maintenance of plumbing components, appliances, equipment and systems. The *International Existing Building code* and the ~~*International Plumbing Code*~~ *Uniform Plumbing Code* shall govern the *alteration, repair,* relocation, replacement and addition of plumbing components, *appliances, equipment* and systems.

Section [P] 2902.1 Minimum number of fixtures

*Amend Section **[P] 2902.1** to read as follows:*

[P] 2902.1 Minimum number of fixtures. Plumbing fixtures shall be provided in the minimum number as shown in Table 2902.1 based on the actual use of the *building* or space. Uses not shown in Table 2902.1 shall be considered individually by the code official. The number of occupants shall be determined by this code. Suitable toilet facilities shall be provided and maintained in a sanitary condition for the use of workers during construction.

[P] Table 2902.1 Minimum number of required plumbing fixtures

*Amend [P] Table **2902.1** to read as follows:*

TABLE 2902.1 [P] TABLE 2902.1—MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 2902.1.1 and 2902.2)

NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS[h] (URINALS: SEE SECTION 424.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN[g] (SEE SECTION 410)	OTHER
			MALE	FEMALE	MALE	FEMALE			
1	Assembly	Theaters and other buildings for the performing arts and motion pictures[d]	1 per 125	1 per 65	1 per 200		—	1 per 500	1 service sink
		Nightclubs, bars, taverns, dance halls and buildings for similar purposes[d]	1 per 40	1 per 40	1 per 75		—	1 per 500	1 service sink
		Restaurants, banquet halls and food courts[d]	1 per 75	1 per 75	1 per 200		—	1 per 500	1 service sink
		Casino gaming areas	1 per 100 for the first 400 and 1 per 250 for the remainder exceeding 400	1 per 50 for the first 400 and 1 per 150 for the remainder exceeding 400	1 per 250 for the first 750 and 1 per 500 for the remainder exceeding 750		—	1 per 1,000	1 service sink
		Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums[d]	1 per 125	1 per 65	1 per 200		—	1 per 500	1 service sink
		Passenger terminals and transportation facilities[d]	1 per 500	1 per 500	1 per 750		—	1 per 1,000	1 service sink
		Places of worship and other religious services[d]	1 per 150	1 per 75	1 per 200		—	1 per 1,000	1 service sink
		Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities[f]	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1,000	1 service sink
		Stadiums, amusement parks, bleachers and grandstands for outdoor sporting events and activities[f]	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1,000	1 service sink

2	Business	Buildings for the transaction of business, nonmedical professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	—	1 per 100	1 service sink[e]
		Ambulatory care facilities and outpatient clinics	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 50	—	1 per 100	1 service sink per floor
3	Educational	Educational facilities	1 per 50		1 per 50	—	1 per 100	1 service sink

TABLE 2902.1 [P] TABLE 2902.1—MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 2902.1.1 and 2902.2)—continued

NO.	CLASSIFICATION	DESCRIPTION		WATER CLOSETS[h] (URINALS: SEE SECTION 424.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN[g] (SEE SECTION 410)	OTHER
				MALE	FEMALE	MALE	FEMALE			
4	Factory and industrial	Structures in which occupants are engaged in work fabricating, assembly or processing of products or materials		1 per 100		1 per 100		—	1 per 400	1 service sink
5	Institutional	Alcohol and drug centers[b] Congregate care facilities[b] Group homes[b] Halfway houses[b] Social rehabilitation facilities[b] Foster care facilities[b]		1 per 10 care recipients		1 per 10 care recipients		1 per 8 care recipients	—	—
		Assisted living and residential board and care facilities with care recipients who receive custodial care	Sleeping units for care recipient[c]	1 per 2 sleeping units		1 per 2 sleeping units		1 per 8 sleeping units		
			Dwelling units for care recipients	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—	1 kitchen sink per dwelling unit
			Employee facilities	1 per 60 care recipient units		1 per 60 care recipient units		—	1 per 100	1 service sink per floor
			Visitor facilities	1 per 75 care recipient units.		1 per 75 care recipient units		—	—	—
		Nursing homes[b]	Sleeping units for care recipients[c]	1 per 2 care recipient sleeping units		1 per 2 care recipient sleeping units		1 per 8 care recipient sleeping units	—	—
			Employee facilities	1 per 60 care recipient units		1 per 60 care recipient sleeping units		—	1 per 100	1 service sink per floor
			Visitor facilities	1 per 75 care recipient units		1 per 75 care recipient sleeping rooms		—	—	—

TABLE 2902.1 [P] TABLE 2902.1—MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a] (See Sections 2902.1.1 and 2902.2)—continued

NO.	CLASSIFICATION	DESCRIPTION		WATER CLOSETS[h] (URINALS: SEE SECTION 424.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN[g] (SEE SECTION 410)	OTHER
				MALE	FEMALE	MALE	FEMALE			
5	Institutional - continued	Hospitals[b]	Sleeping units for care recipients	1 per care recipient sleeping unit		1 per care recipient sleeping unit		1 per 100 care recipient sleeping units		—
			Care recipient treatment areas	1 per 25 care recipient treatment rooms		1 per 50 care recipient treatment rooms		—	1 per 100	—
			Employee facilities	1 per 25 care recipient sleeping units or treatment room	1 per 25 care recipient sleeping units or treatment room	1 per 50 care recipient sleeping room or treatment room		—	1 per 100	1 service sink per floor
			Visitor facilities	1 per 75 care recipient sleeping units or treatment room	1 per 75 care recipient sleeping units or treatment room	1 per 50 care recipient sleeping room or treatment room		—	1 per 500	—
		Prisons[b]		1 per cell		1 per cell		1 per 15	1 per 100	1 service sink
		Reformatorie, detention centers and correctional centers[b]	Cells	1 per 15		1 per 15		1 per 15	1 per 100	1 service sink
			Congregate Living Facilities	1 per 15		1 per 15		1 per 15	1 per 100	1 service sink
			Employees	1 per 25		1 per 35		—	1 per 100	—
		Adult day care and child day care		1 per 15		1 per 15		1	1 per 100	1 service sink
6	Mercantile	Retail stores, service stations, shops, salesrooms, markets and shopping centers		1 per 500		1 per 750		—	1 per 1,000	1 service sink[e]
7	Residential	Hotels, motels, boarding houses (transient)		1 per dwelling or sleeping unit		1 per dwelling or sleeping unit		1 per dwelling or sleeping unit	—	1 service sink
		Dormitories, fraternities, sororities and boarding houses (not transient)		1 per 10		1 per 10		1 per 8	1 per 100	1 service sink

TABLE 2902.1 [P] TABLE 2902.1—MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a] (See Sections 2902.1.1 and 2902.2)—continued

NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS[h] (URINALS: SEE SECTION 424.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN[g] (SEE SECTION 410)	OTHER
			MALE	FEMALE	MALE	FEMALE			
7	Residential—continued	Apartment house	1 per dwelling unit or sleeping unit		1 per dwelling unit or sleeping unit		1 per dwelling unit or sleeping unit	—	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per 20 dwelling units
		Congregate living facilities with 16 or fewer care recipients receiving custodial care	1 per 10		1 per 10		1 per 8		1 kitchen sink
		One- and two-family dwellings and lodging houses with five or fewer guestrooms	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—	1kitchen sink per dwelling unit; 1 automatic clothes washer connection per dwelling unit
8	Storage	Structures for the storage of goods, warehouses, storehouse and freight depots. Low and Moderate Hazard.	1 per 100		1 per 100		—	1 per 1,000	1 service sink

a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by this code.
b. Toilet facilities for employees shall be separate from facilities for inmates or care recipients.
c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units shall be permitted, provided that each patient sleeping unit has direct access to the toilet room and provisions for privacy for the toilet room user are provided.
d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
e. For business and mercantile classifications with an occupant load of ~~15~~ 30 or fewer, a service sink shall not be required.
f. The required number and type of plumbing fixtures for indoor and outdoor swimming pools shall be in accordance with Section 609 of the *International Swimming Pool and Spa Code*.
g. The minimum number of required drinking fountains shall comply with Table 2902.1 and Chapter 11. Drinking fountains are not required for an occupant load of 30 or fewer.
h. In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets in assembly and educational occupancies. Urinals shall not be substituted for more than 50 percent of the required water closets in all other occupancies.

Section [P] 2902.2 Separated facilities

Amend Section [P] 2909.2 to read as follows:

[P] 2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate toilet *facilities* shall not be required for *dwelling units* and *sleeping units*.

2. Separate toilet *facilities* shall not be required in structures or tenant spaces with a total *occupant load*, including both employees and customers, of ~~15~~ 20 or fewer.

3. Separate toilet *facilities* shall not be required in mercantile occupancies in which the maximum *occupant load* is 100 or fewer.

4. Separate toilet *facilities* shall not be required in business occupancies in which the maximum *occupant load* is 25 or fewer.

5. Separate toilet facilities shall not be required to be designated by sex where single-user toilet rooms are provided in accordance with Section 2902.1.2.

6. Separate toilet *facilities* shall not be required where rooms having both water closets and lavatory fixtures are designed for use by all *persons* regardless of sex and privacy is provided for water closets in accordance with Section 405.3.4 of the ~~*International Plumbing Code*~~ *Uniform Plumbing Code* and for urinals in accordance with Section 422.2 of the ~~*International Plumbing Code*~~ *Uniform Plumbing Code*.

Section 3102.7 Engineering design

*Amend Section **3102.7** to read as follows:*

3102.7 Engineering design. The *structure* shall be designed and constructed to sustain *dead loads; loads* due to tension or inflation; *live loads* including wind, snow or *flood* and seismic loads and in accordance with Chapter 16.

Exception: Membrane structures intended to be in place for 30 days or less may be engineered to risk category I loads provided the installation and use are per the manufacturer's recommendations.

Section I105.2 Footings

*Amend Section **I105.2** to read as follows:*

I105.2 Footings. ~~In areas with a frost depth of zero, a~~ An unenclosed *patio cover* that projects 14 feet (1220 mm) or less from the main structure shall be permitted to be supported on a concrete slab on grade without footing, provided that the slab conforms to the provisions of Chapter 19 of this code and is not less than 3½ inches (89 mm) thick, and the columns do not support *loads* in excess of 750 pounds (3.36 kN) per column.

International Existing Building Code (IEBC)

Section 301.5 Baby changing tables

*Add Section **301.5** to Section **301** to read as follows:*

301.5 Baby changing tables. Diaper changing tables are required to be installed in both male, female and other restrooms, in permanent buildings that contain public restrooms as defined in Chapter 29 of the 2024 IBC. Changing tables are required when any of the following occur: new buildings, tenant improvements, new restrooms, alteration of existing restrooms, new additions, change of uses that require updating existing restrooms with additions to those facilities. Shall meet the guidelines of 603.5, 309 and 902 of ANSI/ICC A117.1-2017.

Exceptions: A building or facility that does not have public restrooms or has been issued a permit or license which restricts the admission of children on the basis of age, shall be exempt from this requirement.

Section 902.1 High-rise buildings

*Amend Section **902.1** to read as follows:*

902.1 High-rise buildings. Any building having occupied floors more than ~~75~~ 55 feet (~~22,860~~ 16,764 mm) above the lowest level of fire department vehicle access shall comply with the requirements of Sections 902.1.1 and 902.1.2.

International Energy Conservation Code (IECC)

COMMERCIAL PROVISIONS

Section C104.1.1 Above code programs

*Amend Section **C104.1.1** to read as follows:*

Section C104.1.1 Above code programs. The *code official* or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program as exceeding the energy efficiency required by this code. Programs seeking approval must submit all requested supporting documentation, including program guidelines, protocols, calculations and program simulation performance software to the authority having jurisdiction for review for use as an acceptable program. Buildings *approved* in writing by such an energy efficiency shall be considered to be in compliance with this code. The requirements identified in Table C407.2(1) shall be met.

