3-28-23

ORDINANCE NO._____

An ordinance amending Chapter 57, "Dallas One-and Two-Family Dwelling Code," of the Dallas City Code, as amended; adopting with certain changes the 2021 Edition of the International Residential Code of the International Code Council, Inc.; regulating the construction, enlargement, alteration, repair, demolition, use, and maintenance of construction, plumbing, mechanical, and electrical work in the city on one- and two-family dwellings; providing a penalty not to exceed $2,000; providing a saving clause; providing a severability clause; and providing an effective date.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That Chapter 57, "Dallas One- and Two-Family Dwelling Code," of the Dallas City Code, as amended, is amended by adopting the 2021 Edition of the International Residential Code of the International Code Council, Inc. (which is attached as Exhibit A and made a part of this ordinance), with the following amendments:

1. Chapter 1, "Scope and Administration," of Part I, "Administration," of the 2021 International Residential Code is deleted and replaced with a new Chapter 1, "Scope and Administration," to read as follows:

"**CHAPTER 1**
SCOPE AND ADMINISTRATION

SECTION R101
GENERAL

R101.1 Title. These regulations shall be known as the *Dallas One- and Two-Family Dwelling Code*, hereinafter referred to as "this code."'

101.2 Administrative procedures. All provisions of Chapter 52, "Administrative Procedures for the Construction Codes," of the *Dallas City Code* apply to this code."

2. Section R202, "Definitions," of Chapter 2, "Definitions," of Part II, "Definitions," of the 2021 International Residential Code is amended by alphabetically adding, deleting, or amending the following definitions to read as follows:

"**COMMERCIAL DWELLING SITE.** Three or more *dwelling units* on a *lot*."

"ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from a building electrical service, EVSE, a rechargeable storage battery, a fuel cell, a photovoltaic array, or another source of electric current."

"ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle."

"**ENERGY SYSTEMS LABORATORY.** An agency established by the Texas Legislature to assist communities in evaluating code amendments to the energy provisions of the *International Residential Code* and the *International Energy Conservation Code* which now define the minimum energy efficiency standards for the State of Texas."

"EV CAPABLE SPACE. Electrical panel capacity and space to support a minimum 40-ampere, 208/240-volt branch circuit for each EV parking space, and the installation of raceways, both underground and surface mounted, to support the *EVSE*."

"EV READY SPACE. A designated parking space which is provided with one 40-ampere, 208/240-volt dedicated branch circuit for *EVSE* servicing electric vehicles."

"**FIRE WALL.** A fire-resistance-rated wall having protected openings, which restricts the spread of fire and extends continuously from the foundation to or through the roof, with sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall."

"**FLOOR AREA.** The area included within the surrounding exterior walls of a building or portion thereof, exclusive of vent shafts and courts. The floor area of a building, or portion thereof, not provided with surrounding exterior walls is the usable area under the horizontal projection of the roof or floor above."

"[~~**[RB] GLAZING AREA.** The interior surface area of all glazed fenestration, including the area of sash, curbing or other framing elements, that enclose *conditioned space*. Includes the area of glazed fenestration assemblies in walls bounding conditioned *basements*.~~]"

"**[MP] GRAYWATER.** Wastewater that has not come into contact with toilet waste, kitchen sink waste, dishwasher waste or similarly contaminated sources. Gray water includes waste [~~discharged~~] from lavatories, bathtubs, showers, clothes washers and laundry sinks [~~trays~~]."

"**GREEN BUILDING.** Structures and their surrounding landscapes designed, constructed and maintained to decrease energy and water usage and costs, to improve the efficiency and longevity of building systems and to decrease the burdens imposed on the environment and public health."

"**GREEN BUILT TEXAS.** An initiative of the Homebuilders Association of Greater Dallas that provides climate-specific guidelines and verification systems for residential and multifamily *green buildings*."

"**GREEN BUILT TEXAS-CERTIFIABLE.** A *proposed project* that is not required to be registered with the Home Builders Association of Greater Dallas, but is planned, designed and constructed to meet or exceed a certified rating using version 2.0 of the *Green Built Texas* rating system."

"**[RB] HISTORIC BUILDING.** A building that is designated as historic as defined in the *Dallas Existing Building Code*. [~~or structure that is one or more of the following:~~

1. ~~Listed, or certified as eligible for listing, by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places in the National Register of Historic Places.~~

2. ~~Designated as historic under an applicable state or local law.~~

3. ~~Certified as a contributing resource within a National Register-listed, or a state-designated or locally-designated historic district.~~

~~For the definition applicable in Chapter 11, See Section N1101.6~~]"

"**LEED.** The Leadership in Energy and Environmental Design *green building* rating systems are nationally accepted standards for *green buildings* developed by the *USGBC*."

"**LEED-CERTIFIABLE.** A *proposed project* that is not required to be registered with the *USGBC*, but is planned, designed and constructed to meet or exceed a certified rating using LEED NC (new construction) version 2.2 to present, LEED CS (core and shell) version 2.0 to present, LEED CI (commercial interiors) version 2.0 to present, LEED for schools version 2007, LEED for healthcare, LEED for retail version 2 or LEED for homes."

"**MULTIPLE BUILDING TOWNHOUSE.** A multiple dwelling unit located on a commercial dwelling site and constructed with a maximum of two units located between exterior walls or fire walls complying with Section 706 of the *Dallas Building Code* in which each unit extends from foundation to roof and with a yard or public way on at least two sides."

"**[RB] OCCUPIED SPACE**. The total area of all buildings or structures on any *lot* or parcel of ground projected on a horizontal plane, excluding permitted projections as allowed by this code. Any space that could be assumed to be occupiable shall not be exempt from the requirements of this code by designing the space without means of egress, light, or ventilation."

"**[MP] ON-SITE NONPOTABLE WATER REUSE SYSTEMS.** Water systems for the collection, treatment, storage, distribution, and reuse of nonpotable water generated on site, including but not limited to graywater systems. [~~This definition does not include rainwater harvest systems.~~]"

"**PROPOSED PROJECT.** For purposes of the *green building* program, the erection of any new structure for which a person, firm or corporation is required to obtain a building permit."

"**[MP] RECLAIMED WATER.** Nonpotable water that, as a result of [~~has been derived from~~] the treatment of domestic wastewater, is suitable for a direct beneficial use or a controlled use when such system has been submitted and approved by the building official prior to installation. [~~by a facility or system licensed or permitted to produce water meeting the *jurisdiction's* water requirements for its intended uses.~~] Also known as "Recycled Water"."

"**SINGLE BUILDING TOWNHOUSE.** A multiple dwelling unit located on a commercial dwelling site with more than two units between exterior wall or fire walls complying with Section 706 of the *Dallas Building Code* in which each unit extends from foundation to roof and with a yard or public way on not less than two sides."

"**[MP] STORM [~~SEWER,~~] DRAIN.** A drainage system that carries a natural precipitation, including snow-melt, [~~pipe used for conveying~~] rainwater, surface water [~~subsurface water and~~] or similar liquid waste that has contacted a surface at or below grade."

"**TOWNHOME.** A *dwelling* located on a single-family or duplex *dwelling* site and constructed in a group of abutting structures separated by property lines with each *dwelling* extending from its foundation to its roof and with a *yard* or public way on at least two sides."

"**USGBC.** The U.S. Green Building Council, a nonprofit organization comprised of leaders from the building industry formed to encourage sustainability by promoting buildings that are environmentally responsible, profitable and healthy places to live and work."

3. Subsection R301.1, "Application," of Section R301, "Design Criteria," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R301.1 Application.** Buildings and structures, and parts thereof, shall be constructed to safely support all loads, including dead loads, *live loads*, roof loads, flood loads, snow loads, wind loads and seismic loads as prescribed by this code. The construction of buildings and structures in accordance with the provisions of this code shall result in a system that provides a complete load path that meets the requirements for the transfer of loads from their point of origin through the load-resisting elements to the foundation. Buildings and structures constructed as prescribed by this code are deemed to comply with the requirements of this section.

R301.1.1 Alternative provisions. As an alternative to the requirements in Section R301.1, the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards, the design shall comply with the *Dallas* [~~*International*~~] *Building Code*.

1. AWC *Wood Frame Construction Manual* (WFCM).

2. AISI *Standard for Cold-Formed Steel Framing—Prescriptive Method for One- and Two-Family Dwellings* (AISI S230).

3. ICC *Standard on the Design and Construction of Log Structures* (ICC 400).

R301.1.2 Construction systems. The requirements of this code are based on platform and balloon-frame construction for light-frame buildings. The requirements for concrete and masonry buildings are based on a balloon framing system. Other framing systems must have equivalent detailing to ensure force transfer, continuity and compatible deformations.

R301.1.3 Engineered design. Where a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301 or otherwise not conforming to this code, these elements shall be designed in accordance with accepted engineering practice. The extent of such design need only demonstrate compliance of nonconventional elements with other applicable provisions and shall be compatible with the performance of the conventional framed system. Engineered design in accordance with the *Dallas* [~~*International*~~] *Building Code* is permitted for buildings and structures, and parts thereof, included in the scope of this code.

R301.1.4 Intermodal shipping containers. Intermodal shipping containers that are repurposed for use as buildings or structures shall be designed in accordance with the structural provisions in Section 3115 of the *Dallas* [~~*International*~~] *Building Code*.

R301.1.5 Elevators. The provisions of Section R321 shall apply to the design, construction, installation, operation, alteration and repair of elevators, dumbwaiters, escalators and moving walks and their hoistways.

R301.1.6 Fire protection provisions. In addition to the requirements of Section R313, an automatic sprinkler system must be installed when required by the *Dallas Fire Code*.

R301.1.7 Draftstop requirements. Draftstopping must be installed in accordance with Section 302.12.

R301.1.8 Security. Openings into dwellings must comply with Chapter 45 of this code.

R301.1.9 Unity agreements. The use of a unity agreement is allowed in accordance with Chapter 42 of the *Dallas Building Code*.

R301.1.10 Special inspections. The provisions of Chapter 17 of the *Dallas Building Code* apply to dwellings governed by this code.

R301.1.11 Sound transmission ratings. The sound transmission ratings of the wall assemblies between each *dwelling unit* of a two-family *dwelling*, a *townhome* or *townhouse* must comply with Appendix K."

4. Table R301.2, "Climatic and Geographic Design Criteria," of Subsection R301.2, "Climatic and Geographic Design Criteria," of Section R301, "Design Criteria," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

TABLE R301.2
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD[o]	WIND DESIGN				SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			ICE BARRIER UNDERLAYMENT REQUIRED[h]	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]				
5 lb/ft²	115 (3 sec- gust)/76 fastest mile	No	No	No	A	moderate	6”	Very heavy		Local codes	150	64.9 F

[~~MANUAL J DESIGN CRITERIA~~[n]

~~Elevation~~	~~Altitude correction factor[e]~~	~~Coincident wet bulb~~	~~Indoor winter design dry-bulb temperature~~	~~Indoor winter design dry-bulb temperature~~	~~Outdoor winter design by-bulb temperature~~	~~Heating temperature difference~~
—	—	—	—	—	—	—
~~Latitude~~	~~Daily range~~	~~Indoor summer design relative humidity~~	~~Indoor summer design relative humidity~~	~~Indoor summer design dry-bulb temperature~~	~~Outdoor summer design dry-bulb temperature~~	~~Cooling temperature difference~~
—	—	—	—	—	—	—]

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 from [~~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 basic wind speed 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. Refer to Chapter 51A of the Dallas City Code. [~~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 R.301.2.1.2 [~~the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate "NO" in 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 table using the Ground Snow Loads in Figures R301.2(3) and R301.2(4)."

5. Subsection R302.1, "Exterior Walls," of Section R302, "Fire-Resistant Construction," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R302.1 Exterior walls.** Construction, projections, openings and penetrations of exterior walls of *dwellings* and accessory buildings shall comply with Table R302.1(1); or *dwellings* equipped throughout with an *automatic sprinkler system* installed in accordance with Section P2904 shall comply with Table R302.1(2).

Exceptions:

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the *fire separation distance*.

2. Walls of *individual dwellings* and *accessory structures* located on the same *lot*.

3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from *permits* are not required to provide wall protection based on location on the *lot*. Projections beyond the exterior wall shall not extend over the *lot line* unless allowed under the *Dallas Development Code*.

4. Detached garages accessory to a *dwelling* located within 2 feet (610 mm) of a *lot line* are permitted to have roof eave projections not exceeding 4 inches (102 mm).

5. Foundation vents installed in compliance with this code are permitted.

6. Carports open on all sides and constructed entirely of noncombustible materials may be constructed within 0 feet of the property line without fire-resistive construction or opening protection when the location of such is approved as required by other city ordinances. Projections beyond the exterior wall may not extend over the *lot line* unless allowed as determined by the *Dallas Development Code*."

6. Subsection R302.2, "Townhouses," of Section R302, "Fire-Resistant Construction," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R302.2 Townhouses and townhomes.** Walls separating *townhouse units* shall be constructed in accordance with Section R302.2.1 or R302.2.2 and shall comply with Sections 302.2.3 through 302.2.5.

R302.2.1 Double walls. Each *townhouse unit* shall be separated from other *townhouse units* by two 1-hour fire-resistance-rated wall assemblies tested in accordance with ASTM E119, UL 263 or Section 703.3.2.2 of the *Dallas* [~~*International*~~] *Building Code*.

R302.2.2 Common walls. Common walls not associated with a property line and separating *townhouse units and townhomes* shall be assigned a fire-resistance rating in accordance with Item 1 or 2 and shall be rated for fire exposure from both sides. Common walls shall extend to and be tight against the exterior sheathing of the of the exterior walls without stud walls, or the inside face of exterior walls without stud cavities, and the underside of the roof sheathing. The common wall shared by two *townhouse units and townhomes* shall be constructed without plumbing or mechanical equipment, ducts or vents, other than water-filled fire sprinkler piping 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 installations shall be in accordance with Chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

1. Where an automatic sprinkler system in accordance with Section P2904 is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119, UL 263 or Section 703.3.2.2 of the *Dallas* [~~*International*~~] *Building Code*.

2. Where an automatic sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119, UL 263 or Section 703.3.2.2 of the *Dallas* [~~*International*~~] *Building Code*

Exception: Common walls are permitted to extend to and be tight against the inside of the exterior walls if the cavity between the end of the common wall and the exterior sheathing is filled with a minimum of two 2-inch nominal thickness wood studs.

Each *townhome* must provide at the property line its own fire-resistance-rated wall assembly meeting the requirements of Section R302.1 for exterior walls.

Exception: When approved by the *Dallas Development Code*, townhomes may provide at the property line a common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall must be rated for fire exposure from both sides and must extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations, if allowed by the *Dallas Development Code*, must be installed in accordance with the *Dallas Electrical Code*. Penetrations of electrical outlet boxes must be in accordance with Section R302.4. Use of this common wall provision may require the foundation on either side of the property line to be removable along with an associated deed restriction when required by the *Dallas Development Code*.

