Honorable President

and Members of the City Council,

Attached is an ordinance to amend Chapter 43 of the Omaha Municipal Code, Sec. 43-121 to adopt the 2018 International Residential Code.

Your favorable consideration is requested.

Respectfully submitted,

[Signature]

David K. Fanslau
Planning Director

[Date]
AN ORDINANCE to amend Omaha Municipal Code Sec. 43-121 to adopt the 2018 International Residential Code.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF OMAHA, NEBRASKA:

Section 1. That the Omaha Municipal Code Sections 43-121 – is here hereby amended to read as follows:

ARTICLE II. - BUILDING CODE

DIVISION 1. – ADOPTED

Sec. 43-121. - Building codes adopted.

The following codes are hereby adopted and shall be considered the building codes for the city:

1. The International Building Code, 2012 edition, chapters 2-12, 14-26, 32, 34 and 35 inclusive;
2. Appendix C, Group U Agriculture Buildings;
3. Appendix E, Supplemental Accessibility Requirements;

7. Appendix Q, "Tiny Houses", of the International Residential Code, 2018 edition; and
8. Appendix S, "Strawbale Construction", 2018 edition; and


The International Residential Code shall apply to the construction, alteration, movement, enlargement, replacement, repair and demolition of detached one- and two-family dwellings and townhouses not more than three stories above-grade in height with a separate means of egress and their accessory structures. The International Building Code shall apply to the construction, alteration, enlargement, replacement or repair of all other buildings and structures, and any new construction required as a result of moving any other building.
Sections of these codes are modified, amended or deleted elsewhere in this article. One copy of the International Building Code, the International Residential Code and the International Energy Conservation Code are to be retained on file with the city clerk. These codes shall be in effect within the limits of the city and its three-mile jurisdictional limits.


Secs. 43-122—43-125. - Reserved.

DIVISION 2. AMENDMENTS


The International Building Code is hereby amended, altered, modified and changed in the following respects:

Pages 11-39

Section 202, Definitions. Add the following definitions:

ELECTRICAL CODE: The electrical code for this jurisdiction shall be Chapter 44 of the Omaha Municipal Code and all codes adopted therein.

FIRE CODE: The fire code for this jurisdiction shall be Chapter 46 of the Omaha Municipal Code and all codes adopted therein.

FUEL GAS CODE: The fuel gas code for this jurisdiction shall be NFPA 54 as adopted in Chapter 40 of the Omaha Municipal Code.

ICC ELECTRICAL CODE: Wherever reference is made to the ICC Electrical Code it shall mean "Electrical Code". See definition for "Electrical Code".

INTERNATIONAL ENERGY CONSERVATION CODE: Whenever reference is made to the International Energy Conservation Code, it shall mean the International Energy Conservation Code as adopted and amended by this jurisdiction.

INTERNATIONAL FIRE CODE: Wherever reference is made to the International Fire Code it shall mean "Fire Code". See definition for "Fire Code".

INTERNATIONAL FUEL GAS CODE: Wherever reference is made to the International Fuel Gas Code it shall mean NFPA 54, as adopted in Chapter 40 of the Omaha Municipal Code. See definition for "Fuel Gas Code".

INTERNATIONAL MECHANICAL CODE: Wherever reference is made to the International Mechanical Code it shall mean "Mechanical Code". See definition for "Mechanical Code".

INTERNATIONAL PLUMBING CODE: Wherever reference is made to the International Plumbing Code it shall mean "Plumbing Code". See definition for "Plumbing Code".

INTERNATIONAL PROPERTY MAINTENANCE CODE: Wherever reference is made to the International Property Maintenance Code it shall mean "Property Maintenance Code". See definition for "Property Maintenance Code".
MECHANICAL CODE: The mechanical code for this jurisdiction shall be Chapter 40 of the Omaha Municipal Code.

PLUMBING CODE: The plumbing code for this jurisdiction shall be Chapter 49 of the Omaha Municipal Code.

PROPERTY MAINTENANCE CODE: The property maintenance code for this jurisdiction shall be Chapter 48 of the Omaha Municipal Code and all codes adopted therein.

Add the three new subsections in their entirety:

Section 423.1.2, Application. Storm shelters shall be provided for all multi-family residential uses, mobile home residential uses, daycare services (limited), daycare services (general), primary educational facilities and secondary educational facilities. Detached storm shelters shall be located no more than 600 feet from any dwelling unit and/or occupied area served and on the same parcel.

Exception: In-home daycare services provided that the home has a below grade basement readily available to provide shelter from a storm.

Section 423.1.3, Residential uses. For residential use types, the storm shelter size shall be computed for each unit as follows:

<table>
<thead>
<tr>
<th>Efficiency and one-bedroom</th>
<th>10 sq. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-bedroom</td>
<td>15 sq. ft.</td>
</tr>
<tr>
<td>Three-bedroom</td>
<td>20 sq. ft.</td>
</tr>
<tr>
<td>Four-bedroom</td>
<td>25 sq. ft.</td>
</tr>
</tbody>
</table>

Section 423.1.4, Accessible route. Shelters shall be provided with an accessible route in accordance with ICC A117.1 and IBC Section 1104.5.

Add the following to Table 509 Incidental Uses.

<table>
<thead>
<tr>
<th>ROOM OR AREA</th>
<th>SEPARATION AND/OR PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage rooms over 100 square feet</td>
<td>1 hour or provide automatic fire-extinguishing system</td>
</tr>
</tbody>
</table>

Page 104

Page 290.

Section 1109.2, Toilet and bathing facilities.

Exceptions:
Section 1209, Access To Unoccupied Spaces. Add a new subsection to read as follows:

Section 1209.4, Service and Maintenance. Unless otherwise required by this code, access to normally unoccupied spaces for the purposes of building or equipment service or maintenance is permitted to be a fixed ladder or alternating tread device.

Section 1210, Toilet and bathroom requirements. Delete this section and replace with:

Section 1210.1, Restrooms shall be designed in accordance with Chapter 49 of the Omaha Municipal Code.

Exception: Single family dwellings, two family dwellings and townhomes with a window to wall ratio greater than 15% must conform to the State of Nebraska energy code.

Add a new subsection as follows:

Section 1503.4.4, Rain Water. When roofs are sloped to drain over the edge, scuppers or gutters and downspouts, adequately sized, pitched and supported, shall be installed to conduct rain water to ground level. Rain water shall be discharged at least three feet away from the building foundation in a direction parallel to the adjoining property line when the discharge point is within 20 feet of the adjoining property line.

Table 1507.2.9.2, Valley Lining Material. In the Gage column, for Galvanized steel, delete the number 26, and replace it with 28.

Add a new subsection as follows:

Section 1509.8.6, Occupied Roofs. Any roof top decks, patios, platforms or similar structures, intended for human occupancy shall be of a construction type consistent with, and not less in fire-resistance rating than required for the building to which it is attached. Occupied roofs shall be considered a separate and independent story, and shall be provided with all fire protection systems required for the building to which it is attached. All occupied roofs shall be considered an assembly occupancy and shall not exceed the limits of Table 503 for height and number of stories above grade plane for an assembly occupancy.

Exception: Private roof top decks less than 735 square feet that are accessed from within an individual dwelling or sleeping unit and are intended and designed for the sole use of the owner or tenant.

All such structures intended for human occupancy shall have guard rails that comply with Section 1013, regardless of their height above the plane of the roof.
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Page 5

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Add a new section to read as follows:

Section 1607.12.5 Top level of parking garages. Where top levels of parking garages are exposed to snow loading, the structural design of the top level structural elements shall be based upon a specific snow storage or removal plan. The snow removal plan shall be included in the construction documents that are submitted for building permits, and shall include provisions for snow removal, temporary storage in specific areas, maximum snow heights, and other parameters to clearly indicate to the building official and building owner the necessary means of snow removal.

Page 341

Table 1607.1 Minimum Uniformly Distributed Live Loads and Minimum Concentrated Live Loads

Add the following sentence to footnote "a" to read as follows:

Access to floors designed for passenger cars only shall be restricted by an appropriate overhead barrier located not more than 7'-6" above the floor at the point of entry.

Page 288 344

Section 1607.11.2.1 Flat, pitched and curved roofs. 1607.12.2.1 Ordinary roofs, awnings and canopies.