Section C201.3 Terms defined in other codes

*Amend Section **C201.3** to read as follows:*

C201.3 Terms defined in other codes. Terms that are not defined in this code but are defined in the *International Building Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, Uniform Mechanical Code, ~~International Plumbing Code~~, Uniform Plumbing Code, or the International Residential Code* shall have the meanings ascribed to them in those codes.

Section C202 General Definitions

*Amend Section **C202** by adding the following definitions to read as follows:*

CASINO. A structure that houses a business with a Non-Restricted Gaming License from the Nevada Gaming Commission and State Gaming Control Board. It includes the gaming area(s) as well as the adjacent area(s) within the building envelope.

CASINO GAMING AREA. The space within a *casino* wherein gaming is conducted. The gaming area shall also include accessory uses within the same room(s) as, or substantially open to the gaming floor(s). Such areas shall include, but not be limited to lobbies, balconies, public circulation areas, assembly areas, restaurants, bars, lounges, food courts, retail spaces, mezzanines, convention pre-function areas, cashiers' cages, players' clubs, customer support, conservatories and promenades that share the same atmosphere, spillover lighting and theme lighting with the adjacent gaming floor area. For accessory areas situated on the perimeter of the

gaming floor to be considered substantially open, the walls(s) or partitions(s) separating an accessory space from the gaming area must be a minimum of 50% open, as measured from the interior side of the accessory space, with no doors, windows and other obstructions, other than roll up security grills, installed within the opening.

Section C402.1.5 Rooms containing fuel-burning appliances.

*Amend Section **C402.1.5** to read as follows:*

C402.1.5 Rooms containing fuel-burning appliances. In Climate Zones 3 through 8, where combustion air is supplied through openings in an *exterior wall* to a room or space containing a space-conditioning fuel-burning appliance, one of the following shall apply:

1. The room or space containing the appliance shall be located outside of the *building thermal envelope*.
2. The room or space containing the appliance shall be enclosed and isolated from *conditioned spaces* inside of the *building thermal envelope*. Such rooms shall comply with all of the following:
    2.1 The walls, floors and ceilings that separate the enclosed room or space from *conditioned spaces* shall be insulated to be not less than equivalent to the insulation requirement of *below-grade walls* as specified in Table C402.1.3 or Table C402.1.2.
    2.2 The walls, floors and ceilings that separate the enclosed room or space from *conditioned spaces* shall be sealed in accordance with Section C402.6.1.2.
    2.3 The doors into the enclosed room or space shall be fully gasketed.
    2.4 Piping serving as part of a heating or cooling system and *ducts* in the enclosed room or space shall be insulated in accordance with Section C403. Service water piping shall be insulated in accordance with Section C404.
    2.5 Where an air *duct* supplying combustion air to the enclosed room or space passes through *conditioned space*, the duct shall be insulated to an *R-value* of not less than R-8.

Exception: Fireplaces and stoves complying with Sections 901 through 905 of the *International Mechanical Code*, Sections 911, 912, 913 of the *Uniform Mechanical Code*, and Section 2111.14 of the *International Building Code*.

Section C402.6.8 Air curtains

*Add Section **402.6.8** to Section **402.6** to read as follows:*

C402.6.8 Air curtains. Where doorway, passageway or pass-thru openings in the building thermal envelope area intended to be normally opened to the exterior environment, an approved air curtain tested in accordance with ANSI/AMCA 220-21 shall be used to separate conditioned air from the exterior.

Section C403.2.2 Ventilation

*Amend Section **C403.2.2** to read as follows:*

C403.2.2 Ventilation. *Ventilation*, either natural or mechanical, shall be provided in accordance with Chapter 4 of the *International Mechanical Code* *or Uniform Mechanical Code*. Where mechanical ventilation is provided, the system shall provide the capability to reduce the outdoor air supply to the minimum required by Chapter 4 of the *International Mechanical Code* or *Uniform Mechanical Code*.

Section C403.6.1 Variable air volume and multiple-zone systems

*Amend Section **C403.6.1** to read as follows:*

C403.6.1 Variable air volume and multiple-zone systems. Supply air systems serving multiple *zones* shall be variable air volume (VAV) systems that have *zone* controls configured to reduce the volume of air that is reheated, re-cooled or mixed in each *zone* to one of the following:

1. Thirty percent of the *zone* design peak supply for systems with *direct digital control* (DDC).
2. Systems with DDC where all of the following apply:
    2.1 The airflow rate in the deadband between heating and cooling does not exceed the highest of the allowed rates under items 3, 4, 5, or 6 of this section.
    2.2 The first stage of heating modulates the *zone* supply air temperature setpoint up to a maximum setpoint while the airflow is maintained at the deadband flow rate.
    2.3 The second stage of heating modulates the airflow rate from the deadband flow rate up to the heating maximum flow rate that is less than 50 percent of the *zone* design peak supply rate.
3. The outdoor airflow rate required to meet the minimum *ventilation* requirements of Chapter 4 of the *International Mechanical Code* *or Uniform Mechanical Code*.
4. The minimum primary airflow rate required to meet the Simplified Procedure *ventilation* requirements of ASHRAE 62.1 for the zone and is permitted to be the average airflow rate as allowed by ASHRAE 62.1.
5. Any higher rate that can be demonstrated to reduce overall system annual energy use by offsetting reheat/recool energy losses through a reduction in outdoor air intake for the system as *approved* by the *code official*.
6. The airflow rate required to comply with applicable codes or accreditation standards such as pressure relationships or minimum air change rates.

Exception: The following individual *zones* or entire air distribution systems are exempted are from the requirement for VAV control:

1. *Zones* or supply air systems where not less than 75 percent of the energy for reheating or for providing warm air in mixing systems is provided from a site-recovered, including condenser heat, or site-solar energy source.

2. Systems that prevent reheating, recooling, mixing or simultaneous supply of air that has been previously cooled, either mechanically or through the use of economizer systems, and air that has been previously mechanically heated.

Section C403.6.6 Multiple-zone VAV system ventilation optimization control

*Amend Section **C403.6.6** to read as follows:*

C403.6.6 Multiple-zone VAV system ventilation optimization control. Multiple-zone VAV systems with *direct digital control* of individual *zone* boxes reporting to a central control panel shall have *automatic* controls configured to reduce outdoor air intake flow below design rates in response to changes in system *ventilation* efficiency (E_V) as defined by the *International Mechanical Code* or *Uniform Mechanical Code*.

Exceptions:

1. VAV systems with zonal transfer fans that recirculate air from other *zones* without directly mixing it with outdoor air, dual-duct dual-fan VAV systems, and VAV systems with fan-powered terminal units.
2. Systems where total design exhaust airflow is more than 70 percent of the total design outdoor air intake flow requirements.

Section C403.7.1 Demand control ventilation

*Amend Section **C403.7.1** to read as follows:*

C403.7.1 Demand control ventilation. Demand control ventilation (DCV) shall be provided for the following:

1. Spaces with *ventilation* provided by single-zone systems where an air-side economizer is provided in accordance with Section C403.5.
2. Spaces larger than 250 square feet (23 m^2) in Climate Zones 5A, 6, 7, and 8 and spaces larger than 500 square feet (46.5 m^2) in other *climate zones* that have a design occupant load of 15 people or greater per 1,000 square feet (93 m^2) of floor area, as established in Table 403.3.1.1 of the *International Mechanical Code* or Table 402.1 of the *Uniform Mechanical Code*, and are served by systems with one or more of the following:
   2.1. An air-side economizer.
   2.2. *Automatic* modulating control of the outdoor air damper.
   2.3. A design outdoor airflow greater than 3,000 cfm (1416 L/s).

Exceptions:

1. Spaces served by systems with energy recovery in accordance with Section C403.7.4.2 and that have a floor area less than:
   1.1. 6,000 square feet (557 m^2) in Climate Zone 3C.
   1.2. 2,000 square feet (186 m^2) in Climate Zones 1A, 3B and 4B.
   1.3. 1,000 square feet (93 m^2) in Climate Zones 2A, 2B, 3A, 4A, 4C, 5 and 6.

1.4. 400 square feet (37 m^2) in Climate Zones 7 and 8.

2. Multiple-zone systems without *direct digital control* of individual zones communicating with a central control panel.
3. Spaces served by multiple-zone systems with a design outdoor airflow less than 750 cfm (354 L/s)
4. Spaces where more than 75 percent of the space design outdoor airflow is required for makeup air that is exhausted from the space or transfer air that is required for makeup air that is exhausted from other spaces.
5. Spaces with one of the following occupancy classifications as defined in Table 403.3.1.1 of the *International Mechanical Code* or Table 402.1 of the *Uniform Mechanical Code*: correctional cells, education laboratories, barber, beauty and nail salons, and bowling alley seating areas.
6. Spaces where the r*egistered design professional* demonstrates an engineered ventilation system design that:

   6.1. Prevents the maximum concentration of contaminants from being more than that obtainable by the required rate of outdoor air *ventilation*.

   6.2. Allows the required minimum design rate of outdoor air to be reduced by not less than 15 percent.

Section C403.7.2 Parking garage ventilation controls

*Amend Section **C403.7.2** to read as follows:*

C403.7.2 Parking garage ventilation controls. Ventilation systems employed in enclosed parking garages shall comply with Section 404.1 of the *International Mechanical Code* or Section 403.7 of the *Uniform Mechanical Code* and the following:

1. Separate ventilation systems and control systems shall be provided for each *parking garage* section.
2. Control systems for each *parking garage* section shall be capable of and configured to reduce fan airflow to not less than 0.05 cfm per square foot [0.00025 $m^3/(s \times m^2)$] of the floor area served and not more than 20 percent of the design capacity.
3. The ventilation system for each *parking garage section* shall have controls and devices that result in fan motor demand of not more than 30 percent of design wattage at 50 percent of the design airflow.

Exception: Garage ventilation systems serving a single *parking garage section* having a total ventilation system motor *nameplate horsepower* (ventilation system motor nameplate kilowatt) not exceeding 5 hp (3.7 kW) at fan system design conditions and where the *parking garage* section has no mechanical cooling or mechanical heating.

Nothing in this section shall be construed to require more than one *parking garage section* in any parking structure.

Section C403.7.4.2 Spaces other than nontransient dwelling units

*Amend Section **C403.7.4.2** to read as follows:*

C403.7.4.2 Spaces other than nontransient dwelling units. Where the supply airflow rate of a *fan system* serving a space other than a nontransient dwelling unit exceeds the values specified in Tables C403.7.4.2(1) and C403.7.4.2(2), the system shall include an energy recovery system. The energy recovery system shall provide an *enthalpy recovery* ratio of not less than 50 percent at design conditions. Where an *air economizer* is required, the energy recovery system shall include a bypass or controls that permit operation of the economizer as required by Section C403.5.

Exception: An *energy recovery ventilation system* shall not be required in any of the following conditions:

1. Where energy recovery systems are prohibited by the *International Mechanical Code* or *Uniform Mechanical Code*.
2. Laboratory fume hood systems that include not fewer than one of the following features:
   2.1. Variable-air-volume hood exhaust and room supply systems configured to reduce exhaust and makeup air volume to 50 percent or less of design values.
   2.2. Direct makeup (auxiliary) air supply equal to or greater than 75 percent of the exhaust rate, heated not warmer than 2°F (1.1°C) above room setpoint, cooled to not cooler than 3°F (1.7°C) below room setpoint, with no humidification added, and no simultaneous heating and cooling used for dehumidification control.
3. Systems serving spaces that are heated to less than 60°F (15.5°C) and that are not cooled.
4. Heating energy recovery where more than 60 percent of the outdoor heating energy is provided from site-recovered or site-solar energy in Climate Zones 5 through 8.
5. *Enthalpy recovery ratio* requirements at heating design condition in Climate Zones 0, 1 and 2.
6. *Enthalpy recovery ratio* requirements at cooling design condition in Climate Zones 3C, 4C, 5B, 5C, 6B, 7 and 8.
7. Systems in Climate Zones 0 through 4 requiring dehumidification that employ series energy recovery ~~land~~ and have a minimum ~~SERR~~ SEER of 0.40.
8. Where the largest source of air exhausted at a single location at the *building* exterior is less than 75 percent of the design outdoor airflow rate.
9. Systems expected to operate less than 20 hours per week at the *outdoor air* percentage covered by Table C403.7.4.2(1).
10. Systems exhausting toxic, flammable, paint or corrosive fumes or dust.
11. Commercial kitchen hoods used for collecting and removing grease vapors and smoke.