R302.2.3 Continuity. The fire-resistance-rated wall or assembly separating *townhouse units* shall be continuous from the foundation to the underside of the roof sheathing, deck or slab. The fire-resistance rating shall extend the full length of the wall or assembly, including wall extensions through and separating attached enclosed *accessory structures*.

R302.2.4 Parapets for townhouses. Parapets constructed in accordance with Section R302.2.5 shall be constructed for *townhouses* as an extension of exterior walls or common walls separating *townhouse units* in accordance with the following:

1. Where roof surfaces adjacent to the wall or walls are at the same elevation, the parapet shall extend not less than 30 inches (762 mm) above the roof surfaces.

2. Where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is not more than 30 inches (762 mm) above the lower roof, the parapet shall extend not less than 30 inches (762 mm) above the lower roof surface.

   Exception: A parapet is not required in the preceding two cases where the roof covering complies with a minimum Class C rating as tested in accordance with ASTM E108 or UL 790 and the roof decking or sheathing is of *noncombustible materials* or fire-retardant-treated wood for a distance of 4 feet (1219 mm) on each side of the wall or walls, or one layer of 5/8-inch (15.9 mm) Type X gypsum board is installed directly beneath the roof decking or sheathing, supported by not less than nominal 2-inch (51 mm) ledgers attached to the sides of the roof framing members, for a distance of not less than 4 feet (1219 mm) on each side of the wall or walls and any openings or penetrations in the roof are not within 4 feet (1219 mm) of the common walls. Fire-retardant-treated wood shall meet the requirements of Sections R802.1.5 and R803.2.1.2.

3. A parapet is not required where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is more than 30 inches (762 mm) above the lower roof. The common wall construction from the lower roof to the underside of the higher *roof deck* shall have not less than a 1-hour fire-resistance rating. The wall shall be rated for exposure from both sides.

R302.2.5 Parapet construction. Parapets shall have the same fire-resistance rating as that required for the supporting wall or walls. On any side adjacent to a roof surface, the parapet shall have noncombustible faces for the uppermost 18 inches (457 mm), to include counterflashing and coping materials. Where the roof slopes toward a parapet at slopes greater than 2 units vertical in 12 units horizontal (16.7-percent slope), the parapet shall extend to the same height as any portion of the roof within a distance of 3 feet (914 mm), and the height shall be not less than 30 inches (762 mm).

R302.2.6 Structural independence. Each individual *townhouse unit* and *townhome* shall be structurally independent.

Exceptions:

1. Foundations supporting exterior walls or common walls.
2. Structural roof and wall sheathing from each unit fastened to the common wall framing.
3. Nonstructural wall and roof coverings.
4. Flashing at termination of roof covering over common wall.
5. *Townhouse units* separated by a common wall as provided in Section R302.2.2, Item 1 or 2.
6. Foundations of townhomes may be continuous across property lines when allowed by the *Dallas Development Code*. [~~*Townhouse units* protected by fire sprinkler system complying with Section P2904 or NFPA 13D.~~]"

7. Paragraph R302.5.1, "Opening Protection," of Subsection R302.5, "Dwelling-Garage Opening and Penetration Protection," of Section R302, "Fire-Resistant Construction," of Part III, "Building Planning and Construction," of Chapter 3, "Building Planning," of the 2021 International Residential Code is amended to read as follows:

"**R302.5.1 Opening protection.** Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 ⅜ inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 ⅜ inches (35 mm) thick, or 20-minute fire- rated doors. [~~Doors shall be self-latching and equipped with a self-closing or automatic-closing device.~~]"

8. Subsection R302.12, "Draftstopping," of Section R302, "Fire-Resistant Construction," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R302.12 Draftstopping.** In combustible construction where there is usable space both above and below the concealed space of a floor-ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1,000 square feet (92.9 m^2). Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor-ceiling assemblies under the following circumstances:

1. Ceiling is suspended under the floor framing.

2. Floor framing is constructed of truss-type open-web or perforated members.

Exception: When the entire building, including within the floor-ceiling assembly, is protected by an approved automatic sprinkler system, the floor-ceiling assembly is not required to be subdivided.

R302.12.1 Materials. Draftstopping materials shall be not less than ½-inch (12.7 mm) gypsum board, ⅜-inch (9.5 mm) *wood structural panels* or other *approved* materials adequately supported. Draftstopping shall be installed parallel to the floor framing members unless otherwise *approved* by the *building official*. The integrity of the draftstops shall be maintained.

R302.12.2 Draftstopping attics. Draftstopping shall be installed in attics and concealed roof spaces, such that any horizontal area does not exceed 9,000 square feet (836.13 m^2).

Exception: When the entire building, including the attic spaces, is protected by an *approved* automatic sprinkler system, the attic is not required to be subdivided."

9. Subsection R303.3, "Bathrooms," of Section R303, "Light, Ventilation and Heating," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R303.3 Bathrooms.** Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m^2), one-half of which must be openable.

Exception: The glazed areas shall not be required where artificial light and a local exhaust system are provided. The minimum local exhaust rates shall be determined in accordance with Section M1505. Exhaust air from the space shall be exhausted directly to the outdoors unless the space contains only a water closet, a lavatory or a combination thereof which may be ventilated with an *approved* mechanical recirculating fan or similar device designed to remove odors from the air."

10. Section R307, "Toilet, Bath and Shower Spaces," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**SECTION R307**
TOILET, BATH AND SHOWER SPACES

R307.1 Space required. Fixtures shall be spaced in accordance with Figure R307.1, and in accordance with the requirements of Section P2705.1.

R307.2 Bathtub and shower spaces. Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet (1829 mm) above the floor.

R307.3 When blocking is required. Required at one toilet at grade level. Blocking per Section R307.4 and Figure307.4 shall be installed at rear wall and one wall adjacent to toilet at the lowest living level where a toilet is provided.

R307.4 Blocking dimensions and materials. Blocking may be ½" plywood or equivalent or 2 x solid wood blocking flush with wall.

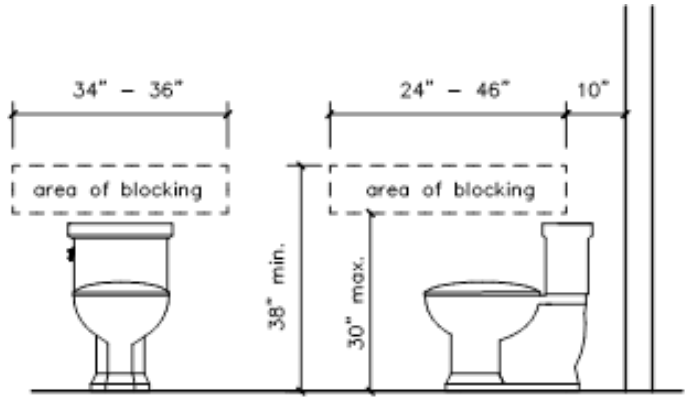


Figure 307.4

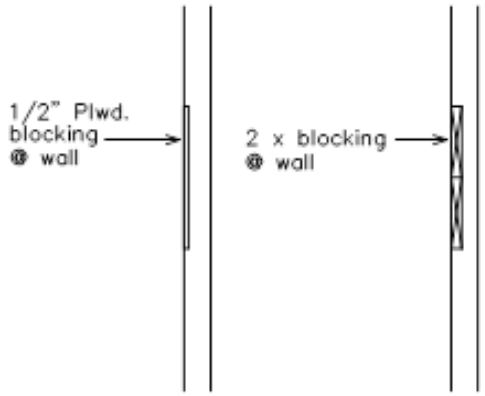


Figure 307.4

"

11. Subsection R311.2, "Egress Door," of Section R311, "Means of Egress," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended by adding a new Paragraph R311.2.1, "Bars, Grilles, Covers and Screens at Egress Door," to read as follows:

> "**R311.2.1 Bars, grilles, covers and screens at egress door.** Bars, grilles, covers, screens or similar devices are permitted to be placed at the egress door provided that the bars, grilles, covers, screens or similar devices shall be releasable from the inside without the use of a key, tool, special knowledge or force greater than that required for the normal operation of passage hardware."

12. Subparagraph R311.7.5.1, "Risers," of Paragraph R311.7.5, "Stair Treads and Risers," of Subsection R311.7, "Stairways," of Section R311, "Means of Egress," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R311.7.5.1 Risers.** The *riser* height shall be not more than 7 ¾ inches (196 mm). The *riser* height shall be measured vertically between leading edges of the adjacent treads. The greatest *riser* height within any flight of stairs shall not exceed the smallest by more than ⅜ inch (9.5 mm). *Risers* shall be vertical or sloped from the underside of the *nosing* of the tread above at an angle not more than 30 ° (0.51 rad) from the vertical. At open *risers*, openings located more than 30 inches (762 mm), as measured vertically, to the floor or *grade* below shall not permit the passage of a 4-inch-diameter (102 mm) sphere.

Exceptions:

1. The opening between adjacent treads is not limited on *spiral stairways*.

2. The riser height of *spiral stairways* shall be in accordance with Section R311.7.10.1.

3. Private steps and stairways serving an occupant load of less than 10 and stairways to unoccupied roofs may be constructed with an 8-inch maximum *riser* height."

13. Subparagraph R311.7.5.2, "Treads," of Paragraph R311.7.5, "Stair Treads and Risers," of Subsection R311.7, "Stairways," of Section R311, "Means of Egress," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R311.7.5.2 Treads.** The tread depth shall be not less than 10 inches (254 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than ⅜ inch (9.5 mm).

Exception: Private steps and stairways serving an occupant load of less than 10 and stairways to unoccupied roofs may be constructed with a 9-inch minimum tread depth.

R311.7.5.2.1 Winder treads. *Winder* treads shall have a tread depth of not less than 10 inches (254 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline. *Winder* treads shall have a tread depth of not less than 6 inches (152 mm) at any point within the clear width of the *stair*. Within any flight of stairs, the largest *winder* tread depth at the walkline shall not exceed the smallest *winder* tread by more than ⅜ inch (9.5 mm). Consistently shaped *winders* at the walkline shall be allowed within the same flight of stairs as rectangular treads and shall not be required to be within ⅜ inch (9.5 mm) of the rectangular tread depth.

Exception: The tread depth at *spiral stairways* shall be in accordance with Section R311.7.10.1."

14. Section R313, "Automatic Fire Sprinkler Systems," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**SECTION R313**
AUTOMATIC FIRE SPRINKLER SYSTEMS

R313.1 Townhouse automatic fire 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. The floor area of an existing unsprinklered *townhouse* greater than 7,500 square feet (696.77 m^2) and not housing a Group H occupancy may be increased by not more than 25 percent of the existing floor area (92.90 m^2). Only one increase in floor area is permitted under this exception.

3. New *townhouses* that are separated into fire areas no greater than 7,500 square feet (696.77 m^2) by the use of 2-hour-rated fire walls. Horizontal assemblies may not be used to satisfy this requirement.

R313.1.1 Design and installation. Automatic sprinkler systems for multiple building *townhouses* shall be designed and installed in accordance with Section P2904 or NFPA 13D. Automatic sprinkler systems for single building *townhouses* shall be designed and installed in accordance with NFPA 13R.

R313.2 One- and two-family dwellings and townhomes automatic sprinkler systems. An automatic 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. The floor area of an existing unsprinklered dwelling greater than 7,500 square feet (696.77 m^2) and not housing a Group H occupancy may be increased by not more than 25 percent of the existing floor area (92.90 m^2). Only one increase in the floor area is permitted under this exception.

3. New *dwellings* that are separated into fire areas no greater than 7,500 square feet (696.77 m^2) by the use of 2-hour rated fire walls. Horizontal assemblies may not be used to satisfy this requirement.

R313.2.1 Design and installation. Automatic sprinkler systems shall be designed and installed in accordance with Section P2904 or NFPA 13D.

R313.3 Fire walls. When fire walls are provided as required by this code, they shall comply with the provisions of Section 706 of the *Dallas Building Code*."

15. Paragraph R314.2.2, "Alterations, Repairs and Additions," of Subsection R314.2, "Where Required," of Section R314, "Smoke Alarms," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R314.2.2 Alterations, repairs and additions.** Where *alterations*, *repairs* or *additions* requiring a *permit* occur, the individual *dwelling unit* shall be equipped with smoke alarms located as required for new *dwellings*.

Exceptions:

1. Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of a porch or deck.

2. Installation, *alteration* or repairs of plumbing or mechanical systems.

3. Hard wiring of smoke alarms in existing areas shall not be required where the *alterations* or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure."

16. Subsection R317.1, "Location Required," of Section R317, "Protection of Wood and Wood-Based Products Against Decay," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R317.1 Location required.** Protection of wood and wood- based products from decay shall be provided in the following locations by the use of *naturally durable wood* or wood that is preservative-treated in accordance with AWPA U1.

1. In crawl spaces or unexcavated areas located within the periphery of the building foundation, wood joists or the bottom of a wood structural floor where closer than 18 inches (457 mm) to exposed ground, or wood girders where closer than 12 inches (305 mm) to the exposed ground, and wood columns where closer than 8 inches (204 mm) to exposed ground.

2. Wood framing members including columns, that rest directly on concrete or masonry exterior foundation walls and are less than 8 inches (203 mm) from the exposed ground.

3. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier.

4. The ends of wood girders entering exterior masonry or concrete walls having clearances of less than ½ inch (12.7 mm) on tops, sides and ends.

5. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches (152 mm) from the ground or less than 2 inches (51 mm) measured vertically from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather.

6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.

7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below *grade* except where an *approved* vapor retarder is applied between the wall and the furring strips or framing members.

8. Portions of wood structural members that form the structural supports of buildings, balconies, porches or similar permanent building appurtenances where those members are exposed to the weather without adequate protection from a roof, eave, overhang or other covering that would prevent moisture or water accumulation on the surface or at joints between members.

   Exception: Sawn lumber used in buildings located in a geographical region where experience has demonstrated that climatic conditions preclude the need to use naturally durable or preservative-treated wood where the structure is exposed to the weather.

9. Wood columns in contact with *basement* floor slabs unless supported by concrete piers or metal pedestals projecting not less than 1 inch (25 mm) above the concrete floor and separated from the concrete pier by an impervious moisture barrier.

10. When the bottoms of wood structural floor elements, including joists, girders and subfloor, are less than 8 inches (203 mm) above the horizontal projection of the outside ground level and extend toward the outside ground beyond the plane represented by the interior face of the foundation wall studs, such elements shall be approved naturally durable or preservative-treated wood.

R317.1.1 Field treatment. Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4.