Delete (Equation 16-27 26) in its entirety and replace it with: \( L_I = 25 \text{ psf} \)

Page 348

Section 1609.1 Applications. Add the following sentences to read as follows:

Buildings, structures, and parts thereof intended for use as a tornado shelter shall be designed and constructed in accordance with Section 55-787 of the Omaha Municipal Code. The design shall follow provisions given in the ICC/NSSA Standard for the Design and Construction of Storm Shelters, ICC 500-2008. Unless otherwise approved by the building official, the design wind speed shall be 250 mph. Exterior wall types, roof assemblies, doors, and other perimeter elements shall meet the projectile impact requirements as required in ICC 500, by reference to FEMA 361, or by other testing approved by the building official.

Page 300

Table 1610.1 Soil Lateral Load. Change the values for Active pressure and At-rest pressure to read as follows:
<table>
<thead>
<tr>
<th>DESCRIPTION OF BACKFILL MATERIAL</th>
<th>UNIFIED SOIL CLASSIFICATION</th>
<th>DESIGN LATERAL SOIL LOAD (pounds per square foot per foot of depth)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Active pressure</td>
</tr>
<tr>
<td>Well-graded, clean gravels; gravel-sand mixes</td>
<td>GW</td>
<td>30</td>
</tr>
<tr>
<td>Poorly graded clean gravels; gravel-sand mixes</td>
<td>GP</td>
<td>30</td>
</tr>
<tr>
<td>Silty gravels, poorly graded gravel-sand mixes</td>
<td>GM</td>
<td>45</td>
</tr>
<tr>
<td>Clayey gravels, poorly graded gravel-and-clay mixes</td>
<td>GC</td>
<td>45</td>
</tr>
<tr>
<td>Well-graded, clean sands; gravelly sand mixes</td>
<td>SW</td>
<td>30</td>
</tr>
<tr>
<td>Poorly graded clean sands; sand-gravel mixes</td>
<td>SP</td>
<td>30</td>
</tr>
<tr>
<td>Silty sands, poorly graded sand-silt mixes</td>
<td>SM</td>
<td>45</td>
</tr>
<tr>
<td>Sand-silt clay mix with plastic fines</td>
<td>SM-SC</td>
<td>45</td>
</tr>
<tr>
<td>Clayey sands, poorly graded sand-clay mixes</td>
<td>SC</td>
<td>45</td>
</tr>
<tr>
<td>Inorganic silts and clayey silts</td>
<td>ML</td>
<td>45</td>
</tr>
<tr>
<td>Mixture of inorganic silt and clay</td>
<td>ML-CL</td>
<td>45</td>
</tr>
<tr>
<td>Inorganic clays of low to medium plasticity</td>
<td>CL</td>
<td>45</td>
</tr>
<tr>
<td>Organic silts and silt clays, low plasticity</td>
<td>OL</td>
<td>Note b</td>
</tr>
<tr>
<td>Inorganic clayey silts, elastic silts</td>
<td>MH</td>
<td>Note b</td>
</tr>
<tr>
<td>Inorganic clays of high plasticity</td>
<td>CH</td>
<td>Note b</td>
</tr>
<tr>
<td>Organic clays and silty clays</td>
<td>OH</td>
<td>Note b</td>
</tr>
</tbody>
</table>

Section 1704.2: Special Inspections. Add first paragraph to read as follows:

Testing and special inspections shall be performed in accordance with the approved drawings and specifications, the approved Statement of Special Inspections, and the building code. The Special Inspection and Testing Services do not supersede or replace the inspections performed by the Authority Having Jurisdiction (AHJ) nor other observations required by the building code. Contractor shall coordinate work to be performed with the AHJ and the special inspector and testing agencies.

Section 1704.2.1: Special Inspector Qualifications. Add paragraphs to read as follows:
Qualification for special inspectors and testing technicians for any material or work performed shall meet the respective qualification(s) listed below, or as otherwise approved by the building official. Multiple qualifications and/or personnel may be required. Personnel may alternatively qualify by holding a current Registered Civil or Structural Engineer License and having at least three years' relevant and verifiable experience. No matter how the qualification is met, the Prime Special Inspection and Testing agency for the project shall submit to the building official documentation confirming the qualifications have been met for each applicable individual performing special inspection and/or testing services. Qualifications for personnel performing special inspections and testing for structural steel and steel construction other than structural steel (e.g., metal deck) shall be in accordance with Chapter N of ANSI/AISC 360-10:

Specification for Structural Steel Buildings. Alternatively, for welding special inspections and testing, personnel may be qualified as an ICC Structural Welding Special Inspector or for bolting special inspections and testing, personnel may be qualified as ICC Structural Steel and Bolting Special Inspector.

Qualifications for personnel performing special inspections and testing for structural concrete shall be in accordance with ACI 311.7-14: Inspection Services Specifications for Cast-in-Place Concrete Construction. An ICC Reinforced Concrete Special Inspector must also carry the applicable ACI Concrete Inspector or Technician qualification.

For masonry construction special inspections and testing, personnel shall be qualified as an ICC Structural Masonry Special Inspector.

For construction on soils and/or deep foundations special inspections and testing, personnel shall be qualified as an ICC Soils Special Inspector.

For fire protection construction special inspections and testing, personnel shall be qualified as an ICC SprayApplied Fire Proofing Special Inspector.

For Exterior Insulation & Finish Systems (EIFS) construction special inspections and testing, personnel shall be qualified as an Association of Wall and Ceiling Industry (AECI) Certified EIFS Inspector.

For nonstructural components special inspections and testing, personnel shall be qualified as any type of ICC Special Inspector.

Section 1704.2.5.2 Fabricator approval. Add a second paragraph to read as follows:

The following are considered approved fabricators:

Steel fabricators holding an appropriate certificate from the American Institute of Steel Construction,

Steel Joist Manufacturers holding membership in the Steel Joist Institute,

Precast/Prestressed Concrete suppliers holding membership in the Prestressed Concrete Institute (PCI) together with plant certification in the appropriate products group and categories in the PCI Plant Certification Program.
The steel fabricator is required to be a current AISC-Certified Fabricator.

The steel erector is required to be a current AISC-Certified Erector.

The precast erector is required to be a current PCI-Certified Erector.

Add a new section to read as follows:

Section 1803.5.3.1 Collapsible soils. Portions of the Omaha Metropolitan Area are
underlain by low-unit weight soils that can collapse when saturated. Additional studies shall
be made to evaluate the presence and extent of collapse-susceptible soils and to assess
the effects of any collapsible soils identified at the site on the performance of the structure.

Section 1808.1 General. Add the following to the end of this section:

Footings shall be constructed of concrete.

Section 1809.5 Frost protection. Delete this section and the exceptions in their entirety and
replace them with:

Except where erected on solid rock or otherwise protected from frost, foundation walls,
piers, and other permanent supports of buildings and structures larger than 750 square
feet in area or 10 feet in height shall extend below the established frost line. The
established frost line shall be 3 feet below the exterior grade for heated structures, and 3.5
feet for unheated structures.

Exceptions:

1. The bottom surface of footings for unattached garages and unattached storage
buildings of wood or metal not more than 750 square feet in area shall not be less than
1 foot below grade.

2. The bottom surface of foundations that bear on rock surfaces is not required to be
below the established frost line provided the rock does not have seams or cracks or
contain disintegrated material that could serve as reservoirs for water which could be
subject to freezing.

3. The support of buildings by posts embedded in the earth shall be designed as
specified in Section 1808. Wood posts or poles embedded in soil or concrete shall be
pressure treated with an approved preservative.

Section 1809.8 Plain concrete footings. Delete this section in its entirety.

Section 1809.9 Masonry-unit footings. Delete this section, and all subsections to this section in
their entirety.
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Page 9

Section 4809-2 1809.12 Timber footings. Delete this section in its entirety.

Pages 545—550

Chapter 29, Plumbing Systems. Delete this chapter in its entirety and change to read as follows: Plumbing systems shall be installed in accordance with Chapter 49 of the Omaha Municipal Code.