Section C403.7.7 Shutoff dampers

*Amend Section **C403.7.7** to read as follows:*

C403.7.7 Shutoff dampers. Outdoor air intake and exhaust openings and stairway and shaft vents shall be provided with Class I motorized dampers. The dampers shall have an *air leakage* rate not greater than 4 cfm/ft^2(20.3 L/s x m^2) of damper surface area at 1.0 inch water gauge (249 Pa) and shall be *labeled* by an *approved agency* when tested in accordance with AMCA 500D for such purpose.

Outdoor air intake and exhaust dampers shall be installed with *automatic* controls configured to close when the systems or spaces served are not in use or during unoccupied period warm-up and setback operation, unless the systems served require outdoor or exhaust air in accordance with the *International Mechanical Code* or *Uniform Mechanical Code* or the dampers are opened to provide intentional economizer cooling.

Stairway and elevator shaft vent dampers shall be installed with *automatic* controls configured to open upon the activation of any fire alarm initiating device of the *building's* fire alarm system, the interruption of power to the damper, or by thermostatic control systems.

Exception: Nonmotorized gravity dampers shall be an alternative to motorized dampers for exhaust and relief openings as follows:

1. In *buildings* less than three stories in height above grade plane.
2. In *buildings* of any height located in Climate Zones 0, 1, 2 or 3.
3. Where the design exhaust capacity is not greater than 300 cfm (142 L/s).

Nonmotorized gravity dampers shall have an *air leakage* rate not greater than 20 cfm/ft^2(101.6 L/s × m^2) where not less than 24 inches (610 mm) in either dimension and 40 cfm/ft^2(203.2 L/s × m^2) where less than 24 inches (610 mm) in either dimension. The rate of *air leakage* shall be determined at 1.0 inch water gauge (249 Pa) when tested in accordance with AMCA 500D for such purpose. The dampers shall be *labeled* by an *approved agency*.

Section C403.13.1 Duct and plenum insulation and sealing

*Amend Section **C403.13.1** to read as follows:*

C403.13.1 Duct and plenum insulation and sealing. Supply and return air *ducts* and plenums shall be insulated with not less than R-6 insulation where located in unconditioned spaces and where located outside the *building* with not less than R-8 insulation in Climate Zones 0 through 4 and not less than R-12 insulation in Climate Zones 5 through 8. *Ducts* located underground beneath *buildings* shall be insulated as required in this section or have an equivalent *thermal distribution efficiency*. Underground *ducts* utilizing the *thermal distribution efficiency* method shall be *listed* and *labeled* to indicate the *R-value* equivalency. Where located within a *building thermal envelope* assembly, the *duct* or plenum shall be separated from the *building* exterior or unconditioned or exempt spaces by not less than R-8 insulation in Climate Zones 0 through 4 and not less than R-12 insulation in Climate Zones 5 through 8.

Exceptions:

1. Where located within equipment.
2. Where the design temperature difference between the interior and exterior of the *duct* or plenum is not greater than 15°F (8°C).

Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with Section 603.9 of the *International Mechanical Code* or Sections 603.9 and 603.10 of the *Uniform Mechanical Code*.

Section C403.13.2.1 Low-pressure duct systems

*Amend Section **C403.13.2.1** to read as follows:*

C403.13.2.1 Low-pressure duct systems. Longitudinal and transverse joints, seams and connections of supply and return *ducts* operating at a static pressure less than or equal to 2 inches water gauge (w.g.) (498 Pa) shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes installed in accordance with the manufacturer's instructions. Pressure classifications specific to the *duct system* shall be clearly indicated on the *construction documents* in accordance with the *International Mechanical Code* or *Uniform Mechanical Code*.

Exception: Locking-type longitudinal joints and seams, other than the snap-lock and button-lock types, need not be sealed as specified in this section.

Section C403.13.2.2 Medium-pressure duct systems

*Amend Section **C403.13.2.2** to read as follows*:

C403.13.2.2 Medium-pressure duct systems. *Ducts* and plenums designed to operate at a static pressure greater than 2 inches water gauge (w.g.) (498 Pa) but less than 3 inches w.g. (747 Pa) shall be insulated and sealed in accordance with Section C403.13.1. Pressure classifications specific to the *duct system* shall be clearly indicated on the *construction documents* in accordance with the *International Mechanical Code* or *Uniform Mechanical Code*.

Section C405.13 Energy monitoring

*Amend Section **C405.13** to read as follows*:

C405.13 Energy monitoring. ~~New *buildings* with a gross *conditioned floor area* of not less than 10,000 square feet (929m^2) shall be equipped to measure, monitor, record and report energy consumption in accordance with Sections C405.13.1 through C405.13.6 for load categories indicated in Table C405.13.2 and Sections C405.13.7 through C405.13.11 for end-use categories indicated in Table C405.13.8.~~ Electrical systems shall be disaggregated as per the end-use categories per Section C405.13.2. A data acquisition system required by Section C405.13.4 and a Graphical energy report required by Section C405.13.5 are not mandatory.

Exceptions:

1. *Dwelling units* in R-2 occupancies.

2. Individual tenant spaces are ~~not~~ required to disaggregate as per the end-use categories per Section C405.13.2 End-use electric metering categories. ~~to comply with this section provided that the space has its own utility services and meters and has less than 5,000 square feet (464.5m^2) of conditioned floor area.~~

Section C405.15 Renewable energy systems

*Amend Section **C405.15** to read as follows:*

C405.15 Renewable energy systems. *Buildings* designed with renewable energy systems and built in Climate Zones 0 through 7 shall comply with Sections C405.15.1 through C405.15.4.

C405.15.1 On-site renewable energy systems. *Buildings* shall be provided with on-site renewable electricity generation systems with a direct current (DC) nameplate power rating of not less than 0.75 watts per square foot (8.1 W/m^2) multiplied by the sum of the *gross conditioned floor* area of all floors, not to exceed the combined g*ross conditioned floor* area of the three largest floors.

Exceptions: The following *buildings* or building sites shall comply with Section C405.15.2:

1. A *building site* located where an unshaded flat plate collector oriented toward the equator and tilted at an angle from horizontal equal to the latitude receives an annual daily average incident solar radiation less than 1.1 kBtu/ft^2 per day (3.5 kWh/m^2/day).

2. A *building* where more than 80 percent of the roof area is covered by any combination of permanent obstructions such as, but not limited to, mechanical equipment, vegetated space, access pathways or occupied roof terrace.

3. Any *building* where more than 50 percent of the roof area is shaded from direct-beam sunlight by natural objects or by structures that are not part of the *building* for more than 2,500 annual hours between 8:00 a.m. and 4:00 p.m.

4. A *building* with gross *conditioned floor area* less than 5,000 square feet (465 m^2).

Section C406.2.2.5 H05 Dedicated outdoor air system

*Amend Section **C406.2.2.5 H05** to read as follows:*

C406.2.2.5 H05 Dedicated outdoor air system. Credits for this measure are allowed only where single-*zone* HVAC units are not required to have multispeed or variable-speed fan control in accordance with Section C403.8.6.1. HVAC controls and ventilation systems shall include all of the following:

1. *Zone* controls shall cycle the heating/cooling unit fans off when not providing required heating and cooling or shalllimit fan power to 0.12 watts/cfm (0.056 w/l/s) of *zone* supply air.
2. Outdoor air shall be supplied by an independent ventilation system designed to provide not more than 130 percent of the minimum outdoor air to each individual occupied *zone*, as specified by the *International Mechanical Code* or *Uniform Mechanical Code.*

   Exception: Outdoor airflow is permitted to increase during emergency or economizer operation, implemented as described in Item 4.

3. The ventilation system shall have energy recovery with an *enthalpy recovery ratio* of 65 percent or more at heating design conditions in Climate Zones 3 through 8 and an *enthalpy recovery ratio* of 65 percent or more at cooling design conditions in Climate Zones 0, 1, 2, 3A, 3B, 4A, 4B, 5A and 6A. In “A” *climate zones*, energy recovery shall include latent recovery. Where no humidification is provided, heating energy recovery effectiveness is permitted to be based on *sensible energy recovery ratio*. Where energy recovery effectiveness is less than the 65 percent required for full credit, adjust the credits from Section C406.2 by the factors in Table C406.2.2.5.
4. Where the ventilation system serves multiple *zones* and the system is not in a latent recovery outside air dehumidification mode, partial economizer cooling through an outdoor air bypass or wheel speed control shall automatically do one of the following:

   4.1. Set the energy recovery leaving-air temperature 55°F (13°C) or 100 percent outdoor air bypass when a majority of *zones* require cooling and outdoor air temperature is below 70°F (21°C).

   4.2. The HVAC ventilation system shall include supply-air temperature controls that automatically reset the supply-air temperature in response to representative *building* loads, or to outdoor air temperatures. The controls shall reset the supply-air temperature not less than 25 percent of the difference between the design supply-air temperature and the design room-air temperature.

5. Ventilation systems providing mechanical dehumidification shall use recovered energy for reheat within the limits of Item 4. This shall not limit the use of latent energy recovery for dehumidification.

Where only a portion of the *building* is permitted to be served by constant air volume units or the *enthalpy recovery ratio* or *sensible energy recovery ratio* is less than 65 percent, the base energy credits shown in Section C406.2 shall be prorated as follows:

Equation 4-18 $EC_{DOA}S = EC_{BASE} \times FLOOR_{CAV} \times ERE_{ADJ}$

where:

EC_{DOAS} = Energy credits achieved for H05.

EC_{BASE} = H05 base energy credits in Section C406.2.

$FLOOR_{CAV}$ = Fraction of whole-project gross conditioned floor area not required to have variable-speed or multi-speed

fan airflow control in accordance with Section C403.8.6.

ERE_{adj} = The energy recovery adjustment from Table C406.2.2.5 based on the lower of actual cooling or heating enthalpy recovery ratio or sensible energy recovery ratio where required for the climate zone. Where recovery ratios vary, use a weighted average by supply airflow.

Section C501.2 Compliance

*Amend Section **C501.2** to read as follows:*

C501.2 Compliance. *Additions, alterations, repairs*, and changes of occupancy to, or relocation of, existing *buildings* and structures shall comply with Sections C502, C503, C504 and C505 of this code, as applicable, and with the provisions for *alterations, repairs, additions* and changes of occupancy or relocation, respectively, in the *International Building Code*, *International Existing Building Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, Uniform Mechanical Code, ~~International Plumbing Code~~, Uniform Plumbing Code, International Property Maintenance Code, International Private Sewage Disposal Code* and NFPA 70. Changes where unconditioned space is changed to conditioned space shall comply with Section C502.

Exception: *Additions, alterations, repairs* or changes of occupancy complying with ANSI/ASHRAE/IES 90.1.

RESIDENTIAL PROVISIONS

Section R104.1.1 Above code programs

*Amend **R104.1.1** to read as follows:*

R104.1.1 Above code programs. The *code official* or other AHJ shall be permitted to deem a national, state or local energy-efficiency program to exceed the energy efficiency required by this code. Programs seeking approval must submit all requested supporting documentation, including program guidelines, protocols, calculations and program simulation performance software, if applicable, to the NNICC and/or the authority having jurisdiction for review for use as an acceptable program. *Buildings approved* in writing by such an energy-efficiency program shall be considered to be in compliance with this code where such buildings also meet the requirements identified in Table R405.2 and the proposed total *building thermal envelope* thermal conductance (TC) shall be less than or equal to the total *building thermal envelope* TC using the prescriptive *U*-factors and *F*-factors from Table R402.1.2 multiplied by 1.08 in Climate Zones 0, 1 and 2, and by 1.15 in Climate Zones 3 through 8, in accordance with Equation 1-1. The area-weighted *maximum fenestration solar heat gain coefficients* (SHGC) permitted in Climate Zones 0 through 3 shall be 0.30.