R317.1.2 Ground contact. All wood in contact with the ground, embedded in concrete in direct contact with the ground or embedded in concrete exposed to the weather that supports permanent structures intended for human occupancy shall be *approved* pressure-preservative-treated wood suitable for ground contact use, except that untreated wood used entirely below groundwater level or continuously submerged in fresh water shall not be required to be pressure-preservative treated."

17. Subsection R321.1, "Elevators," of Section R321, "Elevators and Platform Lifts," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R321.1 Elevators.** Where provided, passenger elevators, limited-use and limited-application elevators or private residence elevators shall comply with ASME A17.1/CSA B44.

Exception: The appendices of ASME A17.1—2013 do not apply. The building owner shall be responsible for the safe operation and maintenance of each elevator, dumbwaiter, escalator or moving walk installation and shall cause periodic inspections, test and maintenance to be made on such conveyance."

18. Subsection R322.1, "General," of Section R322, "Flood-Resistant Construction," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R322.1 General.** Buildings and structures constructed in whole or in part in flood hazard areas, including A or V Zones and Coastal A Zones, as established in Table R301.2(1), and substantial improvement and *repair* of substantial damage of buildings and structures in flood hazard areas, shall be designed and constructed in accordance with the provisions contained in this section. Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

Exception: Buildings and structures permitted to be located, designed and constructed in the flood plain areas in accordance with the regulations of the *Dallas Development Code*.

R322.1.1 Alternative provisions. As an alternative to the requirements in Section R322, ASCE 24 is permitted subject to the limitations of this code and the limitations therein.

R322.1.2 Structural systems. Structural systems of buildings and structures shall be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses from flooding equal to the design flood elevation.

R322.1.3 Flood-resistant construction. Buildings and structures erected in areas prone to flooding shall be constructed by methods and practices that minimize flood damage.

R322.1.4 Establishing the design flood elevation. The design flood elevation shall be used to define flood hazard areas. At a minimum, the design flood elevation shall be the higher of the following:

1. The base flood elevation at the depth of peak elevation of flooding, including wave height, that has a 1 percent (100-year flood) or greater chance of being equaled or exceeded in any given year; or

2. The elevation of the design flood associated with the area designated on a flood hazard map adopted by the community, or otherwise legally designated.

R322.1.4.1 Determination of design flood elevations. If design flood elevations are not specified, the *building official* is authorized to require the applicant to comply with either of the following:

1. Obtain and reasonably use data available from a federal, state or other source.

2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Determinations shall be undertaken by a *registered design professional* who shall document that the technical methods used reflect currently accepted engineering practice. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and *approval*.

R322.1.4.2 Determination of impacts. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall demonstrate that the effect of the proposed buildings and structures on design flood elevations, including fill, when combined with other existing and anticipated flood hazard area encroachments, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the *jurisdiction*.

R322.1.5 Lowest floor. The lowest floor shall be the lowest floor of the lowest enclosed area, including *basement*, and excluding any unfinished flood-resistant enclosure that is useable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the building or structure in violation of this section.

R322.1.6 Protection of mechanical, plumbing and electrical systems. Electrical systems, *equipment* and components; heating, ventilating, air conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* shall be located at or above the elevation required in Section R322.2 or R322.3. If replaced as part of a substantial improvement, electrical systems, *equipment* and components; heating, ventilating, air conditioning and plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* shall meet the requirements of this section. Systems, fixtures, and *equipment* and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

> **Exception:** Locating electrical systems, *equipment* and components; heating, ventilating, air conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* is permitted below the elevation required in Section R322.2 or R322.3 provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the required elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided that they conform to the provisions of the electrical part of this code for wet locations.

R322.1.7 Protection of water supply and sanitary sewage systems. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems in accordance with the plumbing provisions of this code. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters in accordance with the plumbing provisions of this code [~~and Chapter 3 of the *International Private Sewage Disposal Code*~~].

R322.1.8 Flood-resistant materials. Building materials and installation methods used for flooring and interior and exterior walls and wall coverings below the elevation required in Section R322.2 or R322.3 shall be flood damage-resistant materials that conform to the provisions of FEMA TB-2.

R322.1.9 Industrialized housing [~~Manufactured homes~~]. The bottom of the frame of new and replacement industrialized [~~*manufactured*~~] *homes* on foundations that conform to the requirements of Section R322.2 or R322.3, as applicable, shall be elevated to or above the elevations specified in Section R322.2 (flood hazard areas including A Zones) or R322.3 in coastal high-hazard areas (V Zones and Coastal A Zones). The foundation [~~anchor and tie-down~~] requirements of this code [~~the applicable state or federal requirements~~] shall apply. The foundation and anchorage of industrialized [~~*manufactured*~~] *homes* to be located in identified floodways shall be designed and constructed in accordance with ASCE 24.

R322.1.10 As-built elevation documentation. A *registered design professional* shall prepare and seal documentation of the elevations specified in Section R322.2 or R322.3."

19. Subsection R327.1, "General," of Section R327, "Swimming Pools, Spas and Hot Tubs," of Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R327.1 General.** The design and construction of pools and spas shall comply with <u>*Dallas*</u> [~~*International*~~] *Swimming Pool and Spa Code*.

<u>**327.1.1 Adjacency to structural foundation.** Depth of the swimming pool and spa shall maintain a ratio of 1:1 from the nearest building foundation or footing of a retaining wall.</u>

<u>**Exception:** A sealed engineered design drawing of the proposed new structure shall be submitted for approval.</u>

20. Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended by adding a new Section R331, "Aircraft Noise Attenuation Requirements," to read as follows:

"**SECTION R331**
AIRCRAFT NOISE ATTENUATION REQUIREMENTS

R331.1 Definitions. The following words and terms shall, for the purposes of this chapter, and as used elsewhere in this code, have the meanings shown herein.

A-WEIGHTED SOUND LEVEL. An A-weighted sound level is a sound level occurring in the 1,000 to 6,000 Hz frequency range that is increased by 10 dB if the noise event occurs between 10:00 p.m. and 7:00 a.m. The A-weighted sound level reflects the greater intrusiveness of sounds that the ear perceives as louder compared to other frequencies. "dBA" or "dB(A)" indicate a sound level measurement has been A-weighted.

DAY-NIGHT AVERAGE SOUND LEVEL. The day-night average sound level is the noise exposure in areas around airports (abbreviated as "DNL" in text and "L_{dn}" in equations). DNL is a measure of the average A-weighted sound level of all aircraft flights occurring in a 24-hour period.

R331.2 Aircraft noise zone. All land within a DNL noise contour of 65 dBA or greater, as shown on the aircraft noise maps available for review at the division of building inspection is subject to these regulations. A building that is only partly located within an aircraft noise zone is also subject to these regulations.

R331.3 Noise insulation.

R331.3.1 Certification of plans prior to issuance of building permit. A registered Texas engineer who has demonstrable knowledge of acoustical engineering shall certify that the plans and specifications comply with the noise insulation standards of Section 331.3.2. The *building official* shall not issue a building permit for any building within an aircraft noise zone unless the plans and specifications for the building meet the noise insulation standards of Section 331.3.2.

Exception: The plans and specifications may be prepared and certified by a member of the National Council of Acoustical Consultants or another organization approved by the *building official*.

R331.3.2 Noise insulation standards. New buildings must be constructed with sound insulation or other means to achieve a DNL of 45 dBA or less inside the building. If the cost of modifications to an existing building is 75 percent or more of the total assessed improvement value of the site, the building must also meet this standard. Garages and similar accessory buildings that do not include living space are exempt from this requirement."

21. Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended by adding a new Section R332, "Green Building Program," to read as follows:

"**SECTION R332**
GREEN BUILDING PROGRAM

R332.1 Purpose. The purpose of this section is to establish *green building* standards to help reduce the use of natural resources, create a healthier and more sustainable living environment and minimize the negative environmental impacts of development in Dallas and the North Texas region.

R332.2 All new construction. All *proposed projects* must satisfy the minimum requirements of Chapter 11 of this code and:

1. meet the minimum requirements of ICC 700;

2. meet the prescriptive requirements of Section 332.5;

3. be *LEED-certifiable* under the LEED for homes standard;

4. be *Green Built Texas-certifiable*; or

5. meet an equivalent minimum *green building* standard certification level as determined by the *building official*.

Formal certification by the *USGBC*, *Green Built Texas* or an equivalent entity is not required.

Exceptions:

1. Additions to existing one- and two-family dwellings that are 200 square feet or less in floor area and contain no bathroom or restroom plumbing fixtures (water closets, lavatories, tubs, showers).

2. Carports, garages, storage buildings, agricultural barns, stables and similar structures that are accessory to one- and two-family dwellings 400 square feet or less in floor area.

R332.3 LEED. For *proposed projects* utilizing LEED for homes, the point total must include 1 point under the water efficiency credit titled "Indoor Water Use."

R332.4 Green Built Texas. For *proposed projects* utilizing the *Green Built Texas* standards, energy use requirements must be met by complying with the minimum requirements of Chapter 11 of this code.

R332.5 Prescriptive requirements.

R332.5.1 Storm water. For all *proposed projects*, lots must be designed so that at least 70 percent of the built environment, not including any area under a roof, is permeable or designed to capture water runoff for infiltration onsite. The following areas may be counted toward the 70 percent requirement:

1. Vegetative landscape such as grass, trees and shrubs.

2. Permeable paving, installed by an experienced professional. Permeable paving must include porous above-ground materials, such as open pavers and engineered products, and a 6-inch porous sub-base. The base layer must be designed to ensure proper drainage from the home.

3. Impermeable surfaces that are designed to direct all runoff toward an appropriate permanent infiltration feature such as a vegetated swale, onsite rain garden or rainwater cistern.

R332.5.2 Water efficiency.

R332.5.2.1 New construction. *Proposed projects* must:

1. Utilize drip irrigation emitters for all bedding areas of an approved landscape plan, and

2. Meet water reduction strategies that include installing high-efficiency (low-flow) fixtures or fittings which meet at least three of the following requirements:

   2.1. The average flow rate for all lavatory faucets must be less than or equal to 2.0 gallons per minute.

   2.2. The average flow rate for all shower heads must be less than or equal to 2.0 gallons per minute.

   2.3. The average flow rate for all toilets must be:

      2.3.1. Less than or equal to 1.3 gallons per flush;

      2.3.2. Be dual flush and meet the requirements of ASME A 112.19.14; or

      2.3.3. Meet the U.S. Environmental Protection Agency Water Sense specification and be certified and labeled correctly.

   2.4. Utilize ENERGY STAR labeled dishwashers that use 6.0 gallons or less per cycle.

   2.5. Utilize ENERGY STAR labeled clothes washers with a modified energy factor (MEF) greater than or equal to 2.0 and a water factor (WF) of less than 5.

R332.5.2.2 Additions to existing one- and two-family dwellings. Additions to existing one- and two-family *dwellings* must meet at least two of the following water reduction strategies:

1. The average flow rate for all lavatory faucets must be less than or equal to 2.0 gallons per minute.

2. The average flow rate for all shower heads must be less than or equal to 2.0 gallons per minute.

3. The average flow rate for all toilets must be:

   3.1. Less than or equal to 1.3 gallons per flush;

   3.2. Be dual flush and meet the requirements of ASME A 112.19.14; or

   3.3. Meet the U.S. Environmental Protection Agency Water Sense specification and be certified and labeled correctly.

R332.5.3 Energy efficiency. All *proposed projects* must meet the minimum requirements of Chapter 11 of this code.

R332.5.4 Heat island mitigation. *Proposed projects* shall install an ENERGY STAR qualified roof on all roofs with a slope of 2:12 or greater.

Exceptions:

1. A vegetated roof may be installed subject to approval by the *building official*.

2. Installation of a radiant barrier that is manufactured as an integral part of roof decking or roof sheathing materials may be installed in lieu of an ENERGY STAR qualified roof.

3. Attic encapsulated with foam insulation at a minimum of R-22 may be installed in lieu of an ENERGY STAR qualified roof.

R332.5.5 Indoor air quality.

R332.5.5.1 HVAC. For *proposed projects*, all air-handling equipment and ductwork must be outside the fire-rated envelope of the garage.

R332.5.5.2 Minimize pollutants from the garage. For *proposed projects*, surfaces between conditioned space and an attached garage must be tightly sealed.

R332.5.5.2.1 Conditioned spaces above a garage.

1. All penetrations must be sealed.

2. All floor and ceiling joist bays must be sealed.

3. The walls and ceilings of conditioned spaces above a garage must be painted.

R332.5.5.2.2 Conditioned spaces next to a garage.

1. All penetrations must be sealed.

2. All doors must be weather stripped.

3. All cracks at the base of the wall must be sealed.

R332.5.5.2.3 Air filters.

1. For *proposed projects*, air filters must be installed with a minimum reporting value (MERV) equal to or greater than 8.

2. For *proposed projects*, air handlers must be able to maintain adequate air pressure and air flow.

3. For *proposed projects*, air filter housings must be airtight to prevent bypass or leakage."

22. Chapter 3, "Building Planning," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended by adding a new Section R333, "Electric Vehicle Charging Facilities," to read as follows:

"**SECTION R333**
ELECTRIC VEHICLE CHARGING FACILITES

R333.1 Electric vehicle (EV) charging for new construction. New construction shall facilitate future installation and use of *electric vehicle supply equipment (EVSE)* in accordance with the *Dallas Electrical Code (NFPA 70).*

R333.1.1 One- to two-family dwellings and townhouses. For each dwelling unit, provide at least one *EV ready space*. The branch circuit shall be identified as "EV Ready" in the service panel or subpanel directory, and the termination location shall be marked as "EV Ready."

Exception: *EV ready spaces* are not required where no parking spaces are provided.

R333.1.2 Multifamily dwellings (three or more units). *EV ready spaces* and *EV capable spaces* shall be provided in accordance with Table R333.1.2. Where the calculation of percent served results in a fractional parking space, it shall round up to the next whole number. The service panel or subpanel circuit directory shall identify the spaces reserved to support EV charging as "EV Capable" or "EV Ready." The raceway location shall be permanently and visibly marked as "EV Capable."

Where more than one parking facility is provided on a site, electric vehicle ready parking spaces shall be calculated separately for each parking facility. The service panel or subpanel circuit directory shall identify the spaces reserved to support EV charging as "EV-Capable" or "EV-Ready." The raceway location for *EV capable spaces* shall be permanently and visibly marked as "EV-Capable."

Table R333.1.2
***EV Ready Space* and *EV Capable Space* requirements [a]**

Total Number of Parking Spaces	Minimum number of EV Ready Spaces	Minimum number of EV Capable Spaces
1	1	NA
2 – 10	2	NA
11 – 15	2	3
16 – 20	2	4
21 – 25	2	5
26+	2	20% of total parking spaces

a. Where EV-ready spaces installed exceed the required values in Table R333.1.2 the additional spaces shall be deducted from the EV-capable spaces requirement.