Page 526

Section 3004.2, Location of vents. Change to read as follows: Vents shall be located below the floor or floors at the top of the hoistway and shall open either directly to the outer air or through noncombustible ducts to the outer air. Noncombustible ducts shall be permitted to pass through the elevator machine room, when approved by the State Office of Elevator Safety. Holes in the machine room floors for the passage of ropes, cables or other moving elevator equipment shall be limited so as not to provide greater than 2 inches (51 mm) of clearance on all sides.

Page 560

Section 3109.1, General. Change to read as follows: Swimming pools shall comply with the requirements of Chapter 54 of the Omaha Municipal Code.

Page 569

Section 3401.3, Compliance with other codes. Change to read as follows: Alterations, repairs, additions and changes of occupancy to existing structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy of all applicable codes adopted and enforced.

(Ord. No. 33582, § 1(43-126), 6-27-95; Ord. No. 34029, § 2, 10-29-96; Ord. No. 34122, § 2, 2-25-97; Ord. No. 35988, § 18, 7-9-02; Ord. No. 36005, § 7, 2-12-08; Ord. No. 41512, § 16, 7-10-18)


The 2006 International Residential Code is hereby amended, altered, modified and changed in the following respects:

Page 12

Section R202, Definitions. Change the definition of Dwelling to read: Dwelling. Any building that contains one dwelling unit used, intended, or designed to be built, used, rented, leased, let or hired out to be occupied, or that is occupied for living purposes.

Section R202, Definitions. Add the following definition: Foundation wall height. The total distance from the top of the footing to the top of the foundation wall.

Page 18

Section R202, Definitions. Add the following definition: Sleeping Room. Any room in the house that is greater than 70 sq. ft., has built-in closet space and typically could be used as a bedroom. This does not include rooms used exclusively for cooking, eating, family living or gathering and excludes bathrooms, toilet rooms, halls, storage, utility and workshop space and all unconditioned space.
Section R202, Definitions. Change the definition of Townhouse to read:

Townhouse. A single-family dwelling unit constructed in a group of two or more attached units in which each unit extends from foundation to roof and with open space on at least two sides and with separate egress directly to the exterior from each dwelling unit.

Dwelling units within a building with a common egress shall be apartments and regulated by the International Building Code (IBC).

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Add the following information to Table R301.2(1).

<table>
<thead>
<tr>
<th>ROUND SNOW LOAD (mph)</th>
<th>SUBJECT TO DAMAGE FROM</th>
<th>WIND SPEED</th>
<th>SEISMIC DESIGN CATEGORY</th>
<th>Weather</th>
<th>Frost Line-Depth</th>
<th>Termite</th>
<th>WINTER DESIGN TEMP.</th>
<th>ICE BARRIER LAYMENT</th>
<th>FLOOD HAZARDS</th>
<th>AIR FREEZING INDEX</th>
<th>MEAN ANNUAL TEMP.</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. k- 30. 1</td>
<td>90- A- Severe 42- M-H</td>
<td>-3° Yes</td>
<td>1071 168.1 51.2 .1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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- k. Slopes equal to or greater than 4 in 2.
- l. Slopes less than 4 in 12.

Add the following information to Table R301.2(1)
Ordinance No. __________

Page 11

<table>
<thead>
<tr>
<th>GROUND SNOW LOAD</th>
<th>WIND</th>
<th>SUBJECT TO DAMAGE FROM</th>
<th>WINTER DESIGN TEMP</th>
<th>FLOOD</th>
<th>FREEZING INDEX</th>
<th>MEAN ANNUAL TEMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPEED (mph)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>115</td>
<td>A</td>
<td>Severe</td>
<td>42</td>
<td>M-H</td>
<td>-3°</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td>1971</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1680</td>
<td>51.2°</td>
</tr>
</tbody>
</table>

MANUAL J DESIGN CRITERIA

<table>
<thead>
<tr>
<th>Elevation</th>
<th>Latitude</th>
<th>Winter heating</th>
<th>Summer cooling</th>
<th>Altitude correction factor</th>
<th>Indoor design temperature</th>
<th>Design temperature cooling</th>
<th>Heating temperature difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooling temperature difference</th>
<th>Wind velocity heating</th>
<th>Wind velocity cooling</th>
<th>Coincident wet bulb</th>
<th>Daily range</th>
<th>Winter humidity</th>
<th>Summer humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Change the footnotes as follow:

d. The jurisdiction shall fill in this part of the table with the wind speed from the basic ultimate wind speed map (Figure R301.2(5)(A)). Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.

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Table R301.5, Minimum Uniformly Distributed Live Loads. Change the table to read:

Sleeping rooms 40

Section R302.2.2 Common walls. Change the paragraph to read as follows: Common walls separating townhouses shall be assigned a fire-resistance rating in accordance with Item 1 or 2. The common wall shared by two townhouses shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical, cable and telephone installations shall be in accordance with Chapter 44 of the Municipal Code and shall be installed in raceways and metallic outlet boxes. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

Section R302.3 Two-family dwellings. Delete exception 1 in its entirety.
Section R303.8, Exterior stairway illumination. Revise to read as follows: Exterior stairways shall be provided with an artificial light source located at the top of the stairway. Exterior stairways providing access to a basement from the outdoor grade level shall be provided with an artificial light source located at the bottom of the stairway.

Section R305.1, Minimum height. Add the following paragraph after exception 4: The building official shall have the authority to waive the requirements of this section where pre-existing conditions will not allow the requirements to be met.

Section R307.1, Space Required. Change to read as follows: Fixtures shall be spaced as per Chapter 49 of the Omaha Plumbing Code.

Figure R307.1, Minimum Fixture Clearances. Delete Figure R307.1 Minimum Fixture Clearances, in its entirety.

Section 309.5, Fire sprinklers. Delete section in its entirety.

Section R310.1, Emergency escape and rescue opening required. Delete exception 2 in its entirety.

Section R310.6 Alterations or repairs of existing basements. Revise section to read as follows: An emergency escape and rescue opening is required where existing basements undergo alterations or repairs.

Exception: New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section R310.1.

Section R311.3.1 Floor elevations at the required egress doors. Revise the exception to read as follows: The landing or floor on the exterior side shall be not more than 7-3/4" (196 mm) below the top of the interior finish floor provided that the door does not swing over the landing or floor.

Section R311.3.2 Floor elevations at other exterior doors. Revise section to read as follows: Doors other than the required egress door shall be provided with landings or floors not more than 7-3/4" (196 mm) below the top of the finish floor.

Exception: A top landing is not required where a stairway of not more than three risers is located on the exterior side of the door, provided that the door does not swing over the stairway.

Section R311.4.3, Landings at doors. Change exception 1 to read:

1. Where a stairway of three or fewer risers is located on the exterior side of a door, other than the required exit door, a landing is not required for the exterior side of the
door provided the door, other than an exterior storm or screen door does not swing over the stairway.

Section R311.4.3, Landings at doors. Change exception 2 to read:

2. The exterior landing at an exterior doorway shall not be more than 7 3/4 inches (196 mm) below the top of the finished floor, provided the door, other than an exterior storm or screen door does not swing over the landing.

Section R311.4.3, Landings at doors. Change exception 3 to read:

3. The height of floors at exterior doors other than the exit door required by Section R311.4.1 shall not be more than 7 3/4 inches (196 mm) lower than the top of the finished floor.

Section R311.5.2, R311.7.2, Headroom. Add the following as a second paragraph:

Exception 3: The building official shall have the authority to waive the requirements of this section where pre-existing conditions will not allow the requirements to be met.

Section R311.5.3.1, Riser height. Add an exception to this section to read as follows:

Exception: The maximum riser height shall be 8 inches (203 mm) for a period of one year from the adoption date of this code.

Section R311.5.3.2, Tread depth. Add an exception to this section to read as follows:

Exception: The minimum tread depth shall be 9 inches (228 mm) for a period of one year from the adoption date of this code.

Section R311.7.5.1 Risers. At last sentence revise 4-inch-diameter (102 mm) sphere to be 6-1/2 inch diameter (165 mm) sphere.

Section R311.5.3.3, Profile. Change to read as follows: The radius of curvature at the leading edge of the tread shall be no greater than 9/16 inch (14 mm). A nosing not less than 5/8 inch (16 mm) but not more than 1 1/4 inch (32 mm) shall be provided on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8" (9.5 mm) between two stories, including the nosing at the level of floors and landings. Beveling of nosing shall not exceed 1/4 inch (12.7 mm). Risers shall be vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted, provided that the opening between treads does not permit the passage of a 6 3/4 inch diameter (165 mm) sphere.
Section R311.7.8.4 Continuity. Add exception 3 to read as follows:

Exceptions:

3. Handrails for stairways shall be permitted to have no more than a 4" break (102 mm) due to wall offsets and other ornamental features.