Section R401.3 Certificate

*Amend **R401.3** to read as follows:*

R401.3 Certificate. The Builder shall provide a final certificate to the owner. ~~A permanent certificate shall be completed by the builder or other *approved* party and posted on a wall in the space where the furnace is located, a utility room or an *approved* location inside the *building*. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect *label* or other required labels~~. The certificate shall indicate the following:

1. The predominant *R*-values of insulation installed in or on ceilings, roofs, walls, foundation components such as slabs, *basement walls, crawl space walls* and floors and *ducts* outside *conditioned* spaces.
2. *U*-factors of *fenestration* ~~and~~ ~~the *solar heat gain coefficient*(SHGC) of *fenestration*~~. Where there is more than one value for any component of the *building thermal envelope*, the certificate shall indicate both the value covering the largest area and the area weighted average value if available.
3. The results from any required *duct system* and *building thermal envelope* air leakage testing performed on the *building*.
4. The types, sizes and efficiencies of heating, cooling and service water-heating equipment. ~~Where a gas-fired unvented room heater, electric furnace or baseboard electric heater is installed in the residence, the certificate shall indicate "gas-fired unvented room heater,"~~

~~"electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be indicated for gas-fired unvented room heaters, electric furnaces and electric baseboard heaters.~~

5. Where on-site photovoltaic panel systems have been installed, the array capacity, inverter efficiency, panel tilt and orientation shall be noted on the certificate.
6. For *buildings* where an *Energy Rating Index* score is determined in accordance with Section R406, the *Energy Rating Index* score, both with and without any on-site generation, shall be listed on the certificate.
7. The code edition under which the structure was permitted, the compliance path used and, where applicable, the additional efficiency measures selected for compliance with Section R408.
8. The location and dimensions of a *solar-ready zone* where one is provided.

Section R402.5.1.2.1 Unit sampling

*Delete Section **R402.5.1.2.1:***

~~**R402.5.1.2.1 Unit sampling.** For *buildings* with eight or more *dwelling units* or *sleeping units*, seven or 20 percent of the *dwelling units* or *sleeping units*, whichever is greater, shall be tested. Tested units shall include a top-floor unit, a ground-floor unit, a middle-floor unit and the *dwelling unit* or *sleeping unit* with the largest *testing unit enclosure area*. Where the air leakage rate of a tested unit is greater than the maximum permitted rate, corrective actions shall be taken and the unit retested until it passes. For each tested *dwelling unit* or *sleeping unit* with an air leakage rate greater than the maximum permitted rate, three additional units, including the corrected unit, shall be tested. Where *buildings* have fewer than eight *dwelling units* or *sleeping units*, each unit shall be tested.~~

Section R402.5.1.3 Maximum air leakage rate

*Amend Section **R402.5.1.3** to read as follows:*

R402.5.1.3 Maximum air leakage rate. Where tested in accordance with Section R402.5.1.2, the air leakage rate for *buildings*, *dwelling units* or *sleeping units* shall be as follows:

1. Where complying with Section R401.2.1, the *building* or the *dwelling units* or *sleeping units* in the *building* shall have an air leakage rate not greater than ~~4.0~~ 5.0 air changes per hour ~~in Climate Zones 0, 1 and 2; 3.0 air changes per hour in Climate Zones 3 through 5; and 2.5 air changes per hour in Climate Zones 6 through 8.~~
2. Where complying with Section R401.2.2 or R401.2.3, the *building* or the *dwelling units* or *sleeping units* in the *building* shall have an air leakage rate not greater than ~~4.0~~ 5.0 air changes per hour, or 0.22 cubic feet per minute per square foot [1.1 L/(s × m^2)] of the *building thermal envelope* area or the dwelling *testing unit enclosure area*, as applicable.

Exceptions:

1. Where *dwelling units* or *sleeping units* are attached or located in an R-2 occupancy, and are tested without simultaneously testing adjacent *dwelling units* or *sleeping units*, the air leakage rate is permitted to be not greater than 0.27 cubic feet per minute per square foot [1.4 L/(s × m^2)] of the *testing unit enclosure area*. Where adjacent *dwelling units* are simultaneously tested in accordance with ASTM E779, the air leakage rate is permitted to be not greater than 0.27 cubic feet per minute per square foot [1.4 L/(s × m^2)] of the *testing unit enclosure area* that separates *conditioned space* from the exterior.
2. Where *buildings* have 1,500 square feet (139.4 m^2) or less of *conditioned floor area*, the air leakage rate is permitted to be not greater than 0.27 cubic feet per minute per square foot [1.4 L/(s × m^2)].

Section R403.6 Mechanical ventilation

*Amend **R403.6** to add the following:*

R403.6 Mechanical ventilation. The *buildings* and *dwelling units* complying with Section R402.5.1.1 shall be provided with mechanical *ventilation* that complies with the requirements of Section M1505 of the *International Residential Code* or the *International Mechanical Code*, as applicable, or with other *approved* means of *ventilation*. <u>The ventilation system shall have a readily accessible on-off control switch allowing control of the mechanical system. Utilization of outside air temperature sensors, carbon dioxide sensors, humidity sensors or similar intermittent controls to activate the outside air mechanical equipment is permitted.</u> Outdoor air intakes and exhausts shall have *automatic* or gravity *dampers* that close when the *ventilation* system is not operating.

International Residential Code (IRC)

Section R202 Definitions

*Amend **R202** to add the following:*

International Electrical Code. The Electrical Code, whether the National Electrical Code or the International Electrical Code, as amended and adopted by the local jurisdiction.

International Mechanical Code. The Mechanical Code, whether the Uniform Mechanical Code or the International Mechanical Code as amended and adopted by the local jurisdiction.

International Plumbing Code. The Plumbing Code, whether the Uniform Plumbing Code or the International Plumbing Code, as amended and adopted by the local jurisdiction.

International Fuel Gas Code. The Fuel Gas Code, whether NFPA 54 or the International Fuel Gas Code, as amended and adopted by the local jurisdiction.

Surcharge. A vertical load imposed on the retained soil that may impose a lateral force in addition to the lateral earth pressure of the retained soil. Examples include:

- Sloped retained soil.
- Structure footings supported by the retained soil.
- Adjacent vehicle loads supported by the retained soil.

Table R301.2 Climatic and geographic design criteria

*Amend Table **R301.2** to read as follows:*

TABLE R301.2-CLIMATIC AND GEORGRAPHY DESIGN CRITERIA													
GROUND SNOW LOAD [o]	WIND DESIGN				SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP [e]	ICE BARRIER UNDERLAYMENT REQUIRED [f]	FLOOD HAZARDS [g]	AIR FREEZING INDEX [i]	MEAN ANNUAL TEMP [j]
	Speed [d] (mph)	Topographic effects [k]	Special wind region [l]	Windborne debris zone[m]		Weathering[a]	Frost line depth [b]	Termite[c]					
See IBC Table 1608.2.1	See Appendix	See Appendix	See Appendix	See Appendix	See Appendix	See Appendix	See Appendix	See Appendix	~~See Appendix~~	See Appendix	See Appendix	See Appendix	See Appendix
									~~MAMUAL J DESSIGN CRITERIA[n]~~				

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

a. Where weathering requires a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code, the frost line depth strength required for weathering shall govern. The weathering column shall be filled in with the weathering index,“negligible,” “moderate” or “severe” for concrete as determined from Figure R301.2(1). The grade of masonry units shall be determined from ASTM C34, ASTM C55, ASTM C62, ASTM C73, ASTM C90, ASTM C129, ASTM C145, ASTM C216 or ASTM C652.

b. Where the frost line depth requires deeper footings than indicated in Figure R403.1(1), the frost line depth strength required for weathering shall govern. The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.

d. The jurisdiction shall fill in this part of the table with the wind speed from the ultimate design wind speeds map [Figure R301.2(2)]. Wind exposure category shall be determined on a site-specific basis in accordance with SectionR301.2.1.4.

e. The jurisdiction shall fill in this section of the table to establish the design criteria using Table 10A from ACCA Manual J or established criteria determined by the jurisdiction.

f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.

g. The jurisdiction shall fill in this part of the table with the date of the jurisdiction’s entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas); and the title and

date of the currently effective Flood Insurance Study or other flood hazard study and maps adopted by the authority having jurisdiction, as amended.

h. In accordance with Sections R905.1.2, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with

“YES.” Otherwise, the jurisdiction shall fill in this part of the table with “NO.”

i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table “Air Freezing Index-USA Method (Base 32°F).”

j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table “Air Freezing Index-USA Method (Base 32°F).”

k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall indicate “NO” in this part of the table.

l. In accordance with Figure R301.2(2), where there is local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with “YES” and identify any specific requirements. Otherwise, the jurisdiction

shall indicate “NO” in this part of the table.

m. In accordance with Section R301.2.1.2 the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate “NO” on this part of the table.

~~n. The jurisdiction shall fill in these sections of the table to establish the design criteria using Table 1a or 1b from ACCA Manual J or established criteria determined by the jurisdiction.~~

o. The jurisdiction shall fill in this section of the allowable stress design table using the Ground Snow Loads in Figure R301.2(3)

Section R309.1 Townhouse automatic sprinkler systems

*Amend Section **R309.1** to read as follows:*

Section R309.1 Townhouse automatic sprinkler systems. An automatic sprinkler system shall be installed in *townhouses*.

Exceptions:

1. An automatic sprinkler system shall not be required where *additions* or *alterations* are made to existing *townhouses* that do not have an automatic sprinkler system installed.
2. An automatic residential fire sprinkler system shall not be required in *townhouses* with less than 5,000 sq. ft. of living space unless the AHJ has amended the International Fire Code to include provisions pertaining to townhouses in accordance with NRS 278.586.

Section R309.2 One- and two-family dwellings automatic sprinkler systems

*Amend Section **R309.2** to read as follows:*

R309.2 One- and two-family dwellings automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in one- and two-family *dwellings*.

Exceptions:

1. An automatic sprinkler system shall not be required for *additions* or *alterations* to *existing buildings* that are not already provided with a sprinkler system.

2. An automatic residential fire sprinkler system shall not be required in one- and two-family *dwellings* with less than 5,000 sq. ft. of living space unless the AHJ has amended the International Fire Code to include provisions pertaining to one- and two- family *dwellings* in accordance with NRS 278.586.

Section R311.2.2 Alterations, repairs and additions

*Amend Section **R311.2.2** to read as follows:*

R311.2.2 Alterations, repairs and additions. Where *alterations, repairs* or *additions* requiring a *permit* occur, the individual *dwelling unit* shall be equipped with *carbon monoxide alarms* located as required for new *dwellings*.

Exceptions:

1. Work involving the exterior surface of *dwellings*, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.
2. Installation, *alteration* or repairs of plumbing systems that are not fuel fired.
3. Installation, *alteration* or repairs of *mechanical systems* that are not fuel fired.

Section R318.2 Egress door

*Amend Section **R318.2** to read as follows:*

R318.2 Egress door. Not less than one egress door shall be provided for each *dwelling unit*. The egress door shall be of the pivoted, balanced, or side-hinged swinging type, and shall provide a clear width of not less than 32 inches (813 mm) where measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The clear height of the door opening shall be not less than 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be readily openable from inside the *dwelling unit* without the use of a key or special knowledge or effort.

Section R403.1.4.1 Frost protection

*Amend Section **R403.1.4.1** to read as follows:*

R403.1.4.1 Frost protection. Except where otherwise protected from frost, foundation walls, piers and other permanent supports of *buildings* and structures shall be protected from frost by one or more of the following methods:

1. Extended below the frost line specified in Table R301.2.
2. Constructed in accordance with Section R403.3.
3. Constructed in accordance with ASCE 32.
4. Erected on solid rock.

Footings shall not bear on frozen soil unless the frozen condition is permanent.