R333.1.3 Identification. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future *EVSE*, raceway methods, wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on- site distribution transformers, have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the *EVSE*.

R333.1.4 EV ready requirements. The circuit shall terminate in a suitable termination point such as a receptacle, junction box, or an *EVSE*, and be located in close proximity to the proposed location of the EV parking spaces. The circuit shall have no other outlets. The service panel shall include an over-current protective device and provide sufficient capacity and space to accommodate the circuit and over-current protective device and be located in close proximity to the proposed location of the EV parking spaces."

23. Subsection R401.2, "Requirements," of Section R401, "General," of Chapter 4, "Foundations," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R401.2 Requirements.** Foundation construction shall be capable of accommodating all loads in accordance with Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. Every foundation or footing, or any addition of any size to an existing post-tension foundation, regulated by this code must be designed and sealed by an engineer registered in the State of Texas."

24. Paragraph R403.1.4, "Minimum Depth," of Subsection R403.1, "General," of Section R403, "Footings," of Chapter 4, "Foundations," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R403.1.4 Minimum depth.** Exterior footings shall be placed not less than 12 inches (305 mm) below the undisturbed ground surface. Where applicable, the depth of footings shall also conform to Sections R403.1.4.1. Deck footings shall be in accordance with Section R507.3.

Exception: A one-story wood or metal-frame building not used for human occupancy with an area of 400 square feet (37.2 m^2) or less, with an eave height of 10 feet (3048 mm) or less may be constructed with walls supported on a wood foundation plate when approved by the *building official*.

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. 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 freestanding *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 freestanding *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. Decks not supported by a dwelling need not be provided with footings that extend below the frost line."

25. Subsection R408.7, "Flood Resistance," of Section R408, "Under-Floor Space," of Chapter 4, "Foundations," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R408.7 Flood resistance.** For buildings located in flood hazard areas as established in Table R301.2:

1. Walls enclosing the under-floor space shall be provided with flood openings in accordance with Section R322.2.2.

   Exception: Walls that meet the requirements of the floodplain regulations of the *Dallas Development Code*.

2. The finished ground level of the under-floor space shall be equal to or higher than the outside finished ground level on at least one side.

   Exceptions:

   1. Under-floor spaces that meet the requirements of FEMA TB 11-1.

   2. Under-floor spaces that meet the requirements of the floodplain regulations of the *Dallas Development Code*."

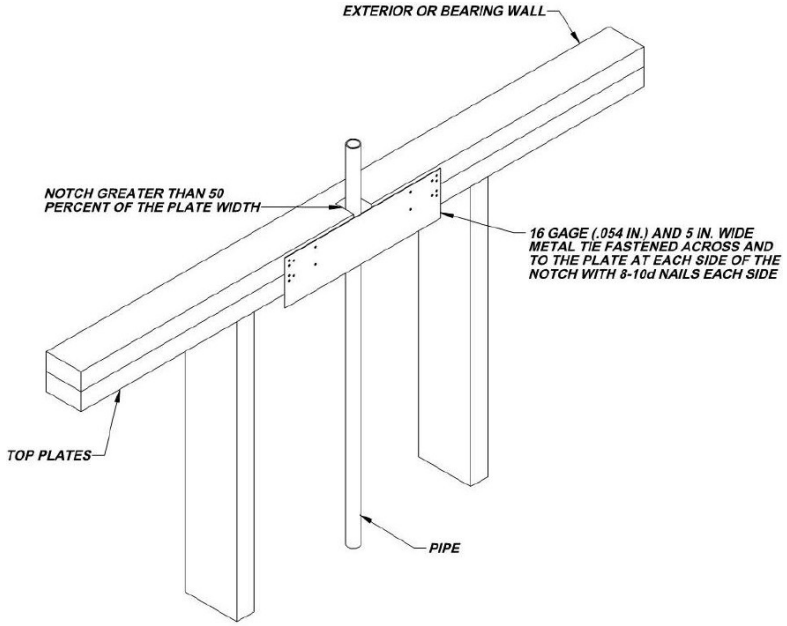
26. Paragraph R602.6.1, "Drilling and Notching of Top Plate," of Subsection R602.6, "Drilling and Notching of Studs," of Section R602, "Wood Wall Framing," of Chapter 6, "Wall Construction," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R602.6.1 Drilling and notching of top plate.** Where piping or ductwork is placed in or partly in an exterior wall or interior *load-bearing wall*, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 ga) and 5 [~~1½~~] inches (127 [~~38~~] mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) nails having a minimum length of 1½ inches (38 mm) at each side or equivalent. Fasteners will be offset to prevent splitting of the top plate material. The metal tie must extend a minimum of 6 inches past the opening. See Figure R602.6.1.

Exception: When the entire side of the wall with the notch or cut is covered by wood structural panel sheathing."

27. Figure R602.6.1, "Top Plate Framing to Accommodate Piping," of Subsection R602.6, "Drilling and Notching of Studs," of Section R602, "Wood Wall Framing," of Chapter 6, "Wall Construction," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is deleted and replaced with a new Figure R602.6.1, "Top Plate Framing to Accommodate Piping," to read as follows:

"FIGURE R602.6.1
TOP PLATE FRAMING TO ACCOMMODATE PIPING



28. Subparagraph R703.8.4.1, "Size and Spacing," of Paragraph R703.8.4, "Anchorage," of Subsection R703.8, "Anchored Stone and Masonry Veneer, General," of Section R703, "Exterior Covering," of Chapter 7, "Wall Covering," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R703.8.4.1 Size and spacing.** Veneer ties, if strand wire, shall be not less in thickness than No. 9 U.S. gage [(0.148 inch) (4 mm)] wire and shall have a hook embedded in the mortar joint, or if sheet metal, shall be not less than No. 22 U.S. gage by [(0.0299 inch) (0.76 mm)] ⅞ inch (22 mm) corrugated. Each tie shall support not more than 2.67 square feet (0.25 m^2) of wall area and shall be spaced not more than 32 inches (813 mm) on center horizontally and 24 inches (635 mm) on center vertically. <u>In stud framed exterior walls, all ties must be anchored to studs as follows:</u>

<u>1. When studs are 16 inches (407 mm) on center, stud ties must be spaced no further apart than 24 inches (737 mm) vertically starting approximately 12 inches (381 mm) from the foundation; or</u>

<u>2. When studs are 24 inches (610 mm) on center, stud ties must be spaced no further apart than 16 inches (483 mm) vertically starting approximately 8 inches (254 mm) from the foundation.</u>

Exception: In Seismic Design Category D_0, D_1 or D_2 or townhouses in Seismic Design Category C or in wind areas of more than 30 pounds per square foot pressure (1.44 kPa), each tie shall support not more than 2 square feet (0.2 m^2) of wall area.

R703.8.4.1.1 Veneer ties around wall openings. Additional metal ties shall be provided around wall openings greater than 16 inches (406 mm) in either dimension. Metal ties around the perimeter of openings shall be spaced not more than 3 feet (9144 mm) on center and placed within 12 inches (305 mm) of the wall opening."

29. Subsection R902.1, "Roofing Covering Materials," of Section R902, "Fire Classification," of Chapter 9, "Roof Assemblies," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R902.1 Roofing covering materials.** Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B or C roofing shall be installed [~~in *jurisdictions* designated by law as requiring their use or where the edge of the roof is less than 3 feet (914 mm) from a *lot line*~~]. Class A, B and C roofing required by this section to be *listed* shall be tested in accordance with ASTM E 108 or UL 790.

Exceptions:

1. Class A *roof assemblies* include those with coverings of brick, masonry and exposed concrete roof deck.

2. Class A *roof assemblies* include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.

3. Class A *roof assemblies* include minimum 16 ounces per square foot (4.882 m^2) copper sheets installed over combustible decks.

4. Class A *roof assemblies* include slate installed over underlayment over combustible decks.

5. Non-classified roof coverings are permitted on one-story detached *accessory structures* used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 200 square feet (18.58 m^2)."

30. Subsection R908.1, "General," of Section R908, "Reroofing," of Chapter 9, "Roof Assemblies," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R908.1 General.** Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 9. All individual replacement shingles or shakes must comply with Section R902.1.

Exceptions:

1. *Reroofing* shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section R905 for roofs that provide *positive roof drainage*.

2. For roofs that provide positive drainage, recovering or replacing an existing roof covering shall not require the secondary (emergency overflow) drains or *scuppers* of Section R903.4.1 to be added to an existing roof."

31. Paragraph R908.3.1, "Roof Recover," of Subsection R908.3, "Roof Replacement," of Section R908, "Reroofing," of Chapter 9, "Roof Assemblies," of Part III, "Building Planning and Construction," of the 2021 International Residential Code is amended to read as follows:

"**R908.3.1 Roof recover.** The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:

1. Where the new roof covering is installed in accordance with the roof covering manufacturer's approved instructions

2. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.

3. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs where applied in accordance with Section R908.4.

4. The application of a new protective *roof coating* over an existing protective *roof coating, metal roof panel*, *metal roof shingle*, mineral surfaced roll roofing, built-up roof, modified bitumen roofing, thermoset and thermoplastic single-ply roofing and spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

5. Where the application of a new roof covering results in not more than a total of two roof coverings and complies with all other provisions of this section.

R908.3.1.1 Roof recover not allowed. A *roof recover* shall not be permitted where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.

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

3. Where the existing roof has three [~~two~~] or more applications of any type of roof covering."

32. Chapter 11[RE] "Energy Efficiency" of Part IV, "Energy Conservation," of the 2021 International Residential Code is deleted.

33. Paragraph M1305.1.2, "Appliances in Attics," of Subsection M1305.1, "Appliance Access for Inspection Service, Repair and Replacement," of Section M1305, "Appliance Access," of Chapter 13, "General Mechanical System Requirements," of Part V, "Mechanical," of the 2021 International Residential Code is amended to read as follows:

"**M1305.1.2 Appliances in attics.** *Attics* containing *appliances* requiring access shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the largest *appliance*, but not less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) long measured along the centerline of the passageway from the opening to the *appliance*. The passageway shall have continuous solid flooring in accordance with Chapter 5 not less than 24 inches (610 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present along all sides of the *appliance* where access is required. The clear access opening dimensions shall be not less than 20 inches by 30 inches (508 mm by 762 mm) or larger where such dimensions are not[~~, and~~] large enough to allow removal of the largest *appliance*. A walkway to an appliance must be rated as a floor as approved by the *building official*. As a minimum, provide one of the following for access to the attic space:

a. A permanent stair.

b. A pull down stair with a minimum 300 lb (136 kg) capacity.

c. An access door from an upper floor.

An access panel may be used in lieu of Items 1, 2 or 3 due to structural conditions with prior approval of the *building official*.

Exceptions:

i. The passageway and level service space are not required where the *appliance* can be serviced and removed through the required opening.

ii. Where the passageway is unobstructed and not less than 6 feet (1829 mm) high and 22 inches (559 mm) wide for its entire length, the passageway shall be not more than 50 feet (15 250 mm) long.

M1305.1.2.1 Electrical requirements. A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the *appliance* location in accordance with the *Dallas Electrical Code* [~~Chapter 39~~]. Exposed lamps shall be protected from damage by location or lamp guards."

34. Subparagraph M1305.1.3.3, "Electrical Requirements," of Paragraph M1305.1.3, "Appliances Under Floors," of Subsection M1305.1, "Appliance Access for Inspection Service, Repair and Replacement," of Section M1305, "Appliance Access," of Chapter 13, "General Mechanical System Requirements," of Part V, "Mechanical," of the 2021 International Residential Code is amended to read as follows:

> "**M1305.1.3.3 Electrical requirements.** A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the *appliance* location in accordance with the *Dallas Electrical Code.* Low voltage wiring of 50 volts or less must be installed in a manner to prevent physical damage [~~Chapter 39~~]. Exposed lamps shall be protected from damage by location or lamp guards."

35. Subsection M1401.4, "Outdoor Installations," of Section M1401, "General," of Chapter 14, "Heating and Cooling Equipment and Appliances," of Part V, "Mechanical," of the 2021 International Residential Code is amended to read as follows:

"**M1401.4 Outdoor installations.** *Equipment* and *appliances* installed outdoors shall be *listed* and *labeled* for outdoor installation. Supports and foundations shall prevent excessive vibration, settlement or movement of the *equipment*. Supports and foundations shall be in accordance with Section M1305.1.3.1.

> **M1401.4.1 Side yard clearances.** A unitary air conditioning unit installed in a required side yard must comply with the requirements of Section 51A-4.402(a)(4) of the *Dallas Development Code*.
>
> **M1401.4.2 Low voltage wiring.** Low voltage wiring of 50 volts or less must be installed in an approved manner as defined in the *Dallas Electrical Code* in order to prevent physical damage to the wiring."

36. Subsection M1411.3, "Condensate Disposal," of Section M1411, "Heating and Cooling Equipment," of Chapter 14, "Heating and Cooling Equipment and Appliances," of Part V, "Mechanical", of the 2021 International Residential Code is amended to read as follows:

"**M1411.3 Condensate disposal.** Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than ⅛ unit vertical in 12 units horizontal (1-percent slope.) Condensate shall not discharge into a street, alley, or other areas where it would cause a nuisance.

M1411.3.1 Auxiliary and secondary drain systems. In addition to the requirements of Section M1411.3, a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil where damage to any building components will occur as a result of overflow from the *equipment* drain pan or stoppage in the condensate drain piping. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than ⅛ unit vertical in 12 units horizontal (1-percent slope). Drain piping shall be a minimum of ¾-inch (19 mm) nominal pipe size. One of the following methods shall be used:

1. An auxiliary drain pan with a separate drain shall be installed under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1.5 inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steel pans shall have a minimum thickness of not less than 0.0236-inch (0.6010 mm) (No. 24 Gage). Nonmetallic pans shall have a minimum thickness of not less than 0.0625 inch (1.6 mm).

2. A separate overflow drain line shall be connected to the drain pan installed with the *equipment*. This overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.

3. An auxiliary drain pan without a separate drain line shall be installed under the coils on which condensation will occur. This pan shall be equipped with a water level detection device conforming to UL 508 that will shut off the *equipment* served prior to overflow of the pan. The pan shall be equipped with a fitting to allow for drainage. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section. A water level detection device may be installed only with prior approval of the *building official*.

4. A water level detection device conforming to UL 508 shall be installed that will shut off the *equipment* served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line or the *equipment*- supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan. A water level detection device may be installed only with prior approval of the *building official*.

M1411.3.1.1 Water-level monitoring devices. On down-flow units and all other coils that do not have secondary drain or provisions to install a secondary or auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the *equipment* served in the event that the primary drain becomes restricted. Devices shall not be installed in the drain line. A water level detection device may be installed only with prior approval of the *building official*.