Section R312.2 Window fall protection. Delete this section in its entirety.

Section R313 Automatic Fire Sprinkler Systems. Delete this section and replace with: One- and two-family dwellings and townhouses may be protected by an automatic sprinkler system installed in accordance with P2904, NFPA 13, 13R or 13 D. Such dwelling units shall have firewalls, openings and projections designed and protected in accordance with R302.

Section R317.1, Two-family dwellings. Delete exception #1 in its entirety.

Section R317.2, Townhouses. Change the exception to read as follows: Exception: A common 2-hour fire-resistance rated wall is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. Electrical, cable, and telephone installations are permitted, but shall be installed in raceways and metallic outlet boxes. Penetrations of electrical outlet boxes shall be in accordance with Section R317.3. The fire-resistance rating of the common wall may be reduced to not less than 1-hour provided the building is equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13, the common wall does not contain plumbing or mechanical equipment, ducts or vents, and electrical, cable, and telephone installations are installed in raceways and metallic outlet boxes.

Section R318.1, Moisture control. Add an exception #4 to read as follows: Exception 4. Exterior bathroom walls.

Section R319.1, R317.1 Location required. Change location #2 to read as follows: All wood framing members, sills or plates that rest on concrete or masonry exterior walls.

Section R319.1, R317.1.1 Field treatment. Delete this section in its entirety.

Section R319.1, R317.1.4 Wood columns. Delete both all exceptions and replace with: Exception: Interior columns, either exposed or enclosed within the framing cavity, provided such columns are separated from any concrete or masonry by approved wood of natural decay resistance, or approved pressure-preservation treated wood.
Section R320.1.2, R318.1.2 Field treatment. Delete this section in its entirety.

Section R324.2.1, Elevation requirements. Change requirement 1 to read as follows:
1. Buildings and structures shall have the lowest floors elevated to a level 1 foot minimum above the design flood elevation.

Section R326, Swimming pools, spas and hot tubs. Delete this section in its entirety.

Section R402.1, Wood foundations. Delete this section and all subsections in its entirety.

Change to read as follows:

R403.1, General. Revise section to read as follows: All exterior walls shall be supported on continuous concrete footings, or other approved structural systems which shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character or the soil. Footings shall be supported on undisturbed natural soils or engineered fill. Concrete footing shall be designed and constructed in accordance with the provisions of Section R403 or in accordance with ACI 332.

R403.1.1, Minimum size. Minimum sizes for concrete and masonry footings shall be as set forth in Table R403.1 and Figure R403.1(1). The footing width, W, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. Spread footings shall be at least 8 inches (203 mm) thick. Footing projections, P, shall be at least 2 inches (51 mm) and shall not exceed the thickness of the footing. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1. Footings for wood foundations shall be in accordance with the details set forth in Section R403.3, and Figures R403.4(2) and R403.1(3).

R403.1.1 Minimum size. Revise section to read as follows: The minimum width, W, and thickness, T, for concrete footings shall be in accordance with Tables R403.1(1) through R403.1(3) and Figure R403.1(1). The footing width shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. Spread footings shall be at least 8 inches (203 mm) thick. Footing projections, P, shall be not less than 2 inches (51 mm) and shall not exceed the thickness of the footing. Footing thickness and projection for fireplaces shall be in accordance with Section R1001.2. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1. Footings for precast foundations shall be in accordance with the details set forth in Section R403.4, Table R403.4, and Figure R403.4(2).
Delete Figure R403.1(1), R403.1(2) and R403.1(3) in its entirety, and replace it with Figure R403.1(1) MINIMUM FOOTING AND FOUNDATION REQUIREMENTS (amended) as-amended.

TYPICAL FLOATING FOUNDATION

Floating foundation approved for detached structures no more than 750 sq. ft. Min. 12" deep in the ground, and 12" wide at the base. Extend min. 8" above grade.

EXCEPTIONS:

1. Detached structures less than 150 sq. ft. do not require foundations.

2. Floating foundations may use max. one course of concrete block as a curb.

TYPICAL COLUMN FOOTING

Min. 36"x36"x18" for support of 1 floor and 1 ceiling/roof, and min. 48"x48"x24" for support of 2 floors and 1 ceiling/roof. The above column pad is limited to the support of floors and ceiling/roofs with a joist/rafter span of <= 15 ft. and beam/girder span of <= 14 ft. Min. 6"x6"x1/4" steel base plate is required.

TYPICAL SPREAD FOUNDATION

2" nominal thickness treated sill plate, 1/2" bolts, min. 7" into concrete or 15" into masonry. Max. 12" from ends. 16"x8" min. footing size. 42" min. depth for exterior walls. 8" min. depth for interior walls. Extend the foundation walls min. 8" above grade.
* Foundation walls with more than 48" of unsupported clearance shall be designed in accordance with Table R404.1(1), and Figure R404.1(2).

1. **FIGURE R403.1(1) MINIMUM FOOTING AND FOUNDATION WALL REQUIREMENTS**

   (AMENDED)

3. **GENERAL NOTES**

4. 1. Footings shall comply with Table R403.1, but shall not be less than twice the foundation wall thickness.

6. 2. Anchor bolt spacing 6' o.c. max. or the same as the rebar spacing, whichever is less, and 12" from each end of the sill.

8. 3. Anchor bolts shall be 1/2" diameter, with 3/16" x 2" washers. Bolts shall be imbedded min. 7" into concrete and 15" into masonry.

10. 4. Foundations shall extend not less than 12" below the top of the floor slab.

11. 5. Footing sizes are based on an assumed soil bearing pressure of 1,500 lbs./sq. ft. Footings on soil with a lower allowable soil pressure shall be designed in accordance with good engineering practice, and a soils engineer's recommendations.

15. **Figure R403.1(1) Minimum footing and foundation wall requirements (amended).**
FIGURE R403.1(1) MINIMUM FOOTING AND FOUNDATION REQUIREMENTS (AMENDED)

GENERAL NOTES

1. Footings shall comply with Table R403.1, but shall not be less than twice the foundation wall thickness.
2. Anchor bolt spacing 6" o.c. max. or the same as the rebar spacing, whichever is less, and 12" from each end of the sill.
3. Anchor bolts shall be 5/8" diameter, with 3/16"x 2" galvanized washers. Bolts shall be imbedded min. 7" into concrete and 1" into masonry.
4. Foundations shall extend not less than 12" below the top of the floor slab.
5. Footing sizes are based on an assumed soil bearing pressure of 1,500 lbs./sq. ft. Footings on soil with a lower allowable pressure shall be designed in accordance with good engineering practice, and a soils engineer's recommendations.
Figure R403.1(2) delete all references to gravel footings and replace with, Footings shall comply with Section R403.

Figure R403.1(3) delete all references to gravel footings and replace with, Footings shall comply with Section R403.

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(1);
2. Constructing in accordance with ASCE 32; or
3. Erected on solid rock.

Exceptions:

1. Protection of freestanding accessory structures with an area of 750 square feet (70 m²) or less, of light-framed construction, with an eave height of 10 feet (3048 mm) or less shall not be required.
2. Protection of freestanding accessory structures with an area of 400 square feet (37 m²) or less, of other than light-framed construction, with an eave height of 10 feet (3048 mm) or less shall not be required.
3. Decks not supported by a dwelling need not be provided with footings that extend below the frost line.

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

Change to read as follows:

R403.2, Footings for wood foundations. Footings for wood foundations shall be in accordance with Figures R403.1(2) and R403.1(3). Delete this section in its entirety.

Delete Section R403.3 Frost protected shallow foundations in its entirety.

Delete Table R403.3 R403.3(1) in its entirety.

Delete Figure R403.3(1) in its entirety.

Delete Figure R403.3(3) in its entirety.
Delete Sections R403.3.1, R403.3.1.1, R403.3.1.2, R403.3.2, R403.3.3, and R403.3.4 in their entirety.

Delete Figure R403.3(4) in its entirety.