Exceptions:

1. Protection of free-standing *accessory structures* with an area of 600 square feet (56 m^2) or less, of *light-frame construction*, with an eave height of 10 feet (3048 mm) or less shall not be required.
2. Protection of free-standing *accessory structures* with an area of 400 square feet (37 m^2) or less, of other than *light-frame construction*, with an eave height of 10 feet (3048 mm) or less shall not be required.
3. For patio covers supported on a concrete slab-on-grade without footings, the slab shall conform to the provisions of Section R506, shall be not less than 3.5 inches (89 mm) thick and the columns shall not support live or dead loads in excess of 750 pounds (3.34 kN) per column.

Chapter 11-Energy efficiency

*Delete **Chapter 11** to read as follows:*

For residential energy efficiency requirements, reference the residential amendments of the 2024 International Energy Conservation Code (IECC).

Section M1503.6 Makeup air required

*Amend Section **M1503.6** to read as follows:*

M1503.6 Makeup air required. Where one or more gas, liquid or solid fuel-burning *appliance* that is neither direct-vent nor uses a mechanical draft venting system is located within a *dwelling unit's* air barrier, each exhaust system capable of exhausting in excess of ~~400~~ 600 cubic feet per minute (~~0.19~~ 0.28 m^3/s) shall be mechanically or passively provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with not fewer than one outdoor air duct and damper complying with Section M1503.6.2.

Exception: Makeup air is not required for exhaust systems installed for the exclusive purpose of space cooling and intended to be operated only when windows or other air inlets are open.

Section G2404.1 Scope

*Add Section **G2404.1.1(301.1.2)** to Section **G2404.1 (301.1)** to read as follows:*

G2404.1 (301.1) Scope. This section shall govern the approval and installation of all *equipment* and *appliances* that comprise parts of the installations regulated by this code in accordance with Section G2401.

> **G2404.1.1 (301.1.2) LP-Gas Installations.** Whenever there is a conflict between this code and NFPA 54 and NFPA 58 as adopted by the Nevada LP-Gas Board for LP-Gas installations, the adopted codes of the Nevada LP-Gas Board shall govern.

Section G2404.12 Snow hazard

*Add Section **G2404.12 (301.16)** to Section **G2404 (301)** to read as follows:*

G2404.12 (301.16) Snow hazard. On any new gas installation or reconnecting the gas service of an existing installation, gas meters above 5,800 feet in elevation in Carson City, and Washoe County must be protected from falling, sliding and accumulating of snow, unless the gas meter is installed in a protected location such as under an engineered deck, roof or shed. Engineered decks, roofs, or sheds shall be enclosed on all sides when used to protect gas meters on the snow shedding sides of a structure as approved by the gas utility.

Section G2417.4.1 Test pressure

*Amend Section **G2417.4.1 (406.4.1)** to read as follows:*

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be no less than 1-1/2 times the proposed maximum working pressure, but not less than ~~3~~ 25 psig (~~20~~ 172.4 kPa gauge). Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not

exceed a value that produces a hoop stress in the *piping* greater than 50 percent of the specified minimum yield strength of the pipe. This test shall be made before any fixtures, or appliances have been attached and before being concealed.

Section G2417.4.2 Test duration

*Amend Section **G2417.4.2 (406.4.2)** to read as follows:*

G2417.4.2 (406.4.2) Test duration. Test duration shall be not less than ~~10~~ 30 minutes.

Section G2417.6.2 Before turning gas on

*Amend Section **G2417.6.2 (406.6.2)** to read as follows:*

G2417.6.2 (406.6.2) Before turning gas on. During the process of turning gas on into a system of new *gas piping* or into a system or portion of a gas system that has been restored after an interruption of service, the entire system shall be inspected to determine that there are no open fittings or ends and that all *valves* at unused outlets are closed and plugged or capped. In the City of Reno, City of Sparks, Storey County and Washoe County, a manometer test shall be made after all valves, unions, connectors and piping to the appliances are complete.

A pressure test shall be made with the use of a manometer gauge measuring inches of water column. With all valves including gas cock and gas control valves in the open position, a pressure of at least eleven (11) to fifteen (15) inches of water column shall be measured for at least fifteen (15) minutes, with no perceptible drop in pressure.

Section G2417.6.2.1 For medium pressure gas systems

*Add Section **G2417.6.2.1 (406.6.2.1)** to Section **G2417.6.2 (406.6.2)** to read as follows:*

G2417.6.2.1 (406.6.2.1) For medium pressure gas systems: Where the appliance is rated for seven (7) to fourteen (14) inches of water column, a manometer test of eleven (11) to fifteen (15) inches of water column will be conducted between the pressure regulating valve and the appliance and shall be measured for at least fifteen (15) minutes with no perceptible drop in pressure.

Section G2417.6.2.2 For appliances or equipment requiring pounds of gas pressure

*Add Section **G2417.6.2.2 (406.2.2)** to Section **G2417.6.2 (406.6.2)** to read as follows:*

G2417.6.2.2 (406.2.2) For appliances or equipment requiring pounds of gas pressure: A pressure test using a pressure gauge measuring in one tenth ($^1/_{10}$) increments shall be conducted on the gas train of that appliance or equipment. The pressure shall be equal to the appliance's normal operating pressure for a period of thirty (30) minutes with no perceptible drop in pressure.

Section G2417.6.2.3 Manometer testing

*Add Section **G2417.6.2.3 (406.2.3)** to Section **G2416.6.2 (406.6.2)** to read as follows:*

G2417.6.2.3 (406.2.3) Manometer testing. Manometer testing shall be performed by a person holding a valid Washoe County manometer tester card for which the number is to be provided at the time of request for inspection. A visual manometer test to be witnessed by the authority having jurisdiction may be allowed by the Building Official. A manometer test does not need to be reported when the serving gas utility performs a manometer or clock test prior to providing service.

Section P2503.5.1 Rough plumbing

*Amend Section **P2503.5.1** to read as follows:*

P2503.5.1 Rough plumbing. DWV systems shall be tested on completion of the rough piping installation by water, by air ~~for piping systems other than plastic,~~ or by a vacuum of air ~~for plastic piping systems~~ without evidence of leakage. The test shall be applied to the drainage system in its entirety or in sections after rough-in piping has been installed, as follows:

1. Water test. Each section shall be filled with water to a point not less than 10 feet (3048mm) above the highest fitting connection in that section, or to the highest point in the completed system. Water shall be held in the section under test for a period of 15 minutes. The system shall prove leak free by visual inspection.
2. Air test. The portion under test shall be maintained at a gauge pressure of 5 pounds per square inch (psi) (34 kPa) or 10 inches of mercury column (34 kPa). This pressure shall be held without introduction of additional air for a period of 15 minutes.
3. *Vacuum Test. The portion under test shall be evacuated of air by a vacuum-type pump to achieve a uniform gauge pressure of -5 pounds per square inch or negative 10 inches of mercury column (-34 kPa). This pressure shall be held without the removal of additional air for a period of 15 minutes.*

Section P2603.5.1 Sewer depth

*Amend Section **P2603.5.1** to read as follows:*

P2603.5.1 Sewer depth. *Building sewers* that connect to private sewage disposal systems shall be not less than **twelve (12)** inches (305 mm) below finished *grade* at the point of septic tank connection. *Building sewers* shall be not less than **twelve (12)** inches (305 mm) below *grade*.

Section P3002.2.2 Building sewer

*Add Section **P3002.2.2** to Section **P3002.2** to read as follows:*

P3002.2.2 Building sewer. In no event shall building sewer be less than four (4) inches in diameter.

Section E3601.6.2 Service disconnect location.

*Amend Section **E3601.6.2** to read as follows:*

E3601.6.2 Service disconnect location. The service disconnecting means shall be installed at a readily accessible location ~~either~~ outside of a *building* or *structure* ~~inside~~ nearest the point of entrance of the service conductors. Service disconnecting means shall not be installed in bathrooms. ~~Each occupant shall have *access* to the disconnect serving the *dwelling unit* in which they reside.~~ [23.70(A)(1)(2), 230.72(C)] The disconnecting means may be located independent of the building or structure served, in direct line of sight, but not to exceed thirty (30) feet.

> **Exception:** The service disconnecting means may be installed within a *building* when an external remote shunt trip switch is provided. All shunt trip switches shall be located at seven feet (7') above finish grade at a location approved by the fire department. All shunt trip switches shall be located within a twelve inch (12") equilateral triangle, red in color.

Section E3705.6 Fuses and fixed trip circuit breakers

*Add Section **E3705.6.1** to Section **E3705.6** to read as follows:*

E3705.6.1 Edison Fuses. Plug fuses of the Edison-based shall be used only for replacement in existing installations where there is no evidence of overfusing or tampering. In any existing building where alterations or additions are made to any of the premise's wiring, all fuse holders shall be made to comply with the requirements for a Type S fuse holder through the installation of a tamper proof (rejection type) base.

Section E3901.2.2 Wall Space

*Amend Section **E3901.2.2** to read as follows:*

E3901.2.2 Wall Space. As used in this section, a wall space shall include the following: [210.52(A)(2)]

1. Any space 2 ft. (610mm) or more in width, including space measured around corners, and that is unbroken along the floor line by doorways and similar openings, fireplaces, stationary appliances, and fixed cabinets that do not have countertops or similar work surfaces.
2. The space occupied by fixed panels in exterior walls, excluding sliding panels.
3. The space created by fixed room dividers such as railings and freestanding bar-type counters.

Exceptions:

1. The space behind operable doors.
2. Vestibules, hallways, and similar areas less than 5 ft wide in bedrooms.

Section E3902.2 Garage and accessory building receptacles

*Amend Section **E3902.2** to read as follows:*

E3902.2 Garage and accessory building receptacles. 125-volt through 250-volt receptacles installed in garages and grade-level portions of unfinished accessory buildings used for storage or work areas and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel. [210.8(A)(2)].

Exception: Single receptacle for a fixed in place heating appliance only (example: fuel-fired FAU, heat pump or water heater) when located within an attached garage.)

National Electrical Code (NEC)

Article 210.52(A)(2) Wall Spacing

*Amend Article **210.52(A)(2)** to read as follows:*

210.52(A)(2) Wall Spacing. As used in this section, a wall space shall include the following:

(1) Any space 600 mm (2 ft) or more in width (including space measured around corners) and unbroken along the floor line by doorways and similar openings, fireplaces, stationary appliances, and fixed cabinets to that do not have countertops or similar work surfaces

(2) The space occupied by fixed panels in walls, excluding sliding panels

(3) The space afforded by fixed room dividers, such as free-standing bar-type counters or railings

Exceptions:

(1) The space behind operable doors

(2) Vestibules, hallways, and similar areas less than 5ft wide in bedrooms

Article 225.31(B) Locations

*Amend Article **225.31(B)** to read as follows:*

225.31(B) Location. The disconnecting means shall be installed ~~either inside or~~ attached to the outside of the building or structure served ~~or~~ where the conductors pass through the building or structure. The disconnecting means shall be at a readily accessible location nearest the point of entrance of the conductors. For the purposes of this section, the requirements in 230.6 shall apply.

Exception No. 1: For installations under single management, where documented safe switching procedures are established and maintained, and where the installation is monitored by qualified individuals, the disconnecting means shall be permitted to be located elsewhere on the premises.

Exception No. 2: For buildings or other structures qualifying under 685.1, the disconnecting means shall be permitted to be located elsewhere on the premises.

Exception No. 3: For towers or poles used as lighting standards, the disconnecting means shall be permitted to be located elsewhere on the premises.

Exception No. 4: For poles or similar structures used only for support of signs installed in accordance with 600.1, the disconnecting means shall be permitted to be located elsewhere on the premises.

Exception No. 5: The disconnecting means shall be located independent of the building or structure served, in direct line of sight, but not to exceed thirty feet (30').

Exception No. 6: The service disconnecting means may be installed within a building when an external remote shunt trip switch is provided. All shunt trip switches shall be located at seven feet (7') above finish grade at a location approved by the fire department. All shunt trip switches shall be located within a twelve inch (12") equilateral triangle, red in color.