Exception: Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

M1411.3.1.2 Appliance, equipment and insulation in pans. Where *appliance, equipment* or insulation are subject to water damage when auxiliary drain pans fill, that portion of the *appliance, equipment* and insulation shall be installed above the rim of the pan. Supports located inside the pan to support the *appliance* or *equipment* shall be water resistant and *approved*.

M1411.3.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be ABS, cast iron, copper, cross-linked polyethylene, CPVC, galvanized steel, PE-RT, polyethylene, polypropylene or PVC pipe or tubing. Components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions Chapter 30. Condensate waste and drain line size shall be not less than ¾-inch (19 mm) nominal diameter from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an *approved* method.

M1411.3.3 Drain line maintenance. Condensate drain lines shall be configured to permit the clearing of blockages and performance of maintenance without requiring the drain line to be cut.

M1411.3.4 Appliances, equipment and insulation in pans. Where *appliances*, *equipment* or insulation are subject to water damage when auxiliary drain pans fill, those portions of the *appliances*, *equipment* and insulation shall be installed above the flood level rim of the pan. Supports located inside of the pan to support the *appliance* or *equipment* shall be water resistant and *approved*."

37. Subsection M1503.6, "Makeup Air Required," of Section M1503, "Domestic Cooking Exhaust Equipment," of Chapter 15, "Exhaust Systems" of Part V, "Mechanical," of the 2021 International Residential Code is amended 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 cubic feet per minute (0.19 m^3/s) shall be mechanically or passively provided with makeup air at a rate approximately [~~equal~~] to the difference between exhaust air rate and 400 cubic feet per minute (0.19 m^3/s). Such makeup air systems shall be equipped with not fewer than one 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. Where all appliances in the house are of sealed combustion, power-vent, unvented or electric, the exhaust hood system is permitted to exhaust up to 600 cubic feet per minute (0.28 m^3/s) without providing makeup air. Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.28 m^3/s) shall be provided with a makeup air rate approximately equal to the difference between the exhausted air rate and 600 cubic feet per minute (0.28 m^3/s).

M1503.6.1 Location. Kitchen exhaust makeup air shall be discharged into the same room in which the exhaust system is located or into rooms or *duct systems* that communicate through one or more permanent openings with the room in which such exhaust system is located. Such permanent openings shall have a net cross-sectional area not less than the required area of the makeup air supply openings.

M1503.6.2 Makeup air dampers. Where makeup air is required by Section M1503.6, makeup air dampers shall comply with this section. Each damper shall be a gravity damper or an electrically operated damper that automatically opens when the exhaust system operates. Dampers shall be located to allow access for inspection, service, repair and replacement without removing permanent construction or any other ducts not connected to the damper being inspected, serviced, repaired or replaced. Gravity or barometric dampers shall not be used in passive makeup air systems except where the dampers are rated to provide the design makeup airflow at a pressure differential of 0.01 in. w.c. (3 Pa) or less."

38. Subsection M1505.2, "Recirculation of Air," of Section M1505, "Mechanical Ventilation," of Chapter 15, "Exhaust Systems," of Part V, "Mechanical," of the 2021 International Residential Code is amended to read as follows:

"**M1505.2 Recirculation of air.** Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another *dwelling unit* and shall be exhausted directly to the outdoors. Exhaust air from bathrooms, toilet rooms and kitchens shall not discharge into an attic, *crawl space* or other areas inside the building. This section shall not prohibit the installation of ductless range hoods in accordance with the exception to Section M1503.3.

Exception: Toilet rooms within private dwellings that contain only a water closet, lavatory or combination thereof may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air."

39. Subsection G2412.5 (401.5), "Identification," of Section G2412 (401), "General," of Chapter 24, "Fuel Gas," of Part VI, "Fuel Gas," of the 2021 International Residential Code is amended to read as follows:

"**G2412.5 (401.5) Identification.** For other than steel *pipe* and CSST, exposed *piping* shall be identified by a yellow *label* marked "Gas" in black letters. The marking shall be spaced at intervals not exceeding 5 feet (1524 mm). The marking shall not be required on piping located in the same room as the *appliance* served. CSST shall be identified as required by ANSI LC1/CSA 6.26. Both ends of each section of medium pressure shall identify its operating gas pressure with an approved tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

WARNING
½ to 5 psi gas pressure
Do Not Remove."

40. Subsection G2415.12 (404.12), "Minimum Burial Depth," of Section G2415 (404), "Piping System Installation," of Chapter 24, "Fuel Gas," of Part VI, "Fuel Gas," of the 2021 International Residential Code is amended to read as follows:

"**G2415.12 (404.12) Minimum burial depth.** Underground *piping systems* shall be installed a minimum depth of 18 [~~12~~] inches (458 [~~305~~] mm), measured from the top of the pipe to existing [~~below~~] grade[~~, except as provided for in Section G2415.10.1.~~

~~**G2415.12.1 (404.12.1) Individual outdoor appliances.** Individual lines to outside lights, grills or other *appliances* shall be installed not less than 8 inches (203 mm) below finished grade, provided that such installation is *approved* and is installed in locations not susceptible to physical damage~~]."

41. Subsection G2417.4 (406.4), "Test Pressure Measurement," of Section G2417 (406), "Inspection, Testing and Purging," of Chapter 24, "Fuel Gas," of Part VI, "Fuel Gas," of the 2021 International Residential Code is amended to read as follows:

"**G2417.4 (406.4) Test pressure measurement.** Test pressure shall be measured with [~~a manometer or with~~] a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the *pressure test* period. The source of pressure shall be isolated before the *pressure tests* are made. [~~Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.~~]

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be not less than [~~1½ times the proposed maximum working pressure, but not less than~~] 3 psig (20 kPa gauge). For tests requiring a pressure of 3 psig, diaphragm gauges must utilize a dial with a minimum diameter of 3 ½ inches, a set hand, 1/10 pound increments and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges must utilize a dial with a minimum diameter of 3 ½ inches, a set hand, a minimum of 2/10 pound increments and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of 14 inches water column pressure (3.48 kPa) (½ psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure must not be less than 10 pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure must be not less than 1½ times the proposed maximum working pressure. Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing. [~~, irrespective of design pressure. 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*.~~]

G2417.4.2 (406.4.2) Test duration. The test duration shall be held for a length of time satisfactory to the *building official*, but in no case for [~~not~~] less than 15 [~~10~~] minutes. For welded piping, and for piping carrying gas at pressures in excess of 14 inches water column pressure (3.48 kPa), the test duration must be held for a length of time satisfactory to the *building official*, but in no case for less than 30 minutes."

42. Subsection G2420.1 (409.1), "General," of Section G2420 (409), "Shutoff Valves," of Chapter 24, "Fuel Gas," of Part VI, "Fuel Gas," of the 2021 International Residential Code is amended by adding a new Paragraph G2420.1.4, "Valves in CSST Installations," to read as follows:

"**G2420.1.4 Valves in CSST installations.** Shutoff valves installed with corrugated stainless steel (CSST) piping systems must be supported with an approved termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration, but in no case greater than 12 inches from the center of the valve. Supports must be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings and valves between anchors. All valves and supports must be designed and installed so they will not be disengaged by movement of the supporting piping."

43. Subparagraph G2422.1.2.3 (411.1.3.3), "Prohibited Locations and Penetrations," of Paragraph G2422.1.2 (411.1.3), "Connector Installation," of Subsection G2422.1 (411.1), "Connecting Appliances," of Section G2422 (411), "Appliance Connections," of Chapter 24, "Fuel Gas," of Part VI, "Fuel Gas," of the 2021 International Residential Code is amended to read as follows:

"**G2422.1.2.3 (411.1.3.3) Prohibited locations and penetrations.** Connectors shall not be concealed within, or extended through, walls, floors, partitions, ceilings, or *appliance* housings.

Exceptions:

1. [~~Connectors constructed of materials allowed for *piping systems* in accordance with Section G2414 shall be permitted to pass through walls, floors, partitions and ceilings where installed in accordance with Section G2420.5.2 or G2420.5.3.~~

~~2.~~] Rigid <u>black</u> steel pipe connectors shall be permitted to extend through openings in *appliance* housings.

<u>2.</u>[~~3.~~] *Fireplace* inserts that are factory equipped with grommets, sleeves or other means of protection in accordance with the listing of the *appliance*.

[~~4. Semirigid *tubing* and *listed* connectors shall be permitted to extend through an opening in an *appliance* housing, cabinet or casing where the tubing or connector is protected against damage.~~]"

44. Subsection G2445.2 (621.2), "Prohibited Use," of Section G2445 (621), "Unvented Room Heaters," of Chapter 24, "Fuel Gas," of Part VI, "Fuel Gas," of the 2021 International Residential Code is amended to read as follows:

"**G2445.2 (621.2) Prohibited use.** One or more *unvented room heaters* shall not be used as the sole source of comfort heating in a *dwelling unit*.

<u>**Exception:** Existing *approved* unvented heaters may continue to be used in *dwelling units*, in accordance with the code provisions in effect when installed, when *approved* by the *building official* unless an unsafe condition is determined to exist as described in Section 203 of Chapter 52 of the *Dallas City Code*, "Administrative Procedures for the Construction Codes."</u>

45. Paragraph P2603.5.1, "Sewer Depth," of Subsection P2603.5, "Freezing," of Section P2603, "Structural and Piping Protection," of Chapter 26, "General Plumbing Requirements," of Part VII, "Plumbing," of the 2021 International Residential Code is amended to read as follows:

"**P2603.5.1 Sewer depth.** [~~*Building sewers* that connect to private sewage disposal systems shall be not less than **[NUMBER]** inches (mm) below finished grade at the point of septic tank connection.~~] *Building sewers* shall not be less than 12 [~~**[**NUMBER**]**~~] inches (304 mm) below grade."

46. Subsection P2718.1, "Waste Connection," of Section P2718, "Clothes Washing Machine," of Chapter 27, "Plumbing Fixtures," of Part VII, "Plumbing," of the 2021 International Residential Code is amended to read as follows:

"**P2718.1 Waste connection.** The discharge from a clothes washing machine shall be through an *air break* into a standpipe. Standpipes must be individually trapped. Standpipes must extend not less than 18 inches (457 mm) but not greater than 42 inches (1066 mm) above the trap weir. Access must be provided to all standpipes and drains for rodding. A trap serving a standpipe cannot be installed below the floor."

47. Paragraph P2801.6.1, "Pan Size and Drain," of Subsection P2801.6, "Required Pan," of Section P2801, "General," of Chapter 28, "Water Heaters" of Part VII, "Plumbing," of the 2021 International Residential Code is amended to read as follows:

"P2801.6.1 Pan size and drain. The pan shall be not less than 1½ inches (38 mm) deep and shall be of sufficient size and shape to receive dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe of not less than ¾ inch (19 mm) diameter. Piping for safety pan drains shall be of those materials indicated in Table P2906.5.

Where a pan drain was not previously installed, a pan drain shall not be required for a replacement water heater installation.

Exception: Multiple pan drains may terminate to a single discharge piping system when *approved* by the administrative authority and permitted by the water heaters manufacturer installation instructions and installed according to manufacturer's instructions."

48. Paragraph P2804.6.1, "Requirements For Discharge Pipe," of Subsection P2804.6, "Installation of Relief Valves," of Section P2804, "Relief Valves," of Chapter 28, "Water Heaters," of Part VII, "Plumbing," of the 2021 International Residential Code is amended to read as follows:

"**P2804.6.1 Requirements for discharge pipe.** The discharge piping serving a pressure-relief valve, temperature-relief valve or combination valve shall:

1. Not be directly connected to the drainage system.

2. Discharge through an *air gap* [~~located in the same room as the water heater~~].

3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the *air gap*.

4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.

   Exception: Multiple relief devices may be installed to a single T&P discharge piping system when first approved by the *building official* and permitted by the manufacturer's installation instructions and installed pursuant to those instructions.

5. Discharge to [~~the floor, to the pan serving the water heater or storage tank, to a waste receptor~~] an approved location or to the outdoors.

6. Discharge in a manner that does not cause personal injury or structural damage.

7. Discharge to a termination point that is readily observable by the building occupants.

8. Not be trapped.

9. Be installed to flow by gravity.

10. Terminate not more than 6 inches (152 mm) and not less two times the discharge pipe diameter above the floor or waste receptor flood level rim.

11. Not have a threaded connection at the end of the piping.

12. Not have valves or tee fittings.

13. Be constructed of those materials indicated in Section P2906.5 or materials tested, rated and *approved* for such use in accordance with ASME A112.4.1.

14. Be one nominal size larger than the size of the relief-valve outlet, where the relief-valve discharge piping is installed with insert fillings. The outlet end of such tubing shall be fastened in place."

49. Paragraph P2902.5.3, "Lawn Irrigation Systems," of Subsection P2902.5, "Protection of Potable Water Connections," of Section P2902, "Protection of Potable Water Supply," of Chapter 29, "Water Supply and Distribution," of Part VII, "Plumbing," of the 2021 International Residential Code is amended to read as follows:

"**P2902.5.3 Lawn irrigation systems.** The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric vacuum breaker, a pressure vacuum breaker assembly, a double-check assembly or a reduced pressure principle backflow prevention assembly. Valves shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly."

50. Subsection P2903.2, "Maximum Flow and Water Consumption," of Section P2903, "Water-Supply System," of Chapter 29, "Water Supply and Distribution," of Part VII, "Plumbing," of the 2021 International Residential Code is amended to read as follows:

"**P2903.2 Maximum flow and water consumption.** Where the state-mandated maximum flow rate is more restrictive than those of this section, the state flow rate prevails. [~~The maximum water consumption flow rates and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Table P2903.2.~~]"

51. Paragraph P2903.9.1, "Service Valve," of Subsection P2903.9, "Valves," of Section P2903, "Water-Supply System," of Chapter 29, "Water Supply and Distribution," of Part VII, "Plumbing," of the 2021 International Residential Code is amended to read as follows:

"**P2903.9.1 Service valve.** Each *dwelling unit* shall be provided with an accessible main shutoff valve near the entrance of the water service. The valve shall be of a full-open type having nominal restriction to flow [~~, with provision for drainage such as a bleed orifice or installation of a separate drain valve. Additionally, the water service shall be valved at the curb or lot line in accordance with local requirements~~]."

52. Section P2904, "Dwelling Unit Fire Sprinkler Systems," of Chapter 29, "Water Supply and Distribution," of Part VII, "Plumbing," of the 2021 International Residential Code is deleted and replaced with a new Section P2904, "Dwelling Unit Fire Sprinkler Systems," to read as follows:

"**SECTION P2904**
DWELLING UNIT FIRE SPRINKLER SYSTEMS

P2904.1 General. The design and installation of multipurpose residential fire sprinkler systems must be in accordance with the most current edition of NFPA 13D."

53. Section P3111, "Combination Waste and Vent System," of Chapter 31, "Vents," of Part VII, "Plumbing," of the 2021 International Residential Code is deleted.