Delete Section R403.4.1 in its entirety.

Delete Table R403.4 in its entirety.

Delete Figure R403.4(1) in its entirety.

Delete Table R404.1(1) in its entirety, and replace it with Table R404.1(1) as amended. Basement Foundation Wall Design and Figure R404.1(2) Foundation Wall to Floor System Attachment.

Delete conditions 2, 3, 4 and 5 of Section R404.1 and replace with:

2. Floor joists and blocking shall be connected to the sill plate at the top of the wall by the prescriptive method called out in Figure 404.1.2.

3. The sill plate shall be connected to the top of the foundation wall in accordance with Table R404.1(1). All anchor bolts shall be ASTM A307. The nut on each bolt shall be torqued to a minimum of 36 pound-feet.

4. Anchor bolt spacing shall be no greater than the spacing of the rebar specified in Table R404.1.1 plus additional bolts as required by Section R403.1.6.

5. The floor shall be blocked perpendicular to the floor joists as shown in Figure R404.1.2.

Delete Table R404.1(2) in its entirety, and replace it with Figure R404.1(2) as amended.

R404.1.3.3.7.2 Location of reinforcement in wall. Revise section to read as follows: The center of vertical reinforcement in basement walls shall be located per Table R404.1(1). The center of the steel shall not vary from the specified location by more than the greater of 10 percent of the wall thickness and 3/8 inch (10 mm). Horizontal and vertical reinforcement shall be located in foundation walls to provide the minimum cover required by Section R404.1.3.3.7.4.

Delete Section R404.1.8 Rubble stone masonry in its entirety.

Delete Section R404.2 Wood foundation walls, and subsections R404.2.1, R404.2.2, R404.2.3, R404.2.4, R404.2.5 and R404.2.6 in their entirety.
**BLOCKING AT END WALL**

a. 2x solid blocking.
b. 9-8d nails thru subfloor into solid blocking.
c. 4-10d nails into each end of solid blocking.
d. 6-10d nails into sill plate.
e. rim joist w/16d nails 12" o.c. into sill plate.
f. anchor bolts per Table R404.1.1

**BLOCKING AT END WALL WITH DUCT**

a. 2x solid blocking.
b. 9-8d nails thru subfloor into solid blocking.
c. 4-10d nails into each end of solid blocking.
d. 10-10d nails thru solid blocking into sill plate.
e. flat 2"x 10".
f. anchor bolts per Table R404.1.1.
g. rim joists w/16d nails 12" o.c. into sill plate.
h. 2-10d nails into each end of flat 2"x 10".
i. duct.

**BLOCKING AT END WALL WITH "I" JOISTS**

a. 1 1/8" LSL or approved engineered rim and solid blocking material.

* (DIMENSION LUMBER NOT ALLOWED) *

b. 9-8d nails thru subfloor into solid blocking.
c. 4-10d nails into each end of solid blocking.
d. 6-10d nails into sill plate.
e. 2-10d nails toenailed into joist.
f. anchor bolts per Table R404.1.1.
g. rim joist w/16d nails 12" o.c. into sill plate.

**FIGURE R404.1(2) FOUNDATION WALL TO FLOOR SYSTEM ATTACHMENT (AMENDED)**

1. Where floor joists are perpendicular to the foundation wall they shall be attached to the plate in the same manner shown in the sketch BLOCKING AT END WALL.
2. A steel angle clip may be substituted for the 6-10d nails connecting the joist to the sill plate.
   If an angle clip is used it must have a minimum load transfer capacity of 370 pounds.
3. Solid blocking must be utilized where floor joists are parallel to the foundation wall.
   The solid blocking shall be spaced no further apart than 1/2 the maximum anchor bolt spacing allowed in accordance with Table R404.1(1).

3  Figure R404.1(2)
4  Delete Section R404.1.1 in its entirety.
5  Delete Section R404.1.2 in its entirety.
6  Page 80 ??
Add a footnote to Table R404.1(3) to read as follows:

a. For the purposes of this chapter, use the column labeled GW, GP, SW and SP soils.

Delete Table R404.1.1(1) in its entirety, and replace it with Table R404.1(1)

Delete Table R404.1.1(2) in its entirety, and replace it with Table R404.1(1)

Delete Table R404.1.1(3) in its entirety, and replace it with Table R404.1(1)

Delete Table R404.1.1(4) in its entirety, and replace it with Table R404.1(1)

Delete Table R404.1.1(5) Tables R404.1.2(2), R404.1.2(3), R404.1.2(4), R404.1.2(5), R404.1.2(6), R404.1.2(7), R404.1.2(8) and R404.1.2(9) in its entirety, and replace it with Table R404.1(1) Basement Foundation Wall Design as amended.

This table is based on a design, which would subject the foundation walls to a soil pressure that would be exerted by soil having an equivalent fluid weight of 35 pounds per cubic foot. In order to use this table the bottom of the foundation wall must be retained by a concrete slab with a minimum thickness of 3½" and the top of the wall must be restrained as defined in the footnotes of this table.

### TABLE R404.1(1) BASEMENT FOUNDATION WALL DESIGN (AMENDED)

<table>
<thead>
<tr>
<th>Wall Type</th>
<th>Distance of Wall to Ground Surface</th>
<th>Wall Thickness</th>
<th>Unsupported Vertical Wall Span</th>
<th>Required Vertical Reinforcing</th>
<th>Required Anchor Bolt Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masonry or Concrete</td>
<td>6&quot; or more</td>
<td>8&quot;</td>
<td>8' 8&quot; or less</td>
<td>#5 @ 40&quot;</td>
<td>5/8 &quot; 1/2&quot; @ 40&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8' 0&quot; or less</td>
<td>#5 @ 48&quot;</td>
<td>5/8 &quot; 1/2&quot; @ 48&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10&quot;</td>
<td>8' 8&quot; or less</td>
<td>#5 @ 48&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8' 0&quot; or less</td>
<td>#5 @ 56&quot;</td>
<td>5/8 &quot; 1/2&quot; @ 56&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12&quot;</td>
<td>8' 8&quot; or less</td>
<td>#5 @ 56&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8' 0&quot; or less</td>
<td>#5 @ 64&quot;</td>
<td>5/8 &quot; 1/2&quot; @ 64&quot;</td>
</tr>
</tbody>
</table>
1. This table applies to hollow unit masonry or to solid concrete walls.

2. This table is only applicable where the exterior grade is above the basement slab on one or more sides of the basement. The distance in column (2) is to be measured from the top of the masonry or concrete wall down to the finished grade after final grading.

3. The thicknesses given are nominal. Actual masonry thickness may be 3/8" less than nominal.

4. This table applies only to walls which span vertically between levels at which resistance to inward movement is provided by a minimum 3½" thick concrete floor slab at the bottom and an anchoring system as defined in Section R404.1 and shown in Figure R404.1.1 at the top.

5. All reinforcing steel utilized based on this table shall be grade 60 and shall be placed not more than 1½" from the inside face of the wall.

6. Masonry walls must comply with Section R609 R606.

7. Walls which do not fall within the limitations of this table, shall be designed by a registered engineer licensed in the State of Nebraska.

8. Anchor bolts shall be 5/8" × ½" diameter with a 3/16" × 2" galvanized washer and nut. Bolts shall be imbedded minimum 7" into concrete and 15" into masonry.

9. Centerline of vertical reinforcing bar shall be located 2" from the inside face of concrete form.

Section R405.1 Concrete or masonry foundations. Delete the exception.

Section R405.1.1 Precast concrete foundation. Delete "that rest on crushed stone footings" from the first sentence.

Section R405.2 Wood foundations. Delete this section and subsections R405.2.1, R405.2.2 and R405.2.3 in their entirety.

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Distance</th>
<th>Thickness</th>
<th>Reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>16&quot; or more</td>
<td>8&quot;</td>
<td>8' 8&quot; or less</td>
<td>#5 @ 48&quot;</td>
</tr>
<tr>
<td>10&quot;</td>
<td>8' 0&quot; or less</td>
<td>#5 @ 56&quot;</td>
<td></td>
</tr>
<tr>
<td>12&quot;</td>
<td>8' 8&quot; or less</td>
<td>#5 @ 64&quot;</td>
<td></td>
</tr>
<tr>
<td>24&quot; or more</td>
<td>8&quot; or more</td>
<td>8' 8&quot; or less</td>
<td>#5 @ 64&quot;</td>
</tr>
<tr>
<td>48&quot; or more</td>
<td>8&quot; or more</td>
<td>8' 8&quot; or less</td>
<td>None required</td>
</tr>
</tbody>
</table>
**Section R406.3 Dampproofing for wood foundations.** Delete this section and subsections R406.3.1, R406.3.2, R406.3.3 and R406.3.4 in their entirety.