Article 230.70(A)(1) Readily Accessible Location

*Amend Article **230.70(A)(1)** to read as follows:*

230.70 (A)(1) Readily Accessible Location. The service disconnecting means shall be installed at a readily accessible location ~~either~~ outside of a building or structure ~~or inside~~ nearest the point of entrance of the service conductors. The disconnecting means may be located independent of the building or structure served, in direct line of sight, but not to exceed thirty feet (30').

***Exception:** The service disconnecting means may be installed within a building when an external remote shunt switch is provided. All shunt trip switches shall be located at seven feet (7') above finish grade at a location approved by the fire department. All shunt trip switches shall be located within a twelve inch (12") equilateral triangle, red in color.*

Article 240.51(B) Replacement Only

*Amend Article **240.51(B)** to read as follows:*

240.51(B) Replacement Only. Plug fuses of the Edison-base type shall be used only for replacements in existing installations where there is no evidence of overfusing or tampering. In any existing building where alterations or additions are made to any of the premise's wiring, all fuse holders shall comply with Article 240.54.

Article 250.118(A)(4) Permitted

*Amend Article **250.118(A)(4)** to read as follows:*

250.118(A)(4) Permitted: Electrical metallic tubing with the exception of where the metallic raceway is subject to either damage or likely to be disturbed in the future under normal operating conditions, this determination shall be made by the Authority Having Jurisdiction.

FPN: An example of "subject to damage" is a surface installed conduit running along a traffic path. An example of "likely to be disturbed" is a surface installed conduit running across a rooftop, where future re-roofing operations will require the conduit to shifted, damaged, removed or relocated.

Article 250.120 Equipment Grounding Conductor Installation

*Amend Article **250.120** to read as follows:*

250.120 Equipment Grounding Conductor Installation. An equipment grounding conductor shall be installed in accordance with 250.120(A), (B), ~~and~~ (C) and (D).

(D) All raceways installed on roofs shall contain an equipment grounding conductor sized per Table 250.122 installed with the circuit conductors.

Exception: Low voltage, communication and similar type systems unless required elsewhere in the Code.

Article 358.10(A) Uses Permitted

*Amend Section **358.10(A)** to read as follows:*

358.10 Uses Permitted.

(A) Exposed and Concealed. The use of EMT shall be permitted for both exposed and concealed work for the following:

(1) In concrete~~, in direct contact with the earth, in direct burial applications with fittings identified for direct burial,~~ or in areas subject to severe corrosive influences where installed in accordance with 358.10(B)

(2) In dry, damp and wet locations

(3) In any hazardous (classified) location as permitted by other articles in this *Code*

(4) For manufactured wiring systems as permitted in604.100(A)(2)

Article 358.12 Uses Not Permitted

*Amend Article **358.12** to read as follows:*

358.12 Uses Not Permitted. EMT shall not be used under the following conditions:

(1) Where subject to severe physical damage
(2) For the support of luminaires or other equipment except conduit bodies no larger than the largest trade size of the tubing
(3) In direct contact with earth or direct burial applications

Article 690.7(D) Marking DC PV Circuits

*Amend **690.7(D)** to read as follows:*

690.7(D) Marking DC PV Circuits: A permanent readily visible etched phenolic or metallic notice label compliant with ANSI Z535.2-2011 indicating the highest maximum dc voltage in a PV

system, calculated in accordance with 690.7, shall be provided by the installer at one on the following locations:

(1) DC PV system disconnecting means
(2) PV system electronic power conversion equipment
(3) Distribution equipment associated with the PV System

Article 700.10(D)(1) Occupancies

*Amend Article **700.10(D)(1)** to read as follows:*

700.10(D) (1) Occupancies. Emergency systems shall meet the additional requirements in 700.100(D)(2) through (D)(4) in the following occupancies:

(1) Assembly occupancies for not less than 1000 persons
(2) Buildings above ~~23~~ 16.8m ~~(75~~ 55ft) in height
(3) Educational occupancies with more than 300 occupants

Article 700.12(B) Equipment Design and Location:

*Amend Article **700.12(B)** to read as follows:*

700.12(B) Equipment Design and Location. Equipment shall be designed and located as to minimize the hazards that might cause complete failure due to flooding, fires, icing, and vandalism.

Equipment for sources of power as described in 700.12(C) through (H) shall be installed either in spaces fully protected by approved automatic fire protection systems or in spaces with a 2-hour fire rating where located within the following:

(1) Assembly occupancies for more than 1000 persons
(2) Buildings above ~~23~~ 16.8m ~~(75~~ 55ft) in height
(3) Educational occupancies with more than 300 occupants

International Fuel Gas Code (IFGC)

Section 301.1.2 LP-Gas installations

*Add Section **301.1.2** to Section **301.1** to read as follows:*

301.1.2 LP-Gas Installations. Whenever there is a conflict between this code and NFPA 54 and NFPA 58 as adopted by the Nevada LP-Gas Board for LP-Gas installations, the adopted codes of the Nevada LP-Gas Board shall govern.

Section 301.16 Snow hazard

*Add Section **301.16** to Section **301** to read as follows:*

301.16 Snow hazard. On any new gas installation or reconnecting the gas service of an existing installation, gas meters above 5,800 feet in elevation in Carson City, Storey County and Washoe County must be protected from falling, sliding and accumulating of snow, unless the gas meter is installed in a protected location such as under an engineered deck, roof or shed. Engineered decks, roofs, or sheds shall be enclosed on all sides when used to protect gas meters on the snow shedding sides of a structure as approved by the gas utility.

Section 406.4.1 Test pressure

*Amend Section **406.4.1** to read as follows:*

406.4.1 Test pressure. The test pressure to be used shall be no less than 1½ times the proposed maximum working pressure, but not less than ~~3~~ 25 psig (~~20~~ 172.4 kPa gauge). Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the *piping* greater than 50 percent of the specified minimum yield strength of the pipe. This test shall be made before any fixtures or appliances have been attached and before being concealed.

Section 406.4.2 Test duration

*Amend Section **406.4.2** to read as follows:*

406.4.2 Test duration. Test duration shall be not less than 30 minutes. ~~½ hour for each 500 cubic feet (14 m^3) of pipe volume or fraction thereof. When testing a system having a volume less than 10 cubic feet (0.28 m3) or a system in a single family dwelling, the test duration shall be not less than 10 minutes. The duration of the test shall not be required to exceed 24 hours.~~

Section 406.6.2 Before turning gas on*

*Amend Section **406.6.2** and add new subsections **405.6.2.1** thru **405.6.2.3** to read as follows:*
This amendment shall only apply to the City of Reno, City of Sparks, and Washoe County.

406.6.2 Before turning gas on. During the process of turning gas on into a system of new gas *piping,* or portion of a gas system that has been restored after an interruption of service, the entire system shall be inspected to determine that there are no open fittings or ends and that all valves at unused outlets are closed and plugged or capped. In the City of Reno, City of Sparks, and Washoe County, a manometer test shall be made after all valves, unions, connectors and piping to the appliances are complete. A pressure test shall be made with the use of a manometer gauge measuring inches of water column. With all valves including gas cock and gas control valves in the open position, a pressure of at least eleven (11) to fifteen (15) inches of water column shall be measured for at least fifteen (15) minutes with no perceptible drop in pressure.

406.6.2.1 For medium pressure gas systems: Where the appliance is rated for seven (7) to fourteen (14) inches of water column, a manometer test of eleven (11) to fifteen (15) inches of water column will be conducted between the pressure regulating valve and the appliance and the appliance shall be measured for at least fifteen (15) minutes with no perceptible drop in pressure.

406.2.2 For appliances or equipment requiring pounds of gas pressure: A pressure test using a pressure gauge measuring in one tenth ($\frac{1}{10}$) increments shall be conducted on the gas train of that appliance or equipment. The pressure shall be equal to the appliance's normal operating pressure for a period of thirty (30) minutes with no perceptible drop in pressure.

406.2.3 Manometer testing. Manometer testing shall be performed by a person holding a valid *Washoe County manometer tester card* for which the number is to be provided at the time of request for inspection. A visual manometer test to be witnessed by the authority having jurisdiction may be allowed by the Building Official. A manometer test does not need to be reported when the serving gas utility performs a manometer or clock test prior to providing service.

Section 505.4 Makeup air required

*Amend Section **505.4** to read as follows:*

505.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of ~~400~~ 600 cfm (~~0.19~~ 0.28 m^3/s) shall be provided with *makeup air* at a rate approximately equal to the *exhaust air* rate. Such *makeup air* systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

Section 508.1.4 Evaporative cooling systems used as makeup air

*Add Section **508.1.4** to Section **508.1** to read as follows:*

508.1.4 Evaporative cooling systems used as makeup air. Evaporative coolers shall not be used for make-up air units on commercial kitchen hoods and kitchen ventilation systems.

Exception: Evaporative cooling systems that are a listed assembly with tempered air for kitchen make-up air systems.

Section 603.2 Duct sizing

*Amend Section **603.2** to read as follows:*

603.2 Duct sizing. Ducts installed within a single *dwelling unit* shall be sized in accordance with ACCA Manual D based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculations methodologies, the *appliance* manufacturer's installation instructions or other *approved* methods. Ducts installed within all other *buildings* shall be sized in accordance with the ASHRAE *Handbook of Fundamentals* or other equivalent computation procedure.

Uniform Mechanical Code (UMC)

Section 304.3 Access to Appliances on Roofs

*Amend Section **304.3** to read as follows:*

Section 304.3 Access to Appliances on Roofs. Appliances located on roofs or other elevated locations above 30 inches (762 mm) shall be accessible. [NFPA 54:9.4.3.1]

304.3.1 Access from the Inside. Buildings of more than 15 feet (4572 mm) in height shall have an inside means of access to the roof unless other means acceptable to the Authority Having Jurisdiction are used [NFPA 54:9.4.3.2]

304.3.1.1 Access Type. The inside means of access shall be a permanent or foldaway inside stairway or ladder, terminating in an enclosure, scuttle, or trapdoor. Such scuttles or trap doors shall be at least 22 inches by 24 inches (559 mm by 610 mm) in size, shall open easily and safely under all conditions, especially snow, and shall be constructed so as to permit access from the roof side unless deliberately locked on the inside.

At least ~~6~~ 10 feet(~~1829~~ 3048 mm) of clearance shall be available between the access opening and the edge of the roof or similar hazard, or rigidly fixed rails or guards a minimum of 42 inches (1067 mm) in height shall be provided on the exposed side. Where parapets or other building structures are utilized in lieu of guards or rails, they shall be a minimum of 42 inches (1067 mm) in height. [NFPA 54:9.4.3.3]

Section 403.7.2 Enclosed Parking Garages

*Amend Section **403.7.2** to read as follows:*

403.7.2 Enclosed Parking Garages. Mechanical ventilation systems for enclosed parking garages shall operate continuously.

Exceptions:

(1) Mechanical ventilation systems for enclosed parking garages shall be permitted to operate intermittently where the system is designed to operate automatically upon detection of vehicle operation or presence of occupants by approved automatic detection devices.

(2) Approved automatic carbon monoxide sensing devices, and nitrogen dioxide detectors shall be permitted to modulate the ventilation system to not exceed a maximum average of 50 parts per million of carbon monoxide, or 1 part per million of nitrogen dioxide during an eight-hour period with a concentration of not more than 200 parts per million for carbon monoxide, or 5 parts per million nitrogen dioxide, for a period not exceeding 15 minutes. Automatic carbon monoxide sensing devices installed in modulated parking garage ventilation systems shall be approved in accordance with Section 301.2.

Section 504.4.2.1 Length Limitation

*Amend Section **504.4.2.1** to read as follows:*

504.4.2.1 Length Limitation. Unless otherwise permitted or required by the dryer manufacturer's instructions and approved by the Authority Having Jurisdiction, domestic dryer moisture exhaust ducts shall not exceed a total combined horizontal and vertical length of 14 feet (4267 mm), including two 90 degree (1.57 rad) elbows. A length of 2 feet (610 mm) shall be deducted for each 90- degree (1.57 rad) elbow in excess of two.