54. Subsection P3112.2, "Vent Connection," of Section P3112, "Island Fixture Venting," of Chapter 31, "Vents," of Part VII, "Plumbing," of the 2021 International Residential Code is deleted and replaced with a new Subsection P3112.2, "Installation," to read as follows:

"**P3112.2 Installation.** Traps for island sinks and similar equipment must be roughed in above the floor and may be vented by extending the vent as high as possible, but not less than the drain board height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical *fixture drain*. The return vent must be connected to the horizontal drain through a wye-branch fitting and must, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye-branch immediately below the floor and extending to the nearest partition and then through the roof to the open air or may be connected to other vents at a point not less than 6 inches (152 mm) above the flood level rim of the fixtures served. Drainage fittings must be used on all parts of the vent below the floor level and minimum slope of ¼ inch per foot (20.9 mm/m) back to the drain must be maintained. The return bend used under the drain board must be a one piece fitting or an assembly of a 45° (0.79 radius), a 90° (1.6 radius) and a 45° (0.79 radius) elbow in the order named. Pipe sizing must be as elsewhere required in this code. The island sink drain, upstream of the return vent, must serve no other fixtures. An accessible cleanout must be installed in the vertical portion of the foot vent."

55. Chapter 34, "General Requirements," of Part VIII, "Electrical," of the 2021 International Residential Code is deleted and replaced with a new Chapter 34, "General Requirements," to read as follows:

"**CHAPTER 34**
GENERAL REQUIREMENTS

SECTION E3401
GENERAL

E3401.1 Applicability. The provisions of the *Dallas Electrical Code* establish the general scope of the electrical system and equipment requirements of this code."

56. Chapter 35, "Electrical Definitions"; Chapter 36, "Services"; Chapter 37, "Branch Circuit and Feeder Requirements"; Chapter 38, "Wiring Methods"; Chapter 39, "Power and Lighting Distribution"; Chapter 40, "Devices and Luminaires"; Chapter 41, "Appliance Installation"; Chapter 43, "Class 2 Remote-Control, Signaling and Power- Limited Circuits," of Part VIII, "Electrical," of the 2021 International Residential Code are deleted.

57. The ASTM standards of Chapter 44, "Referenced Standards," of Part IX, "Referenced Standards," of the 2021 International Residential Code are amended by amending the following standard to read as follows:

"**E119—2018B: Test Methods for Fire Tests of Building Construction and Materials**
Table R302.1(1), Table R302.1(2), R302.2.1, [~~R302.2.2,~~] R302.3, R302.4.1, R302.11.1, R606.2.2"

58. The ICC standards of Chapter 44, "Referenced Standards," of Part IX, "Referenced Standards," of the 2021 International Residential Code are amended by adding or amending the following standards to read as follows:

"**ICC 700—12: National Green Building Standard**
332.2"

"**ICC/ANSI A117.1—17: Accessible and Usable Buildings and Facilities**
R321.3, P2709.1"

59. The NFPA standards of Chapter 44, "Referenced Standards," of Part IX, "Referenced Standards," of the 2021 International Residential Code are amended by deleting the following standard to read as follows:

"[~~**70—20: National Electrical Code**~~
~~R107.3, R324.3, R328.6, E3401.1, E3401.2, E4301.1, Table E4303.2, E4304.3, E4304.4~~]"

60. The NSF standards of Chapter 44, "Referenced Standards," of Part IX, "Referenced Standards," of the 2021 International Residential Code are amended by deleting the following standard as follows:

"[~~**372—2016: Drinking Water Systems Components—Lead Content**~~
~~P2906.2.1~~]"

61. The UL standards of Chapter 44, "Referenced Standards," of Part IX, "Referenced Standards," of the 2021 International Residential Code are amended by amending or deleting the following standards to read as follows:

"[~~**174—2004: Household Electric Storage Tank Water Heaters—with revisions through September 2016**~~
~~M2005.1~~]"

"[~~**732—2018: Oil-Fired Storage Tank Water Heaters—with revisions through April 2018**~~

~~M2005.1~~]"

"**2523—2009: Standard for Solid Fuel-fired Hydronic Heating Appliances, Water Heaters and Boilers—with revisions through March 2018**

M2001.1.1,[~~M2005.1,~~]"

62. The 2021 International Residential Code is amended by adding a new Chapter 45, "Building Security," to read as follows:

"**CHAPTER 45**
BUILDING SECURITY

SECTION S4510
PURPOSE

S4510.1 General. The purpose of this chapter is to establish minimum standards to make *dwelling units* resistant to unlawful entry.

SECTION S4511
SCOPE

S4511.1 General. The provisions of this chapter apply to the following openings:

1. Openings into *dwellings* of *townhouses* and *townhomes*.
2. Openings into *dwelling units*.
3. Openings between attached garages and the *dwelling units*.
4. Openings into attached garages.

Exceptions:

1. An opening in an exterior wall when all portions of the opening are more than 12 feet (3656.6 mm) vertically or 6 feet (1826.8 mm) horizontally from an accessible surface of any adjoining yard, court, passageway, public way, walk, breezeway, patio, planter, porch or similar area.
2. All openings in an exterior wall when all portions of the opening are more than 12 feet (3656.6 mm) vertically or 6 feet (1826.8 mm) horizontally from the surface of any adjoining roof, balcony landing, stair tread, platform or similar structure, or when any portion of such surface is more than 12 feet (3656.6 mm) above an accessible surface.

3. All openings in a roof when all portions of such roof are more than 12 feet (3656.6 mm) above an accessible surface.

4. An opening where the smaller dimension is 6 inches (152.4 mm) or less, provided that the closest edge of the opening is at least 40 inches (1016 mm) from the locking device of a door.

5. An opening protected by required fire door assemblies having a fire-endurance rating of not less than 45 minutes.

SECTION S4512
OBSTRUCTING MEANS OF EGRESS

S4512.1 General. Security methods shall not create a hazard to life by obstructing any means of egress or any opening that is classified as an emergency exiting facility. Security provisions contained in this chapter do not supersede or waive the safety provisions relative to latching or locking devices on means of egress doors or egress windows required by any other provision of this code.

S4512.2 Emergency escape or rescue windows. Bars, grilles, grates or similar security or secondary locking devices may be installed on emergency escape or rescue windows or doors required by Section R310 of this code, provided the following:

1. Such devices are equipped with approved release mechanisms that are operable from the inside without the use of a key or special knowledge or effort.

2. The building is equipped with smoke alarms installed in accordance with the *Dallas Fire Code* and Section R314 of this code.

SECTION S4513
ENTRY VISION

S4513.1 Vision required. All main or front entry doors to dwelling units shall be arranged so that the occupant has a view of the area immediately outside the door without opening the door. The view may be provided by a door viewer having a field of view of not less than 180° or through a window or view port.

S4513.2 Glazing separation. Breakable glass should not be installed within 40 inches (1016 mm) of a door-locking device.

Exceptions:

1. For required means of egress doors and emergency escape or rescue doors, glazing may be installed within 40 inches (1016 mm) of the locking device if the glass is laminated, patterned, wired, obscured or protected by approved bars, grilles or grates.

2. For other doors, glazing may be installed within 40 inches (1016 mm) of a locking device that is key-opened from both the inside and the outside.

SECTION S4514
SWINGING DOORS

S4514.1 General. Swinging doors regulated by this chapter shall comply with the following:

1. Wood doors shall be solid core and not less than $1^{3/8}$-inches (34.92 mm) thick.

2. Double doors shall have the inactive leaf secured by header and threshold bolts that penetrate metal strike plates. The bolts shall be flush-mounted in the door edge whenever breakable glass is located within 40 inches (1016 mm) of the bolts.

3. Dutch doors shall have concealed flush-bolt locking devices to interlock the upper and lower halves.

S4514.2 Strike plate installations. In wood-frame construction, any open space between trimmers and wood doorjambs shall be solid-shimmed by a single piece extending not less than 6 inches (152.4 mm) above and below the strike plate.

Strike plates shall be attached to wood with not less than two No. 8 by 2-inch (50.8 mm) screws. Strike plates when attached to metal shall be attached with not less than two No. 8 machine screws.

S4514.3 Hinges. Hinges that are exposed to the exterior shall be equipped with nonremovable hinge pins or a mechanical interlock to preclude removal of the door from the exterior by removing the hinge pins.

S4514.4 Locking hardware. Single swinging doors and the active leaf of double doors shall be equipped with an approved exterior key-operated dead bolt which shall lock with a minimum bolt throw of 1 inch (25.4 mm) through a metal strike plate. When mounted on an exit door or a required emergency escape or rescue door, the dead bolt lock shall be operable from the inside without the use of a key or any special knowledge or effort. See Chapter 10 for other exit door requirements.

SECTION S4515
WINDOWS AND SLIDING DOORS

S4515.1 General requirements. When regulated by this chapter, openable windows and sliding door assemblies shall be secured by a primary lock or sash operator and by either of the following:

1. A secondary locking device consisting of screws, dowels, pinning devices or key-operated locks designed to prevent opening by lifting or prying.

2. Approved bars, grilles or grates.

Jalousie or louvered windows do not comply with this section unless protected with approved bars, grilles or grates. Installation of secondary locking devices or bars, grilles or grates on required emergency escape windows or doors shall comply with Sections R310 and R311.

SECTION S4516
GARAGE DOORS

S4516.1 General requirements. Vehicle access doors in enclosed attached garages shall be equipped with a security device or locking devices.

SECTION S4517
ALTERNATE MATERIALS OR METHODS

S4517.1 General. The provisions of this chapter are not intended to prevent the use of any material, device, hardware or method not specifically prescribed in this chapter, when such alternate provides equivalent security and is approved by the *building official*."

63. Appendix AE, "Manufactured Housing Used as Dwellings," of the 2021 International Residential Code is adopted with the following amendments:

A. Appendix AE, "Manufacture Housing Used as Dwellings," is retitled as Appendix AE, "Prefabricated Housing Used as Dwellings."

B. Section AE101, "Scope," is amended to read as follows:

"**SECTION AE101**
SCOPE

AE101.1 Industrialized housing. All *industrialized housing* is subject to the Texas Industrialized Housing and Building Act, Texas Civil Statutes, Article 5221f-1 and Texas Civil Statutes, Article 1900.

AE101.2 Manufactured housing. All *manufactured housing* is subject to the Texas Manufactured Housing Standards Act, Texas Revised Civil Statutes, Article 5221f.

AE101.3 Prefabricated housing [~~General~~]. These provisions shall be applicable only to a prefabricated [~~*manufactured*~~] *home* used as a single or two-family *dwelling unit* [~~installed on privately owned (nonrental) lots~~] and shall apply to the following:

1. Construction, *alteration* and *repair* of any foundation system that is necessary to provide for the installation of an industrialized housing [~~a *manufactured home*~~] unit.

2. Construction, installation, addition, *alteration*, *repair* or maintenance of the building service equipment that is necessary for connecting prefabricated [~~*manufactured*~~] *homes* to water, fuel, or power supplies and sewage systems.

3. [~~*Alterations*, *a*~~] *Additions* [~~or repairs to~~] existing prefabricated [~~*manufactured*~~] *homes*. The construction, *alteration*, moving, demolition, *repair* and use of accessory buildings and structures, and their building service equipment, shall comply with the requirements of the codes adopted by this *jurisdiction*.

These provisions shall not be applicable to the design and construction of *manufactured homes* and shall not be deemed to authorize either modifications or *additions* to *manufactured homes* where otherwise prohibited.

AE101.4[~~2~~] Flood hazard areas. New and replacement prefabricated [~~manufactured~~] homes to be installed in flood hazard areas as established in Table R301.2 shall meet the applicable requirements of Section R322 or the floodplain regulations of the *Dallas Development Code*.

AE101.5 State mandatory codes.

AE101.5.1 Electrical code. In addition to complying with Subsection AE101.5.2, industrialized housing and buildings must be constructed to meet or exceed the requirements and standards of the *National Electrical Code*, published by the National Fire Protection Association, as that code existed on January 1, 1985.

AE101.5.2 Other codes. Industrialized housing and buildings erected or installed in a municipality must be constructed to meet or exceed the requirements and standards of the *Uniform Building Code*, *Uniform Plumbing Code*, and *Uniform Mechanical Code*, published by the International Conference of Building Officials, as those codes existed on January 1, 1985.

AE101.6 Building code amendment. If a code described by Section AE101.5 is amended by the council after January 1, 1985, the requirements and standards of the amended code shall be used in place of the January 1, 1985 editions.

AE101.7 Local code amendment. The building official may not require or enforce, as a prerequisite for granting or approving a building or construction permit or certificate of occupancy, an amendment to a code described by Section AE101.5.

AE101.8 Effect of mandatory building code amendment. Industrialized housing that bears an approved decal or insignia indicating that the building complies with the mandatory building codes and that has not been modified or altered is considered to be in compliance with a new mandatory building code adopted by the council or an amendment to a code approved by the council under Section AE101.6 or AE101.7.

AE101.9 Alterations, additions or repairs to existing industrialized homes. Alterations, additions or repairs to existing *industrialized homes* shall comply with the *Dallas One- and Two-Family Dwelling Code* and Section 103.1 of Chapter 52 of the *Dallas City Code*.

AE101.10 Relocated industrialized housing. Relocated *industrialized housing* is treated as moved buildings in accordance with Section 309 of the *Dallas Existing Building Code*."

C. Section AE102, "Application to Existing Manufactured Homes and Building Service Equipment," is deleted.

D. Subsection AE103.1, "General," of Section AE103, "Definitions," is amended to read as follows:

AE103.1 General. For the purpose of these provisions, certain abbreviations, terms, phrases, words and their derivatives shall be construed as defined or specified herein.

ACCESSORY BUILDING. Any building or structure or portion thereto, located on the same property as a prefabricated [~~*manufactured*~~] *home*, which does not qualify as a prefabricated [~~*manufactured*~~] *home* as defined herein.

ALTERATION. Any construction, other than ordinary repairs of the house or building, to an existing *industrialized house* or building after affixing of the *decal* by the *manufacturer*. *Industrialized housing* or buildings that have not been maintained are considered altered.

ALTERATION DECAL. The approved form of certification issued by the department to an *industrialized builder* to be permanently affixed to a *module* indicating that *alterations* to the industrialized building *module* have been constructed to meet or exceed the state model code requirements.

BUILDING SERVICE EQUIPMENT. Refers to the plumbing, mechanical and electrical equipment, including piping, wiring, fixtures and other accessories that provide sanitation, lighting, heating, ventilation, cooling, fire protection and facilities essential for the habitable occupancy of a prefabricated [~~*manufactured*~~] *home* or accessory building or structure for its designated use and occupancy.