**Section R408.6 Finished grade.** Revise "bottom of the footings" to read "top of the footings" in the first sentence.

**Page 403:**

Change to read as follows:

**R502.6.2 Joist framing.** Revise section to read as follows: Joists framing into the side of a wood girder shall be supported by approved framing anchors.

**Page 421:**

**Section R506.2.2 Base.** Delete this section in its entirety.

**Section R507.2.1 Wood materials.** Revise to read as follows: Wood materials shall be No. 2 grade or better lumber, preservative-treated in accordance with Section R317, or approved, naturally durable lumber, and termite protected where required in accordance with Section R318. Where design in accordance with Section R301 is provided, wood structural members shall be designed using the wet service factor defined in AWC NDS. All preservative-treated wood products in contact with the ground shall be labeled for such usage.

**Section R507.3.1 Minimum size.** Revise to read as follows: The minimum size of concrete footings shall be in accordance with Table R507.3.1, and allowable soil-bearing pressure of 1500 pounds per square foot.

Delete Table R507.3.1 in its entirety and replace with Table R507.3.1 Minimum Footing Sizes for Decks.

**TABLE R507.3.1 MINIMUM FOOTING SIZES FOR DECKS**

<table>
<thead>
<tr>
<th>FOOTING DEPTH</th>
<th>8&quot; DIAM</th>
<th>10&quot; DIAM</th>
<th>12&quot; DIAM</th>
<th>14&quot; DIAM</th>
<th>16&quot; DIAM</th>
<th>18&quot; DIAM</th>
<th>20&quot; DIAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>42&quot;</td>
<td>&lt;941 lbs</td>
<td>&lt;1340 lbs</td>
<td>&lt;1805 lbs</td>
<td>&lt;2334 lbs</td>
<td>&lt;2930 lbs</td>
<td>&lt;3591 lbs</td>
<td>&lt;4316 lbs</td>
</tr>
<tr>
<td>48&quot;</td>
<td>&lt;1481 lbs</td>
<td>&lt;2071 lbs</td>
<td>&lt;2747 lbs</td>
<td>&lt;3509 lbs</td>
<td>&lt;4360 lbs</td>
<td>&lt;5298 lbs</td>
<td>&lt;6323 lbs</td>
</tr>
</tbody>
</table>

**Section R507.5 Deck Beams.** Revise third sentence to read as follows: Beams shall be permitted to cantilever a maximum of 24-inches (610mm) unless designed by a professional engineer licensed in the State of Nebraska.

**Table R507.5 Deck Beam Span Lengths.** Revise footnote g to read as follows: Beam cantilevers are limited to 24-inches (610 mm) unless designed by a professional engineer licensed in the State of Nebraska.

**Section R601.2 Requirements.** Add second paragraph as follows: Braced wall lines, braced panels and bracing method must be clearly shown on plans at time of submittal.
Ordinance No. __________
Page 25

Figure R602.3(1) Typical Wall, Floor and Roof Framing. Delete balloon framing at floor joist/wall and monolithic slab-on-grade foundation from drawing.

Page 132-

Change to read as follows:-

R602.6 Drilling and notching-studs. Revise section to read as follows: Drilling and notching of studs shall be in accordance with the following:

1. Notching. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40 percent of a single stud width. All studs in exterior walls or bearing partitions that are notched more than 10 percent shall be doubled.

2. Drilling. Any stud may be bored or drilled, provided that the diameter of the resulting hole is no more than 60 percent of the stud width, the edge of the hole is no more than 5/8 inch (16 mm) to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40 percent and up to 60 percent shall also be doubled with no more than two successive doubled studs bored. See Figures R602.6(1) and R602.6(2).

Exception: Use of approved stud shoes is permitted when they are installed in accordance with the manufacturer's recommendations.

Add footnote a to Figure R602.10.6.2, figure R602.10.6.3 and figure R602.10.6.4:

a. The use of steel headers must be designed by a professional engineer licensed in the State of Nebraska, and the structural engineer's report shall be on site for the framing inspection.

Delete Table 608.5.4(2) in its entirety.

Page 224-

Section R613.2, Window sills. Delete this section in its entirety.

Page 231-

Table R702.3.5, Minimum Thickness and Application of Gypsum Board. Change footnote (d) to read as follows:

d. Three-eighths-inch-thick single-ply gypsum board shall not be used on a ceiling where a water-based textured finish is to be applied, or where it will be required to support insulation above a ceiling. On ceiling applications to receive a water-based texture material, either hand or spray applied, the gypsum board shall be applied perpendicular to framing. When applying a water-based texture material, the minimum gypsum board thickness shall be ½ inch.

Page 241-
Section R703.7.4.2, Air Space. Change to read as follows: The veneer shall be separated from the sheathing by an air space of a minimum of a nominal 7/8 inch (13 mm) but not more than 4 inches (114 mm).

Section R802.3 Ridge. Revise 1 inch (25 mm) to be 2 inches (51 mm).

Table R802.5.2 Rafter/Ceiling Joist Heel Joint Connections. For purposes of this table, use the column for a ground snow load of 30 psf.

Page 268

Table R802.11 Required Strength of Truss or Rafter Connections to Resist Wind Uplift Forces.

Add footnote G to read as follows:

g. i. Wind uplift calculations, prepared by a structural engineer licensed in the State of Nebraska, shall be provided at the time of the framing inspection, for all structures built without uplift connections as prescribed by this table.

Page 269

Add a second paragraph to section R903.4 as follows:

Section R903.4, Roof Drainage. Revise section to read as follows: Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing area.

When roofs are sloped to drain over the edge, scuppers or gutters and downspouts, adequately sized, pitched and supported, shall be installed to conduct rain water to ground level. Rainwater shall be discharged at least three feet away from the building foundation in a direction parallel to the adjoining property line when the discharge point is within 20 feet of the adjoining property line.

Exception: Structures with no sub-grade spaces.

Page 291

Section R905.2.5, Fasteners. Change to read as follows: Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, minimum 12 gage [0.105 inch (3 mm)] shank with a minimum 3/8-inch (10 mm) diameter head, ASTM F 1667, or if approved by the manufacturer, corrosion-resistant staples, minimum 16 gage 15/16-inch crown width, of a length to penetrate through the roofing materials and a minimum of 3/4 inch (19 mm) into the roof sheathing. Where the roof sheathing is less than 3/4 inch (19 mm) thick, the fasteners shall penetrate through the sheathing. Fasteners shall comply with ASTM F 1667.

Page 292

Table R905.2.8.2, Valley Lining Material. In the Gage column, for Galvanized steel, delete the number 26, and replace it with 28.
Section R905.2.8.4, Sidewall flashing. Change to read as follows: Flashing against a vertical sidewall shall be corrosion-resistant metal of minimum 28 gage.

Page 293.

Section R905.3.8, Flashing. Change the first sentence to read as follows: At the juncture of roof vertical surfaces, flashing and counterflashing shall be provided in accordance with this chapter and the manufacturer's installation instructions and, where of metal, shall not be less than 0.018 inches (0.4 mm) (No. 28 galvanized sheet gage) corrosion-resistant metal.

Page 295.

Section R905.7.6, Valley flashing. Change the first sentence to read as follows: Roof flashing shall be not less than No. 28 gage [(0.018 inches (0.4 mm)] corrosion-resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal (100-percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater.

Page 296.

Section R905.8.8, Valley flashing. Change the first section to read as follows: Roof flashing shall not be less than No. 28 gage [(0.018 inches (0.4 mm)] corrosion-resistant sheet metal and shall extend at least 11 inches (279 mm) from the centerline each way.

Page 299.

Section R907.3, Re-covering versus replacement. Change condition 2 to read as follows: 

2. Where the existing roof covering is wood shake, wood shingle, slate, clay, cement or asbestos-cement tile.

Page 300.