Exceptions: ~~Where an exhaust duct power ventilator, in accordance with Section 504.4.2.3, is used, the maximum length of the dryer exhaust duct shall be permitted to be in accordance with the dryer exhaust duct power ventilator manufacturer's installation instructions.~~

(1) Where the make and model of the clothes dryer to be installed is known and the manufacture's installation instructions for the clothes dryer are provided to the Authority Having Jurisdiction, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacture's installation instructions.
(2) Where large-radius 45-degree (0.8 rad) and 90-degree (1.6 rad) bends are installed, determination of the equivalent length of clothes dryer exhaust duct for each bend by engineering calculation in accordance with ASHRAE Fundamentals Handbook shall be permitted.
(3) Dryer exhaust duct lengths may be increased when justified by calculations prepared and stamped by a Nevada Licensed Mechanical engineer.

Section 505.10 Makeup Air

*Amend Section **505.10** to read as follows:*

505.10 Makeup Air. Makeup air shall be provided to replenish air exhausted by the ventilation system. Exhaust hood systems capable of exhausting in excess of 600 cfm (0.28 m3/s) shall be provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system. Makeup air intakes shall be located so as to avoid recirculation of contaminated air within enclosures.

Section 508.3.5.4 Evaporative Cooling Systems Used as Make Up Air Systems

*Add Section **508.3.5.4** to read as follows:*

508.3.5.4.1 Evaporative Cooling Systems. Evaporative cooling systems will comply with this chapter. Evaporative coolers shall not be used for makeup air units on commercial kitchen hoods and kitchen ventilation systems.

Exception: Evaporative cooling systems that are part of a listed heating air system for kitchen make up air systems. The temperature differential between the makeup air and the air in the conditioned space shall not exceed 10^0F (6^0C) except where the added heating and cooling load of makeup air do not exceed the capacity of the HVAC system.

Section 511.2.2.2 Capture and Containment Test

*Amend Section **511.2.2.2** to read as follows:*

Section 511.2.2.2 Capture and Containment Test. The permit holder shall verify the capture and containment performance of Type I hoods. A field test shall be conducted with all appliances under the hood at operating temperatures, all the hoods operating at design airflows, and with all sources of replacement air operating at design airflows for the restaurant. Capture and containment shall be verified visually by observing smoke or steam produced by actual cooking operation or by simulating cooking using devices such as smoke candles or smoke puffers. Smoke bombs shall not be used [ASHRAE 154:4.7.2]

Exception: Capture and containment test not required if hood is UL and NFPA listed and manufacturers data lists the individual equipment below hood.

Section 605.1 General

*Amend Section **605.1** to read as follows:*

605.1 General. ~~Air ducts conveying air at temperatures exceeding 140°F (60°C) shall be insulated to maintain an insulation surface temperature of not more than 140°F (60°C)~~. Insulation material on the exterior of ducts shall be legibly printed with the name of the manufacturer, the thermal resistance (R) value at installed thickness, flame-spread index, and smoke developed index of the composite material. Internal duct liners and insulation shall be installed in accordance with SMACNA HVAC Duct Construction Standards – Metal and Flexible. Supply-air ducts, return air-ducts, and plenum of a heating or cooling system shall be insulated to achieve the minimum thermal (R) value in accordance with the 2024 International Energy Conservation Code Section R403.3 for residential and C403.13.1 for commercial.

~~**Exceptions:**~~

~~(1) Factory-installed plenums, casings, or ductwork furnished as a part of HVAC equipment tested and rated in accordance with approved energy efficiency standards.~~

~~(2) Ducts or plenums located in conditioned spaces where heat gain or heat loss will not increase energy use.~~

~~(3) For runouts less than 10 feet (3048 mm) in length to air terminals or air outlets, the rated R value of insulation need not exceed R-3.5 (R-0.6).~~

~~(4) Backs of air outlets and outlet plenums exposed to unconditioned or indirectly conditioned spaces with face areas exceeding 5 square feet (0.5 m^2) need not exceed R-2; those 5 square feet (0.5 m^2) or smaller need not be insulated.~~

~~(5) Ducts and plenums used exclusively for evaporative cooling systems.~~

Section 609.1 Air-Moving Systems and Smoke Detectors

*Amend Section **609.1** to read as follows:*

609.1 Air-Moving Systems and Smoke Detectors. Air-moving systems supplying air in excess of 2000 cubic feet per minute (ft³/min) (0.9439 m³/s) to enclosed spaces within buildings shall be equipped with an automatic shutoff. Automatic shutoff shall be accomplished by interrupting the power source of the air-moving equipment upon detection of smoke in the main ~~supply~~ return-air duct or plenum upstream of any filters, exhaust air connections, outdoor air connections, or decontamination equipment and appliance air duct served by such equipment. Duct smoke detectors shall comply with UL 268A and shall be installed in accordance with NFPA 72 and the manufacturer's installation instructions. Such devices shall be compatible with the operating velocities, pressures, temperatures, and humidities of the system. Where fire-detection or alarm systems are provided for the building, the smoke detectors shall be supervised by such systems in an approved manner.

Section 610 Performance Test for Automatic Shutoffs

*Add Section **610** to read as follows:*

610.0 Performance Test for Automatic Shutoffs.

610.1 General. Upon completion and before final approval of the air-moving system, provide with the required smoke detectors, a performance test shall be performed to verify compliance of detector installation to manufacturer's instructions and system compatibility as specified in this chapter. The permittee shall furnish the necessary test equipment and devices required to perform the tests and shall provide the jurisdiction with an accurate, completed, and signed test report. The report shall provide the jurisdiction a form containing equivalent information. At the discretion of the Authority Having Jurisdiction, the performance test may be required to be witnessed by the Authority Having Jurisdiction or performed by an approved third-party testing agency.

Section 939 Electric Sauna Heaters

*Amend Section **939** to read as follows:*

939.0 Sauna Heaters.

939.1 Electric Sauna Heaters. Sauna heaters shall comply with UL 875 and shall be installed in accordance with the manufacturer's installation instructions. Approved guards or barriers shall be installed to prevent accidental contact with the sauna heater. Ventilation shall be provided in accordance with its listing and combustion air for gas-fired sauna heaters shall comply with chapter 7.

Section 1301.1 Applicability

*Amend Section **1301.1** to read as follows:*

1301.1 Applicability. The regulations of this chapter shall govern the installation of fuel gas piping in or in connection with a building, structure or within the property lines of premises up to 5 pounds-force per square inch (psi) (34 kPa) for natural gas and 10 psi (69 kPa) for undiluted propane, other than service pipe.

Whenever there is a conflict between this code and NFPA 54 and NFPA 58 as adopted by the Nevada LP-Gas Board for LP-Gas installations, the adopted codes of the Nevada LP-Gas Board shall govern.

Section 1313.3 Test Pressure

*Amend Section **1313.3** to read as follows:*

1313.3 Test Pressure. This inspection shall include an air, CO_2, or nitrogen pressure test, at which time the gas piping shall stand a pressure of not less than ~~10~~ 25 psi (~~69~~ 172.4 kPa) gauge pressure. Test pressures shall be held for a length of time satisfactory to the Authority Having Jurisdiction but in no case less than ~~15~~ 30 minutes with no perceptible drop in pressure. For welded piping, and for piping carrying gas at pressures in excess of 14 inches water column (3.5 kPa) pressure, the test pressure shall be not less than 60 psi (414 kPa) and shall be continued for a length of time satisfactory to the Authority Having Jurisdiction, but in no case for less than 30 minutes. ~~For CSST carrying gas at pressures in excess of 14 inches water column (3.5 kPa) pressure, the test pressure shall be 30 psi (207 kPa) for 30 minutes.~~ These tests shall be made using air, CO_2, or nitrogen pressure and shall be made in the presence of the Authority Having Jurisdiction. Necessary apparatus for conducting tests shall be furnished by the permit holder. Test gauges used in conducting test shall be in accordance with Section 1303.3.3.1 through Section 1303.3.3.4. This test shall be made before any fixtures, or appliances have been attached and before being concealed.

Section 1313.5.1 Turning Gas On

*Amend Section **1313.5.1** to read as follows:*

1313.5.1 Turning Gas On. During the process of turning gas on into a system of new gas piping or portion of a gas system that has been restored after an interruption of service, the entire system shall be inspected to determine that there are no open fittings or ends and that all valves at unused outlets are closed and plugged or capped. [NFPA 54:8.2.2]

> **1313.5.1.1 During** the process of turning gas on into a system of new gas *piping* or into a system or portion of a gas system that has been restored after an interruption of service; in the City of Reno, City of Sparks, and Washoe County a manometer test shall be made after all valves, unions, connectors and piping to the appliances are complete. A pressure test shall be made with the use of a manometer gauge measuring inches of water column.

With all valves including gas cock and gas control valves in the open position, a pressure of at least eleven (11) to fifteen (15) inches of water column shall be measured for at least fifteen (15) minutes with no perceptible drop in pressure.

1313.5.1.2 For medium pressure gas systems: Where the appliance is rated for seven (7) to fourteen (14) inches of water column, a manometer test of eleven (11) to fifteen (15) inches of water column will be conducted between the pressure regulating valve and the appliance and shall be measured for at least fifteen (15) minutes with no perceptible drop in pressure.

1313.5.1.3 For appliances or equipment requiring pounds of gas pressure: A pressure test using a pressure gauge measuring in one tenth ($^{1}/_{10}$) increments shall be conducted on the gas train of that appliance or equipment. The pressure shall be equal to the appliance's normal operating pressure for a period of thirty (30) minutes with no perceptible drop in pressure.

1313.5.1.4 Manometer testing. Manometer testing shall be performed by a person holding a valid *Washoe County manometer tester card* in the City of Reno, City of Sparks, and Washoe County for which the number is to be provided at the time of request for inspection. A visual manometer test to be witnessed by the authority having jurisdiction may be allowed by the Building Official. A manometer test does not need to be reported when the serving gas utility performs a manometer or clock test prior to providing service.

Uniform Plumbing Code (UPC)

Section 216.0 Non-Combustible Material

*Add Section **216.0** to read as follows:*

261.0 Non-Combustible Material. Materials that, when tested in accordance with ASTM E136, have at least three of four specimens tested meeting all of the following criteria:

1. The recorded temperature of the surface and interior thermocouples shall not at any time during the test rise more than 54ºF (30ºC) above the furnace temperature at the beginning of the test.
2. There shall not be flaming from the specimen after the first 30 seconds.
3. If the weight loss of the specimen during testing exceeds 50 percent, the recorded temperature of the surface and interior thermocouples shall not at any time during the test rise above the furnace air temperature at the beginning of the test, and there shall not be flaming of the specimen.

Section 218.0 Penetration Firestop System

*Delete Section **218.0**:*

~~**218.0 Penetration Firestop System**. A specific assemblage of field-assembled materials, or a factory-made device, which has been tested to a standard test method and, where installed properly on penetrating piping materials, is capable of maintaining the fire-resistance rating of assemblies penetrated.~~

Section 222.0 “T” Rating

*Delete Section **222.0**:*

~~**222.0 T Rating**. The time period that the penetration firestop system, including the penetrating item, limits the maximum temperature rise of 325° (181°C) above its initial temperature through the penetration on the non-fire side, where tested in accordance with ASTM E 814 or UL 1479.~~

Section 312.7 Fire-Resistant Construction

*Amend Section **312.7** to read as follows:*

312.7 Fire-Resistant Construction. Piping penetrations of fire-resistance-rated walls, partitions, floors, floor/ceiling assemblies, roof/ceiling assemblies, or shaft enclosures shall be protected in accordance with the requirements of the building code. ~~and Chapter 14, “Firestop Protection.”~~

Section 422.0 Minimum Number of Required Fixtures

*Delete Section **422.0**:*

Shall comply with 2024 International Building Code Chapter 29.