BUILDING SYSTEM. The design or method of assembly of *modules* or *modular components* represented in the plans, specifications and other documentation which may include structural, electrical, mechanical, plumbing, fire protection and other systems affecting health and safety.

COMMISSION. The Texas Commission of Licensing and Regulation.

COMPONENT. A sub-assembly, subsystem or combination of elements for use as a part of a building system or part of a *modular component* that is not structurally independent, but may be part of structural, plumbing, mechanical, electrical, fire protection or other systems affecting life safety.

COUNCIL. The Texas Industrialized Building Code Council.

DECAL. The approved form of certification issued by the department to the *manufacturer* to be permanently affixed to the *module* indicating that it has been constructed to meet or exceed the code requirements and in compliance with these sections.

DEPARTMENT. The Texas Department of Licensing and Regulation.

DESIGN PACKAGE. The aggregate of all plans, designs, specifications and documentation required by these sections to be submitted to the *design review agency*, or required by the *design review agency* for compliance review, including the compliance control manual and the *on-site construction* documentation. Unique or site specific foundation drawings and special *on-site construction* details prepared for specific projects are not a part of the design package except as approved by the Texas Industrialized Housing and Building Act.

DESIGN REVIEW AGENCY. An approved organization, private or public, determined by the *Texas Industrialized Building Code Council* to be qualified by reason of facilities, personnel, experience and demonstrated reliability to review designs, plans, specifications and building systems documentation, and to certify compliance to these sections evidenced by affixing the *Texas Industrialized Building Code Council's* stamp.

EXECUTIVE DIRECTOR. Executive director of the *department*.

INDUSTRIALIZED BUILDER. A person who is engaged in the assembly, connection and *on-site construction* and erection of *modules* or *modular components* at the building site or who is engaged in the purchase of *industrialized housing* or buildings or of *modules* or *modular components* from a *manufacturer* for sale or lease to the public; a subcontractor of an industrialized builder is not a builder for purposes of these sections.

INDUSTRIALIZED HOUSING is a residential structure that is:

1. designed for the occupancy of one or more families;

2. constructed in one or more modules or constructed using one or more modular components built at a location other than the permanent site; and

3. designed to be used as a permanent residential structure when the module or the modular component is transported to the permanent site and erected or installed on a permanent foundation system.

Industrialized housing includes the structure's plumbing, heating, air conditioning, and electrical systems. Industrialized housing does not include:

1. a residential structure that exceeds four stories or 60 feet in height;

2. housing constructed of a sectional or panelized system that does not use a modular component; or

3. a ready-built home constructed in a manner in which the entire living area is contained in a single unit or section at a temporary location for the purpose of selling and moving the home to another location.

INSIGNIA. The approved form of certification issued by the department to the *manufacturer* to be permanently affixed to the *modular component* indicating that it has been constructed to meet or exceed the code requirements and in compliance with the sections in this chapter.

MANUFACTURED HOME. A structure transportable in one or more sections which, in the traveling mode, is 8 body feet (2438 body mm) or more in width or 40 body feet (12 192 body mm) or more in length or, where erected on site, is 320 or more square feet (30 m^2), and is built on a permanent chassis and designed to be used as a *dwelling* with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning and electrical systems contained therein; except that such term shall include any structure which meets all the requirements of this paragraph, except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the Secretary of the U.S. Department of Housing and Urban Development (HUD) and complies with the standards established under this title.

For mobile homes built prior to June 15, 1976, a *label* certifying compliance with the *Standard for Mobile Homes*, NFPA 501, ANSI 119.1, in effect at the time of manufacture, is required. For the purpose of these provisions, a mobile home shall be considered to be a *manufactured home*.

MANUFACTURED HOME INSTALLATION. Construction that is required for the installation of a *manufactured home*, including the construction of the foundation system, required structural connections thereto and the installation of on-site water, gas, electrical and sewer systems and connections thereto which are necessary for the normal operation of the *manufactured home*.

MANUFACTURED HOME STANDARDS. The *Manufactured Home Construction and Safety Standards* as promulgated by the U.S. Department of Housing and Urban Development (HUD) or the Texas Department of Housing and Community Affairs.

MANUFACTURER. A person who constructs or assembles *modules* or *modular components* at a *manufacturing facility* which are offered for sale or lease, sold or leased, or otherwise used.

MANUFACTURING FACILITY. The place other than the building site, at which machinery, equipment and other capital goods are assembled and operated for the purpose of making, fabricating, constructing, forming or assembly of *industrialized housing*, buildings, *modules* or *modular components*.

MOBILE HOME. A factory-assembled *structure* or *structures* equipped with the necessary service connections and made to be readily movable as a unit or units on its (their) own running gear and designed to be used as a *dwelling unit*(s) without a permanent foundation.

MODULAR COMPONENT. A structural portion of any *dwelling* that is constructed at a location other than the homesite in such a manner that its construction cannot be adequately inspected for code compliance at a homesite without damage or without removal of a part thereof and reconstruction.

MODULE. A three dimensional section of *industrialized housing*, designed and approved to be transported as a single section independent of other sections, to a site for *on-site construction* with or without other modules *or modular components*.

ON-SITE CONSTRUCTION. Preparation of the site, foundation construction, assembly and connection of the *modules* or *modular components*, affixing the *structure* to the permanent foundation, connecting the *structures* together, completing all site-related construction in accordance with designs, plans, specifications and on-site construction documentation.

PERMANENT FOUNDATION SYSTEM. A foundation system for *industrialized housing* designed to meet the applicable requirements of the *Dallas Building Code* or the *Dallas One- and Two-Family Dwelling Code*.

PREFABRICATED HOUSING. Includes both *industrialized housing* and *manufactured homes*.

[~~**PRIVATELY OWNED (NONRENTAL) LOT.** A parcel of real estate outside of a *manufactured home* rental community (park) where the land and the *manufactured home* to be installed thereon are held in common ownership.~~]

STATE MANDATORY CODES. The state adopted codes listed in Sections AE101.5, AE101.6 and the Administrative Rules of the Texas Department of Licensing and Regulation, 16 *Texas Administrative Code*, Chapter 70.

STRUCTURE. An *industrialized house* which results from the complete assemblage of the *modules*, *modular components* or components designed to be used together to form a completed unit.

TEXAS INDUSTRIALIZED BUILDING CODE COUNCIL. The state-appointed council having as its mission the assurance that the designs, plans and specifications of *industrialized housing* and buildings meet the mandatory state codes."

E. Section AE104, "Permits," is deleted and replaced with a new Section AE104, "Permits," to read as follows:

"**SECTION AE104**
PERMITS

AE104.1 Permit requirements. This section is governed by Chapter 52 of the *Dallas City Code*."

F. Section AE105, "Application for Permit," is deleted and replaced with a new Section AE105, "Application for Permit," to read as follows:

"**SECTION AE105**
APPLICATION FOR PERMIT

AE105.1 Permit application requirements and procedures. This section is governed by Chapter 52 of the *Dallas City Code*."

G. Section AE106, "Permits Issuance," is deleted and replaced with a new Section AE106, "Permits Issuance," to read as follows:

"**SECTION AE106**
PERMITS ISSUANCE

AE106.1 Issuance, expiration, suspension, revocation and validity of permits. Except as otherwise provided in Section AE106.2, this section is governed by Chapter 52 of the *Dallas City Code*.

AE106.2 Other requirements and procedures for permit issuance.

AE106.2.1 Disputes over whether a design package and/or unique on-site documentation meets state code requirements. Questions concerning the code compliance of an approved *design package* must be raised prior to the issuance of a building permit. The *building official* shall forward in writing to the *executive director* any instances where it is found that the approved *design package* does not meet the mandatory building codes adopted in this chapter. The documentation must specify the code sections and the reasons why the design package fails to meet the mandatory building codes.

AE106.2.1.1 In compliance. If the approved *design package* is found to be in compliance, the *executive director* shall notify all concerned parties and the *building official* shall issue a building permit.

AE106.2.1.2 Not in compliance. If the approved *design package* is not in compliance, the *executive director* shall notify all concerned parties and the *industrialized builder* or *manufacturer* shall bring the building into compliance with the mandatory building codes.

AE106.2.1.3 Disagreements. If the *building official*, *industrialized builder*, or *manufacturer* disagrees with the *executive director*, an appeal may be made to the *Texas Industrialized Building Code Council* for a determination of whether the *design package* complies with the mandatory building codes. The decision of the council is binding on all parties.

AE106.2.2 Dispute over whether on-site construction complies with approved design package and/or unique on-site construction documentation. If a dispute or difference of opinion arises between the *industrialized builder* and the *building official* as to whether the *on-site construction* meets or exceeds the approved *design package* or unique *on-site construction* documentation, the dispute or difference of opinion must be resolved by the commissioner. If the commissioner is unable to resolve the dispute, then he will forward it to the *Texas Industrialized Building Code Council* for resolution.

AE106.2.3 Correction of deviations. If an inspector finds a *structure*, or any part thereof, at the building site to be in violation of the approved *design package* and/or the unique on-site plans and specifications, the inspector shall immediately post a deviation notice and notify the *industrialized builder*. The *industrialized builder* is responsible for assuring that all deviations are corrected and inspected prior to occupation of the building.

AE106.2.4 Unique on-site details. If the typical foundation drawing in the *on-site construction* documentation is not suitable for a specific site, or if the *structure* is only partially constructed of *modular components*, or if the *industrialized builder* will add unique on-site details, a registered Texas professional engineer (or architect for one and two-family dwellings or buildings having one story and total floor area or 5,000 square feet or less) shall design and stamp the unique foundation drawings or on-site details. Review by a *design review* agency is not needed or required."

H. Section AE107, "Fees," is deleted and replaced with a new Section AE107, "Fees," to read as follows:

"**SECTION AE107**
FEES

AE107.1 Permit fees. This section is governed by Chapter 52 of the *Dallas City Code*."

I. Section AE108, "Inspections," is deleted and replaced with a new Section AE108, "Inspections," to read as follows:

"**SECTION AE108**
INSPECTIONS

AE108.1 General. Except as otherwise provided in this section, inspections are governed by Chapter 52 of the *Dallas City Code*.

AE108.2 Inspection procedures. The council issues instructions establishing procedures for inspecting the construction and installation of industrialized housing and buildings to ensure compliance with approved designs, plans, and specifications.

AE108.3 Department inspections. To ensure compliance with the mandatory building codes or approved designs, plans, and specifications, the department inspects the construction of industrialized housing and buildings. The executive director may designate approved third-party inspectors to perform the inspections subject to the rules of the commission.

AE108.4 On-site inspections. The building official must inspect all construction involving industrialized housing to be located in the municipality to ensure compliance with designs, plans and specifications, including inspection of:

1. the construction of the foundation system; and

2. the erection and installation of the modules or modular components on the foundation.

AE108.5 Rules providing for decals or insignia. The commission by rule provides for the placement of decals or insignia on each transportable modular section or modular component to indicate compliance with the mandatory building codes.

AE108.6 Reservation of building official authority. Authority is specifically and entirely reserved to the building official, including, as applicable:

1. land use and zoning requirements;

2. building setback requirements;

3. side and rear yard requirements;

4. site planning and development and property line requirements;

5. subdivision control; and

6. landscape architectural requirements.

AE108.7 Local regulation of industrialized housing.

AE108.7.1 General. The building official must:

1. require and review, for compliance with mandatory building codes, a complete set of designs, plans and specifications bearing the council's stamp of approval for each installation of industrialized housing in the municipality;

2. require that all applicable local permits and licenses be obtained before construction begins on a building site;

3. require, in accordance with commission rules, that all modules or modular components bear an approved decal or insignia indicating inspection by the department; and

4. establish procedures for the inspection of:

    4.1. the erection and installation of industrialized housing to be located in the municipality, to ensure compliance with mandatory building codes and commission rules; and

    4.2. all foundation and other on-site construction, to ensure compliance with approved designs, plans, and specifications.

AE108.7.2 Other approvals. Procedures described by Subsection AE108.7.1**(**4) may require:

1. before occupancy, a final inspection or test in accordance with mandatory building codes; and

2. correction of any deficiency identified by the test or discovered in the final inspection."

J. Subsection AE109.1, "General," is amended to read as follows:

"**AE109.1 General.** In addition to the inspections required by Section AE108, the *building official* has the authority to require the *owner* to employ a special inspector during construction of specific types of work as described in this code. Special inspections, when required, shall be governed by Chapter 17 of the *Dallas Building Code*."

K. Subsection AE110.1, "General," of Section AE110, "Utility Service," is amended to read as follows:

"**AE110.1 General.** Utility service shall not be provided to any building service equipment regulated by these provisions or other applicable codes, and for which a prefabricated [~~*manufactured*~~] *home* installation *permit* is required by these provisions, until *approved* by the *building official*."

L. Subsection AE111.1, "Manufactured Homes," of Section AE111, "Occupancy Classification," is amended to read as follows:

"**AE111.1 Industrial [~~Manufactured~~] homes.** An industrial [~~*manufactured*~~] *home* shall be limited in use to a single *dwelling unit* or its components for living, sleeping, eating, cooking, sanitation and accessory use.

Exception: *Industrialized homes* converted and in compliance with Chapters 51, 51A, and 53, as well as other applicable ordinances of the *Dallas City Code*."

M. Subsection AE112.1, "General," of Section AE112, "Location On Property," is amended to read as follows:

"**AE112.1 General.** Prefabricated [~~*Manufactured*~~] *homes* and accessory buildings shall be located on the property in accordance with applicable codes and ordinances of this *jurisdiction*."

N. Section AE113, "Design," is amended to read as follows:

"**SECTION AE113**
DESIGN

AE113.1 General. An industrial [~~*manufactured*~~] *home* shall be installed on a foundation system designed and constructed to sustain within the stress limitations specified in this code and all loads specified in this code. *Industrialized housing* may not be installed on a temporary foundation system.

[~~**Exception:** When specifically authorized by the *building official*, foundation and anchorage systems which are constructed in accordance with the methods specified in Section AE120 of these provisions, or in the HUD, *Permanent Foundations for Manufactured Housing*, 1984 Edition, Draft, shall be deemed to meet the requirements of this appendix.~~]

AE113.2 Manufacturer's installation instructions. The installation instructions as provided by the manufacturer of the industrialized [~~*manufactured*~~] *home* shall be used to determine permissible points of support for vertical loads and points of attachment for anchorage systems used to resist horizontal and uplift forces.

AE113.3 Rationality. Any system or method of construction to be used shall submit to a rational analysis in accordance with well-established principles of mechanics."

O. Section AE114, "Foundation Systems," is amended to read as follows:

"**SECTION AE114**
FOUNDATION SYSTEMS

AE114.1 General. Foundation systems designed and constructed in accordance with this section shall be considered a permanent installation.

AE114.2 Soil classification. The classification of the soil at each industrial [~~*manufactured*~~] *home* site shall be determined when required by the *building official*. The *building official* has the authority to require that the determination be made by an engineer or architect licensed by the state to conduct soil investigations.