Section R907.4, Roof Recovering. Delete this section in its entirety.

Section R908.3.1 Roof recover. Delete this section in its entirety.

Section R908.3.1.1 Roof recover not allowed. Revise to read as follows: A roof recover is not allowed.

Section R908.4 Roof recovering. Delete this section in its entirety.

Page 310.

Section R1006.2, Exterior air intake. Change to read as follows: The exterior air intake shall be capable of supplying all combustion air from the exterior of the dwelling or from spaces within the dwelling ventilated with outside air such as non-mechanically ventilated crawl or attic spaces. The exterior air intake shall not be located within the garage or basement of the dwelling. The exterior air intake shall be covered with a corrosion-resistant screen of ¼-inch (9 mm) mesh.
Section N1102.2, Compliance. Add the following exception after this section:

Exception: Single-family dwellings, two-family dwellings and townhomes with a window-to-wall ratio greater than 15% must conform to the State of Nebraska energy code.

Section N1101.5 (R103.2) Information on construction documents. Revise section to read as follows: Construction documents shall be provided as required in the Omaha Municipal Code. Where the REScheck is submitted, it shall be considered part of the construction documents and is required to be signed and dated.

Section N1101.12 (R303.3) Maintenance information. Delete the second and third sentences from this section.

Section N1103.3.5 (R403.3.5) Building Cavities (Mandatory). Revise section to read as follows: Exterior building framing cavities shall not be used as ducts or plenums. Interior framing cavities only may be used for return air ducts or plenums.

Section N1103.5.1.1 (R403.5.1.1) Circulation systems. Revise section to read as follows: Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Thermosyphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls may automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

Section N1103.6 (R403.6) Mechanical ventilation (Mandatory). Revise reference to mechanical section M1507 to be M1505.

Delete Section N1103.8 (R403.8) Systems serving multiple dwelling units (Mandatory) in its entirety.

M1201.2, Applications. Revise section to read as follows: The administrative provisions of this chapter shall also apply to the mechanical requirements of Chapters 13 through 24.

M1301.1, Scope. Revise section to read as follows: The provisions of this chapter shall govern the installation of mechanical systems not specifically covered in other chapters applicable to mechanical systems. Installations of mechanical appliances, equipment and systems not addressed by this code shall comply with the applicable provisions of the International Mechanical Code and the National Fuel Gas Code (NFPA 54).

M1302.1, Listed and labeled. Revise section to read as follows: Appliances regulated by this code shall be listed and labeled for the application in which they are installed and used. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. Alternative material, design or method of construction shall be approved where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that
the material, method, or work offered is for the purpose intended at least the equivalent of that prescribed in this code.

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M1308.3. Foundations and supports. Foundations and supports for outdoor mechanical systems shall be raised at least 2 inches (51 mm) above the finished grade, and shall also conform to the manufacturer's installation instructions.

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M1403.1. Heat pumps. The minimum unobstructed total area of the outside and return air ducts or openings to a heat pump shall be not less than 6 square inches per 1,000 Btu/h (13208 mm²/kW) output rating or as indicated by the conditions of the listing of the heat pump. Electric heat pumps shall conform to UL 1995. INSERT.

Exception: The total area of the supply air ducts and outdoor and return air ducts shall not be required to be larger than the minimum size required by the heat pump manufacturer's installation instructions.

M1403.2. Foundations and supports. Foundations and supports for outdoor unit of a heat pump shall be raised at least 2 inches (51 mm) above the ground to permit free drainage of defrost water, and shall also conform to the manufacturer's installation instructions.

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M1501.1, Outdoor discharge. Add Exception 2 Change to read as follows: The air removed by every mechanical exhaust system shall be discharged to the outdoors. Air shall not be exhausted into an attic, soffit, ridge-vent or crawl space.

Exceptions:

1. Whole-house ventilation-type attic fans that discharge into the attic space of dwelling units having private attics shall be permitted.

2. Bathroom exhaust fans may be ducted through an exterior soffit, provided that the exhaust duct discharges through a dedicated soffit vent to the exterior.

M1502.2 M1502.3. Duct termination. Revise section to read as follows: Exhaust ducts shall terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. Exhaust duct terminations shall be equipment with a backdraft damper. Screens shall not be installed at the duct termination.

M1502.6. Duct length. The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location to the wall or roof termination. The maximum length of the duct shall be reduced 2.5 feet (762 mm) for each 45-degree (0.8 rad) bend and 5 feet (1524 mm) for each 90-degree (1.6 rad) bend. The maximum length of the exhaust duct does not include the transition duct.

Exceptions:

1. Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for the dryer are provided to the building official,
the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer'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 the ASHRAE Fundamentals Handbook shall be required.

3. The maximum length of an exhaust duct may be increased by use of a boost fan listed for clothes dryer exhaust. The boost fan and clothes dryer must be interlocked to prevent clothes dryer operation if the boost fan is not in operation.

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M1801.1, Venting required. Revise section to read as follows: Fuel-burning appliances shall be vented to the outdoors in accordance with their listing and label and manufacturer's installation instructions except appliances listed and labeled for un-vented use. Venting systems shall consist of approved chimneys or vents, or venting assemblies that are integral parts of labeled appliances. Gas-fired appliances shall be vented in accordance with the National Fuel Gas Code (NFPA 54) nationally recognized fuel gas code for that appliance.

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M1902.2, Installation: Revise section to read as follows: Sauna heaters shall be installed in accordance with the manufacturer’s installation instructions, Nebraska Boiler Act, ASME Section 4, and the authority having jurisdiction.

M1904.1, Installation: Revise section to read as follows: Gaseous hydrogen systems shall be installed in accordance with the applicable requirements of Section M1307.4 and M1903.1 and the National Fuel Gas Code, (NFPA 54), NFPA 58, the International Fire Code and the International Building Code.

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M2001.1, Installation: Revise section to read as follows: In addition to the requirements of this code, the installation of boilers shall conform to the Nebraska Boiler Act, ASME Section 4, the authority having jurisdiction and the manufacturer's installation instructions. The manufacturer's rating data, the nameplate and operating instructions of a permanent type shall be attached to the boilers. Boilers shall have all controls set, adjusted and tested by the installer. A complete control diagram together with complete boiler operation instructions shall be furnished by the installer. Solid-and liquid-fuel-burning boilers shall be provided with combustion air as required by Chapter 17.

M2001.2, Clearance: Revise section to read as follows: Boilers shall be installed in accordance with their listing and label, Nebraska Boiler Act, and the authority having jurisdiction.

M2001.3, Valves. Every boiler or modular boiler shall have a shutoff valve in the supply and return piping. For multiple boiler or multiple modular boiler installations, each boiler or modular boiler shall have individual shutoff valves in the supply and return piping. Delete the exception in its entirety.
M2002.1, Safety controls. Revise section to read as follows: Electrical and mechanical
operating and safety controls for boilers shall be listed and labeled for the purpose and
condition of their use and operation.

M2002.4, Pressure-relief valve. Revise section to read as follows: Boilers shall be equipped
with pressure relief valves with minimum rated capacities for the equipment served.
Pressure-relief valves shall be set no greater than the maximum rating of the boiler.
Discharge shall be piped to drains by gravity to within 3 inches (76 mm) of the floor or to an
approved plumbing fixture.

M2002.5, Boiler low water cutoff. All steam and hot water boilers shall be protected with.
The low water cutoff shall automatically stop the combustion operation of the appliance
when the water level drops below the lowest safe water level as established by the
manufacturer.

Section M2004.1 General. Delete this section in its entirety.

M2005.1, General: Revise section to read as follows: Water heaters shall be installed in
accordance with the manufacturer's installation instructions, the Omaha Plumbing Code,
and the requirements of this code. Water heaters with inputs of 200,000 BTU's and greater
must comply with the Nebraska Boiler Act and the authority having jurisdiction. Water
heaters installed in an attic shall conform to requirements in Chapter 24. Domestic electric
water heaters shall conform to UL 174 or UL1453, and NFPA 70. Commercial electric
water heaters shall conform to UL1453 and NFPA 70. Oiled-fired water heaters shall
conform to UL 732 and NFPA 31.

M2005.3, Electric water heaters. Revise section to read as follows: Electric water heaters
shall also be installed in accordance with the applicable provisions of National Electrical
Code (NFPA 70).