Table 422.1 Minimum Plumbing Facilities

*Delete Table **422.1**:*

Shall comply with 2024 International Building Code Table 2902.1

Section 609.1 Installation

*Amend Section **609.1** to read as follows:*

609.1 Installation. Water piping shall be adequately supported in accordance with Table 313.3. Burred ends shall be reamed to the full bore of the pipe or tube. Changes in direction shall be made by the appropriate use of fittings, except that changes in direction in copper or copper alloy tubing shall be permitted to be made with bends, provided that such bends are made with bending equipment that does not deform or create a loss in the cross-sectional area of the tubing. Changes in direction are allowed with flexible pipe and tubing without fittings in accordance with the manufacturer's instructions. Provisions shall be made for expansion in hot-water piping. Piping, equipment, appurtenances, and devices shall be installed in a workmanlike manner in accordance with the provisions and intent of the code. Building supply yard piping shall be not less than ~~12~~ 6 inches (~~305~~ 152mm) below the average local frost depth. The cover shall be not less than 12 inches (305 mm) below finish grade.

Section 712.1 Media

*Amend Section **712.1** to read as follows:*

712.1 Media. The piping of the plumbing, drainage and venting systems shall be tested with water or air. ~~except that plastic piping shall not be tested with air~~. The Authority Having Jurisdiction shall be permitted to require the removal of cleanouts, etc., to ascertain whether the pressure has reached all parts of the system. After the plumbing fixtures have been set and their traps filled with water, they shall be submitted to a final test.

Section 717.1 General (Size of Building Sewers)

*Amend Section **717.1** to read as follows:*

717.1 General. The minimum size of a building sewer shall be determined on the basis of the total number of fixture units drained by such sewer, in accordance with Table 717.1. No building sewer shall be smaller than the building drain or less than four (4) inches in diameter.

For alternate methods of sizing building sewers, see Appendix C.

Section 723.1 General (Building Sewer Test)

*Amend Section **723.1** to read as follows:*

723.1 General. Building sewers shall be tested by plugging the end of the building sewer at its points of connection to the public sewer or private sewage disposal system and completely filling the building sewer with water from the lowest to highest point thereof, or by approved equivalent low-pressure air test. ~~Plastic DWV piping systems shall not be tested by the air test method.~~ The building sewer shall be watertight.

Section 1107.2 Methods of Testing Storm Drainage Systems

*Amend Section **1107.2** to read as follows:*

1107.2 Methods of Testing Storm Drainage Systems. Except for outside leaders and perforated or open-jointed drain tile, the piping of storm drain systems shall be tested upon completion of the rough piping installation by water or air, ~~except that plastic pipe shall not be tested with air,~~ and proved tight. The Authority Having Jurisdiction shall be permitted to require the removal of cleanout plugs to ascertain whether the pressure has reached parts of the system. One of the following test methods shall be used in accordance with Section 1107.2.1 through Section 1107.2.3.

Section 1201.1 Applicability

*Amend Section **1201.1** to read as follows:*

1201.1 Applicability. The regulations of this chapter shall govern the installation of fuel gas piping in or in connection with a building, structure or within the property lines of premises up to 5 pounds-force per square inch (psi)(34 kPa) for natural gas and 10 psi (69 kPa) for undiluted propane, other than service pipe. Fuel oil piping systems shall be installed in accordance with NFPA 31. Whenever there is a conflict between this code and NFPA 54 and NFPA 58 as adopted by the Nevada LP-Gas Board for LP-Gas installations, the adopted codes of the Nevada LP-Gas Board shall govern.

Section 1208.6.1.3 Snow Hazard

*Add Section **1208.6.1.3** to **1208.6** to read as follows:*

1208.6.1.3 Snow Hazard: On any new gas installation or reconnecting the gas service of an existing installation, gas meters above 5,800 feet in elevation in Carson City, Storey County and Washoe County must be protected from falling, sliding and accumulating of snow, unless the gas meter is installed in a protected location such as under an engineered deck, roof or shed. Engineered decks, roofs, or sheds shall be enclosed on all sides when used to protect gas meters on the snow shedding sides of a structure as approved by the gas utility.

Section 1213.3 Test Pressure

*Amend Section **1213.3** to read as follows:*

1213.3 Test Pressure. This inspection shall include an air, CO2, or nitrogen pressure test, at which time the gas piping shall stand a pressure of not less than ~~10~~ 25 psi (~~69~~ 172.4 kPa) gauge pressure. Test pressures shall be held for a length of time satisfactory to the Authority Having Jurisdiction, but in no case less than ~~15~~ 30 minutes with no perceptible drop in pressure. For welded piping, and for piping carrying gas at pressures in excess of 14 inches water column pressure (3.5 kPa), the test pressure shall be not less than 60 psi (414 kPa) and shall be continued for a length of time satisfactory to the Authority Having Jurisdiction, but in no case for less than 30 minutes. For CSST carrying gas at pressures in excess of 14 inches water column (3.5 kPa) pressure, the test pressure shall be not less than 30 psi (207 kPa) for 30 minutes. These tests shall be made using air, CO2, or nitrogen pressure and shall be made in the presence of the Authority Having Jurisdiction. Necessary apparatus for conducting tests shall be furnished by the permit holder. Test gauges used in conducting tests shall be in accordance with Section 318.0.

Section 1213.5.1 Turning Gas On

*Amend Section **1213.5.1** to read as follows:*

1213.5.1 Turning Gas On. During the process of turning gas on into a system of new gas piping or into a system or portion of a gas system that has been restored after an interruption of service, the entire system shall be inspected to determine that there are no open fittings or ends and that the valves at unused outlets are closed and plugged or capped. [NFPA 54:8.2.2]

> **1213.5.1.1 During** the process of turning gas on into a system of new gas *piping* or into a system or portion of a gas system that has been restored after an interruption of service; in the City of Reno, City of Sparks, Storey County and Washoe County a manometer test shall be made after all valves, unions, connectors and piping to the appliances are complete. A pressure test shall be made with the use of a manometer gauge measuring inches of water column. With all valves including gas cock and gas control valves in the

open position, a pressure of at least eleven (11) to fifteen (15) inches of water column shall be measured for at least fifteen (15) minutes, with no perceptible drop in pressure.

1213.5.1.2 For medium pressure gas systems: Where the appliance is rated for seven (7) to fourteen (14) inches of water column, a manometer test of eleven (11) to fifteen (15) inches of water column will be conducted between the pressure regulating valve and the appliance and shall be measured for at least fifteen (15) minutes with no perceptible drop in pressure.

1213.5.1.3 For appliances or equipment requiring pounds of gas pressure: A pressure test using a pressure gauge measuring in one tenth (1/10) increments shall be conducted on the gas train of that appliance or equipment. The pressure shall be equal to the appliance's normal operating pressure for a period of thirty (30) minutes with no perceptible drop in pressure.

1213.5.1.4 Manometer testing. Manometer testing shall be performed by a person holding a valid Washoe County manometer tester card in the City of Reno, City of Sparks, Storey County and Washoe County for which the number is to be provided at the time of request for inspection. A visual manometer test to be witnessed by the authority having jurisdiction may be allowed by the Building Official. A manometer test does not need to be reported when the serving gas utility performs a manometer or clock test prior to providing service.

Chapter 14 Firestop Protection

*Delete Chapter **14**:*

Refer to 2024 International Building Code

Appendix

Table R301.2 - Climatic And Geography Design Criteria

JURISDICTION	GROUND SNOW LOAD [O]	WIND DESIGN				SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP [E]	ICE BARRIER UNDERLAYMENT REQUIRED [H]	FLOOD HAZARDS [G]	AIR FREEZING INDEX [I]	MEAN ANNUAL TEMP [J]
		Speed [d] (mpg)	Topographic effects [k]	Special wind region [l]	Windborne debris zone[m]		Weathering[a]	Frost line depth [b]	Termite[c]					
Carson City	See IBC Table 1608.2.1	120	No	Yes	No	D_2	Severe	24”	Moderate to heavy	9^0F	Yes above 5500’	Varies. See Engineering Dept	444	50.9^0F
City of Elko	30 lb/ft^2	115	No			D_0	Severe	30”	Slight to moderate	-2^0F	Yes	Varies, see Engineering Dept	2000	46^0F
City of Fallon	See IBC Table 1608.2.1 (16 lbs)	115	No	No	No	D_1	Severe	18”	Moderate to severe	49.9^0F	No	See FMC 17.36	382	50.6^0F
City of Fernley	See IBC Table 1608.2.1	120	No	Yes	No	D_2	Severe	18”	Moderate to heavy	11^0F	No	a)06/04/2003 (b)11/20/1998 Firm	594	49.4^0F
City of Reno	See IBC Table 1608.2.1	120	No	Yes	No	D_2	Severe	24”	Moderate to heavy	17^0F	Yes above 5300’	See RMC 18.12.1701	594	49.4^0F
City of Sparks	See IBC Table 1608.2.1	120	No	Yes	No	D_2	Severe	24”	Moderate to heavy	17^0F	No	See SMC 15.11	594	49.4^0F
Churchill County	See IBC Table 1608.2.1	115	No	No	No	D_1	Severe	18”	Moderate to heavy	49.4	No	See Churchill County Code Title 19	382	51.6
Douglas County	See IBC Table 1608.2.1	120	No	Yes	No	D_2	Severe	18”< 6000’ 24”> 6000’	Moderate To heavy	4^0F	Yes above 5300’	Douglas County Title 20 Chapter 20.50	647	47.2^0F
Lyon County	See IBC Table 1608.2.1	115	No	No	No	D_1	Severe	18”	Moderate to heavy	11^0F	No	Lyon Co. Title 12	445	51.2^0F
Storey County	See IBC Table 1608.2.1	115	No	No	No	D_1	Severe	18”	Moderate to heavy	18^0F	Yes above 5500’	See SCC 15.20	594	49.4^0F
Washoe County	See IBC Table 1608.2.1	120	No	Yes	No	D_2	Severe	24”	Moderate to heavy	17^0F	Yes above 5300’	See WCC Chapter 110	594	49.4^0F

~~**MAMUAL J DESSIGN CRITERIA**[n]~~

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

a. Where weathering requires a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code, the frost line depth strength required for weathering shall govern. The weathering column shall be filled in with the weathering index, “negligible,” “moderate” or

“severe” for concrete as determined from Figure R301.2(1). The grade of masonry units shall be determined from ASTM C34, ASTM C55, ASTM C62, ASTM C73, ASTM C90, ASTM C129, ASTM C145, ASTM C216 or ASTM C652.

b. Where the frost line depth requires deeper footings than indicated in Figure R403.1(1), the frost line depth strength required for weathering shall govern. The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.

d. The jurisdiction shall fill in this part of the table with the wind speed from the ultimate design wind speeds map [Figure R301.2(2)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.

e. The jurisdiction shall fill in this section of the table to establish the design criteria using Table 10A from ACCA Manual J or established criteria determined by the jurisdiction.

f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.

g. The jurisdiction shall fill in this part of the table with: the date of the jurisdiction’s entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas); and the title and

date of the currently effective Flood Insurance Study or other flood hazard study and maps adopted by the authority having jurisdiction, as amended.

h. In accordance with Sections R905.1.2, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with

“YES.” Otherwise, the jurisdiction shall fill in this part of the table with “NO.”

i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table “Air Freezing Index-USA Method (Base 32°F).”

j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table “Air Freezing Index-USA Method (Base 32°F).”

k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall indicate “NO” in this part of the table.

l. In accordance with Figure R301.2(2), where there is local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with “YES” and identify any specific requirements. Otherwise, the jurisdiction shall indicate “NO” in this part of the table.

m. In accordance with Section R301.2.1.2 the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate “NO” on this part of the table.

~~n. The jurisdiction shall fill in these sections of the table to establish the design criteria using Table 1a or 1b from ACCA Manual J or established criteria determined by the jurisdiction.~~

o. The jurisdiction shall fill in this section of the allowable stress design table using the Ground Snow Loads in Figure R301.2(3)