M2006.1, General: Revise section to read as follows: Pool and spa heaters shall be
constructed and installed in accordance with the manufacturer's installation instructions,
ASME Section 4, the Nebraska Boiler Act, and the authority having jurisdiction. Oil-fired
pool heaters shall be tested in accordance with UL 726 and NFPA 31. Electric pool and spa
heaters shall conform to UL1261, and NFPA 70.

M2006.2, Clearances: Revise section to read as follows: In no case shall the clearances
interfere with combustion air, draft hood or flue terminal relief, or accessibility for servicing,
or as required by the Nebraska Boiler Act, and the authority having jurisdiction.

M2006.3, Add Section M2006.4, Pressure and Temperature-limiting devices: Pool heaters
shall have temperature limiting controls and pressure relief valves.

M2101.1, General: Revise section to read as follows: Hydronic piping shall conform to
Table M2101.1 as amended by this section. Approved piping, valves, fittings and
connections shall be installed in accordance with the installations instructions. Pipe and
fittings shall be rated for use at the operating temperature and pressure of the hydronic
system. Chlorinated poly (vinyl chloride) (CPVC) pipe, tubing and fittings, Cross-linked
polyethylene (PEX) pipe, tubing and fittings, Cross-linked polyethylene/aluminum/ cross-
linked polyethylene (PEX-AL-PEX) pipe, tubing and fittings, Polyethylene (PB) pipe, tubing and fittings, Polyethylene (PE) pipe, tubing and fittings and Polypropylene (PP) pipe, tubing and fittings will not be permitted for above ground use in a hydronic heating or cooling system. Used pipe, fittings, valves or other materials shall be free of foreign materials.

M2101.2, System drain down. Revise section to read as follows: Hydronic piping systems shall be installed to permit draining of the system. When the system drains to the plumbing drainage system, the installation shall conform to the requirements of the Omaha Plumbing Code.

M2101.3, Protection of potable water. Revise section to read as follows: The potable water system shall be protected from backflow in accordance with the provisions of the Omaha Plumbing Code and Metropolitan Utilities District (MUD).

M2101.4, Pipe penetrations: Opening through concrete or masonry building elements shall be sleeved or protected from contact with building materials.-

M2101.10, Tests: Revise section to read as follows: Hydronic piping shall be tested hydrostatically at a pressure of not less than 100 pounds per square inch (psi) (690kPa) for a duration of not less than 30 minutes.

M2104.4 and M2104.9 Add Section M2103.5 Termination and Section M2104.5. Termination. (Insert) Final termination of all embedded piping systems is required to terminate to listed and labeled equipment or to a piping manifold. The maximum length from piping system entering the structure to equipment or manifold is 48 inches (1219 mm).

M2106.1, Testing: The assembled loop system shall be pressure tested with water at 100 psi (690kPa) for 30 minutes with no observed leaks before connection (header) trenches are backfilled.-

M2105.28 Testing. Revise section to read as follows: Before connection header trenches are backfilled, the assembled loop system shall be pressure tested with water at 100 psi (689 kPa) for 30 minutes without observed leaks.

Delete the text of Chapter 22 in its entirety and insert:

Chapter 22 Fuel Oil Piping and Storage Systems

The design, installation, construction and repair of fuel oil piping and storage systems must comply with the requirements of NFPA 30, 30A, and 31, 37, Title 159 (State of Nebraska), Omaha Municipal Code, the International Fire Code and the International Building Code.

M2301.5, Backflow protection. Revise section to read as follows: Connections from the potable water supply to the solar systems shall comply with the Omaha Plumbing Code and Metropolitan Utilities District (MUD).
The 2006 International Energy Conservation Code is hereby amended, altered, modified
and changed in the following respects:

Amend Section 101.2 to read as follows:

101.2 Scope. This code applies to residential and commercial buildings.

Exception: Industrial and commercial processes/uses not designed for or affecting human
comfort or human use of the building. This exception shall be limited to the specific energy
system(s) that is (are) directly affected by said process or use.

The code official may allow exemptions from the requirements of this code for valid
reasons.

Amend Section 101.4.4 to read as follows:

101.4.4 Change in occupancy or use. Buildings undergoing a change in occupancy or use
that would result in an increase in demand for either fossil fuel or electrical energy shall
comply with this code. In determining the extent of required work to be done, consideration
shall be given to the affect each energy system has on other energy systems of the
building. The energy systems of a building are the building envelope, building mechanical,
service water heating and electrical power and lighting systems.

Amend Section 202 by adding the following definitions:

Gross exterior wall area. The normal projection of all above grade exterior walls enclosing
conditioned space including basement walls with an average below grade wall area which
is less than 50% of the total opaque and non-opaque area of that enclosing side.

ICC Electrical Code. Whenever reference is made in this code to the ICC Electrical Code, it
shall mean Chapter 44 of the Omaha Municipal Code and NFPA 70 - National Electric
Code as adopted by the City.

International Fuel Gas Code. Whenever reference is made in this code to the International
Fuel Gas Code, it shall mean NFPA 54 - National Fuel Gas Code as adopted by the City.

International Plumbing Code. Whenever reference is made in this code to the International
Plumbing Code, it shall mean Chapter 49 - Plumbing of the Omaha Municipal Code.

Window area. The rough opening of all fenestration in walls above grade.

Amend Section 401.2 to read as follows:

401.2 Compliance. Projects with window area exceeding 15% of the gross exterior wall
area shall be designed using ResCheck 3.6 Release 2. Other projects shall comply with
Sections 401, 402.4, 402.5, 402.6, 403, 403.7, 505.1, 505.2, 505.3, 505.4, 505.6, 505.7
(referred to as the mandatory provisions) and either:

1. Sections 402.1 through 402.3 (prescriptive); or
2. Section 404 (performance).

Amend Section 402.4.1 to read as follows:

402.4.1 Building thermal envelope. The building thermal envelope shall be durably sealed
to limit infiltration. The sealing methods between dissimilar materials shall allow for
differential expansion and contraction. The following shall be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material:

1. All joints, seams and penetrations.
2. Site-built windows, doors and skylights.
3. Openings between window and door assemblies and their respective jambs and framing.
5. Dropped ceilings, soffits or chases adjacent to the thermal envelope.
7. Floors, walls and ceilings separating a garage from conditioned spaces.
8. Behind tubs, showers and fireplaces on exterior walls.
9. Common walls between dwelling units.
10. Chases for plumbing stacks and furnace flues.
11. All rim joist areas.
12. Cantilevered floors.
14. Other sources of infiltration.

Amend Section 403.7 to read as follows:


Amend Section 404.1 to read as follows:

404.1 Scope. This section establishes criteria for compliance using simulated energy performance analysis. Such analysis shall include heating, cooling, service water heating and electrical power and lighting energy only.

Amend Section 404.2 to read as follows:

404.2 Mandatory requirements. Compliance with this Section requires that the criteria of Sections 401, 402.4, 402.5, 402.6, 403 and 405, 505.1, 505.2, 505.3, 505.4, 505.6, and 505.7 be met.

Add a new Section 405 to read as follows:

SECTION 405
ELECTRICAL POWER AND LIGHTING

405.1 Electrical energy consumption. In residential buildings having individual dwelling units, provisions shall be made to determine the electrical energy consumed by each tenant by separately metering individual dwelling units.
405.2 Lighting power budget. The lighting system shall meet the applicable provisions of Section 505.

Exception: Detached one- and two-family dwellings and townhouses and the dwelling portion of Group R-2 and R-4 residential buildings.

Amend Section 503.2.9 to read as follows:

503.2.9 HVAC system completion. Upon request of the code official, the design professional shall provide evidence of system completion in accordance with Section 503.2.9.1 through 503.2.9.3.

Secs. 43-129, 43-130. - Reserved.

Section 2. This ordinance shall be in full force and take effect July 1, 2020.

INTRODUCED BY COUNCILMEMBER

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APPROVED BY:

______________________________

MAYOR OF THE CITY OF OMAHA DATE

PASSED ________________________

ATTEST:

______________________________

CITY CLERK OF THE CITY OF OMAHA DATE

APPROVED AS TO FORM:

______________________________

ASSISTANT CITY ATTORNEY DATE