The classification shall be based on observation and any necessary tests of the materials disclosed by borings or excavations made in appropriate locations. Additional studies may be necessary to evaluate soil strength, the effect of moisture variation on soil-bearing capacity, compressibility and expansiveness.

When required by the *building official*, the soil classification design-bearing capacity and lateral pressure shall be shown on the plans.

AE114.3 Footings and foundations. Footings and foundations, unless otherwise specifically provided, shall be constructed of materials specified by this code for the intended use and in all cases shall extend below the frost line. Footings of concrete and masonry shall be of solid material. Foundations supporting untreated wood shall extend at least 8 inches (203 mm) above the adjacent finish *grade*. Footings shall have a minimum depth below finished *grade* of 12 inches (305 mm) unless a greater depth is recommended by a foundation investigation.

Piers and bearing walls shall be supported on masonry or concrete foundations or piles, or other *approved* foundation systems which shall be of sufficient capacity to support all loads.

AE114.4 Foundation design. A licensed professional engineer (or architect for one- and two-family dwellings or buildings having one story and total floor area of 5,000 square feet or less) shall design and seal the foundation systems for each industrialized house or building. Review by a design review agency is not needed or required. The foundation system design must be reviewed for compliance with the mandatory building code. Foundation system designs shall comply with the mandatory building code and shall contain complete details for the construction and attachment of the house or building on the foundation, including, but not limited to the following:

1. address or area for which the foundation is suitable;

2. minimum load specifications, including wind loads, seismic design loads, soil bearing capacity, and if the foundation is designed for expansive soils;

3. site preparation details;

4. material specifications;

5. requirements for corrosion resistance, protection against decay, and termite resistance;

6. size, configuration and depth below grade of all footings, piers and slabs including, but not limited to, details of concrete reinforcement, spacing of footings and piers, capping of piers, and mortar or concrete fill requirements for piers;

7. fastening requirements, including, but not limited to, size, spacing and corrosion resistance;

8. requirements for surface drainage; and

9. details for enclosure of the crawl space, including details for ventilation and access.

[~~When a design is provided, the foundation system shall be designed in accordance with the applicable structural provisions of this code and shall be designed to minimize differential settlement. Where a design is not provided, the minimum foundation requirements shall be as set forth in this code.~~]

AE114.5 Drainage. Drainage p[~~P~~]rovisions shall be in accordance with Chapter 4 of this code [~~made for the control and drainage of surface water away from the *manufactured home*~~].

AE114.6 Under-floor clearances—ventilation and access. A minimum clearance of 12 inches (305 mm) shall be maintained beneath the lowest member of the floor support framing system. Clearances from the bottom of wood floor joists or perimeter joists shall be as specified in this code.

Under-floor spaces shall be ventilated with openings as specified in this code. If *combustion air* for one or more heat-producing *appliance* is taken from within the under-floor spaces, ventilation shall be adequate for proper *appliance* operation.

Under-floor access openings shall be provided. Such openings shall be not less than 18 inches (457 mm) in any dimension and not less than 3 square feet (0.279 m^2) in area, and shall be located so that any water supply and sewer drain connections located under the industrialized [~~*manufactured*~~] *home* are accessible."

P. Subsection AE115.2, "Retaining Walls," of Section AE115, "Skirting and Perimeter Enclosures," is amended to read as follows:

"**AE115.2 Retaining walls.** Where retaining walls are used as a permanent perimeter enclosure, they shall resist the lateral displacements of soil or other materials and shall conform to this code as specified for foundation walls. Retaining walls and foundation walls shall be constructed of *approved* [~~treated wood, concrete, masonry or other *approved*~~] materials or combination of materials as for foundations as specified in this code. Siding materials shall extend below the top of the exterior of the retaining or foundation wall, or the joint between the siding and enclosure wall shall be flashed in accordance with this code."

Q. Subsection AE116.1, "General," of Section AE116, "Structural Additions," is amended to read as follows:

"**AE116.1 General.** Accessory buildings shall not be structurally supported by or attached to a prefabricated [~~*manufactured*~~] *home* unless engineering calculations are submitted to substantiate any proposed structural connection.

Exception: The *building official* may approve an alternate method of compliance or [~~has the authority to~~] waive the submission of engineering calculations if it is found that the nature of the work applied for is such that engineering calculations are not necessary to show conformance to these provisions."

R. Subsection AE117.1, "General," of Section AE117, "Building Service Equipment," is amended to read as follows:

"**AE117.1 General.** The installation, *alteration*, *repair*, replacement, addition to or maintenance of the building service equipment within the industrialized [~~*manufactured*~~] *home* shall conform to regulations set forth in this code [~~the Manufactured Home Standards~~]. Such work that is located outside the prefabricated [~~*manufactured*~~] *home* shall comply with this code and other [~~the~~] applicable city ordinances [~~codes adopted by this *jurisdiction*~~]."

S. Subsection AE119.1, "General," of Section AE119, "Occupancy, Fire Safety and Energy Conservation Standards," is amended to read as follows:

"**AE119.1 General.** *Alterations* made to an industrialized [~~*manufactured*~~] *home* subsequent to its initial installation shall conform to the occupancy, fire safety and energy conservation requirements set forth in this code [~~the Manufactured Home Standards~~]."

T. Sections AE120, "Special Requirements for Foundation Systems"; AE121, "Footings and Foundations"; AE122, "Pier Construction"; AE123, "Height of Piers"; AE124, "Anchorage Installations"; AE125, "Ties, Materials and Installation"; and AE126, "Referenced Standards" are deleted.

64. Appendix AH, "Patio Covers," of the 2021 International Residential Code is adopted.

65. Appendix AI, "Private Sewage Disposal," of the 2021 International Residential Code is adopted with the following amendment:

A. Subsection AI101.1, "Scope," of Section AI101, "General," is amended to read as follows:

"**AI101.1 Scope.** Private sewage disposal systems shall conform to the Dallas Plumbing [~~International Private Sewage Disposal~~] *Code*."

66. Appendix AJ, "Existing Buildings and Structures," of the 2021 International Residential Code is adopted with the following amendments:

A. Subsection AJ102.5, "Flood Hazard Areas," of Section AJ102, "Compliance," is amended to read as follows:

"**AJ102.5 Flood hazard areas.** Work performed in existing buildings located in a flood hazard area as established by Table R301.2(1) shall be subject to the provisions of Section 51A-5.104 of the *Dallas Development Code* [~~R105.3.1.1~~]."

B. Subsection AJ102.7, "Other Alternatives," of Section AJ102, "Compliance," is deleted.

C. Subsection AJ103.1, "General," of Section AJ103, "Preliminary Meeting," is amended to read as follows:

"**AJ103.1 General.** If a building *permit* is required at the request of the prospective *permit* applicant, the *building official* or his or her designee shall meet with the prospective applicant to discuss plans for any proposed work under these provisions prior to the application for the *permit.* The purpose of this preliminary meeting is for the *building official* to gain an understanding of the prospective applicant's intentions for the proposed work, and to determine, together with the prospective applicant, the specific applicability of these provisions.

Exception: The *building official* may substitute a project information sheet indicating the categories of proposed work in lieu of a meeting."

D. Subsection AJ106.1, "General," of Section AJ106, "Definitions," is amended to read as follows:

"**AJ106.1 General.** For the purposes of this appendix, the terms used are defined as follows:

ALTERATION. The rearrangement or reconfiguration of any space by the construction of walls or partitions or by a change in ceiling height; the addition or elimination of any door or window; the [~~reconfiguration or~~] extension or arrangement of any system; [~~or~~] the installation of any additional equipment or fixtures and any work which reduces the loadbearing capacity of, or which imposes additional loads on, a primary structural component.

CATEGORIES OF WORK. The nature and extent of construction work undertaken in an existing building. The categories of work covered in this appendix, listed in increasing order of stringency of requirements, are *repair*, renovation, *alteration* and reconstruction.

DANGEROUS. Where the stresses in any member; the condition of the building, or any of its components or elements or attachments; or other condition that results in an overload exceeding 150 percent of the stress allowed for the member or material in this code.

EQUIPMENT OR FIXTURE. Any plumbing, heating, electrical, ventilating, air-conditioning, refrigerating and fire protection equipment; and elevators, dumb waiters, boilers, pressure vessels, and other mechanical facilities or installations that are related to building services.

MATERIALS AND METHODS REQUIREMENTS. Those requirements in this code that specify material standards; details of installation and connection; joints; penetrations; and continuity of any element, component or system in the building. The required quantity, fire resistance, flame spread, acoustic or thermal performance, or other performance attribute is specifically excluded from materials and methods requirements.

RECONSTRUCTION. The reconfiguration of a space that affects an exit, a renovation or *alteration* where the work area is not permitted to be occupied because existing means-of-egress and fire protection systems, or their equivalent, are not in place or continuously maintained; or there are extensive *alterations* as defined in Section AJ109.3. Reconstruction does not include projects comprised only of floor finish replacement, painting or wallpapering, or the replacement of *equipment* or furnishings. Asbestos hazard abatement and lead hazard abatement projects shall not be classified as reconstruction solely because occupancy of the work area is not permitted.

REHABILITATION. Any *repair*, renovation, *alteration* or reconstruction work undertaken in an existing building.

RENOVATION. The removal ans [~~change, strengthening or addition of load-bearing elements;~~] and[~~/or the refinishing,~~] replacement, [~~bracing, strengthening, upgrading or extensive repair of existing materials, elements, components, equipment~~] or covering of existing interior or exterior trim, finish, doors, windows or other materials with new materials that serve the same purpose and do not change the configuration of space [~~fixtures~~]. Renovation shall include the replacement of equipment or fixtures, the change, strengthening, bracing or addition of load bearing elements, or extensive replacement of existing materials [~~does not involve reconfiguration of spaces. Interior and exterior painting are not considered refinishing for purposes of this definition, and are not renovation~~].

REPAIR. The patching, restoration or minor replacement of materials, elements, components, equipment or fixtures for the purposes of maintaining those materials, elements, components, equipment or fixtures in good or sound condition.

WORK. That scope of activities affected by any repair, *renovation*, *alteration* or r*econstruction* work and indicted as such in the permit.

WORK AREA. That portion of a building affected by any renovation, *alteration* or reconstruction work as initially intended by the *owner* and indicated as such in the *permit*. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed, and portions of the building where work not initially intended by the *owner* is specifically required by these provisions for a renovation, *alteration* or reconstruction."

E. Subsection AJ107.3, "Electrical," of Section AJ107, "Repairs," is amended to read as follows:

"**AJ107.3 Electrical.** [~~Repair or replacement of e~~]Existing electrical wiring and equipment undergoing repair [~~with like material~~] shall be permitted to be repaired or replaced in accordance with the *Dallas Electrical Code*.

[~~**Exceptions:**~~

~~1. Replacement of electrical receptacles shall comply with the requirements of Chapters 34 through 43.~~

~~2.~~ Plug fuses of the Edison-base type shall be used for replacements only where there is not evidence of overfusing or tampering in accordance with the applicable requirements ~~of Chapters 34 through 43.~~

~~3.~~ For replacement of nongrounding-type receptacles with grounding-type recepticles and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system, or to any accessible point on the grounding ~~electrode conductor, as allowed and described in Chapters 34 through 43.~~]"

F. Subsection AJ109.5, "Electrical Equipment and Wiring," of Section AJ109, "Alterations," is amended to read as follows:

"**AJ109.5 Electrical equipment and wiring.**

AJ109.5.1 Materials and methods. All n[~~N~~]ewly installed electrical equipment and wiring relating to work done in any work area shall comply with the materials and methods requirements of Chapter[~~s~~] 34 [~~through 43~~].

Exception: Electrical equipment and wiring in newly installed partitions and ceilings shall comply with the applicable requirements of Chapter[~~s~~] 34 [~~through 43~~].

AJ109.5.2 Electrical service. Service to the *dwelling unit* shall be not less than 100 ampere, three-wire capacity and service *equipment* shall be dead front having no live parts exposed that could allow accidental contact. [~~Type "S" fuses shall be installed when fused equipment is used.~~]

Exception. Existing service of 60 ampere, three-wire capacity, and feeders of 30 ampere or larger two- or three-wire capacity shall be accepted if adequate for the electrical load being served.

AJ109.5.3 Additional electrical requirements. When the work area includes any of the following areas within a *dwelling unit*, the requirements of Sections AJ109.5.3.1 through AJ109.5.3.5 shall apply.

AJ109.5.3.1 Enclosed areas. Enclosed areas other than closets, kitchens, *basements*, garages, hallways, laundry areas and bathrooms shall have not less than two duplex receptacle outlets, or one duplex receptacle outlet and one ceiling- or wall-type lighting outlet.

AJ109.5.3.2 Kitchen and laundry areas. Kitchen areas shall have not less than two duplex receptacle outlets. Laundry areas shall have not less than one duplex receptacle outlet located near the laundry equipment and installed on an independent circuit.

AJ501.5.3.3 Ground-fault circuit-interruption. Ground-fault circuit-interruption shall be provided on newly installed receptacle outlets if required by Chapter[~~s~~] 34 [~~through 43~~].

AJ109.5.3.4 Lighting outlets. Not less than one lighting outlet shall be provided in every bathroom, hallway, *stairway*, attached garage and detached garage with electric power to illuminate outdoor entrances and exits, and in utility rooms and *basements* where these spaces are used for storage or contain *equipment* requiring service.

AJ109.5.3.5 Clearance. Clearance for electrical service equipment shall be provided in accordance with Chapter[~~s~~] 34 [~~through 43~~]."

67. Appendix AK, "Sound Transmission," of the 2021 International Residential Code is adopted.

68. Appendix AO, "Automatic Vehicular Gates," of the 2021 International Residential Code is adopted.

69. Appendix AQ, "Tiny Houses," of the 2021 International Residential Code is adopted.

70. Appendix AW, "3-D Printed Building Construction," of the 2021 International Residential Code is adopted.

71. Appendices AA, AB, AC, AD, AF, AG, AL, AM, AN, AP, AR, AS, AT, AU and AV of the 2021 International Residential Code are not adopted.

72. All chapters of the 2021 International Residential Code adopted by this ordinance are subchapters of Chapter 57 of the Dallas City Code, as amended.

73. Any errata corrections published by the International Code Council for the 2021 International Residential Code, as they are discovered, are considered as part of this code.

74. All references in the 2021 International Residential Code to the fire code, building code, plumbing code, mechanical code, electrical code, existing building code, energy conservation code, fuel gas code, green construction code and swimming pool and spa code refer, respectively, to Chapters 16, 53, 54, 55, 56, 58, 59, 60, 61, and 62 of the Dallas City Code.

SECTION 2. That a person violating a provision of this ordinance, upon conviction, is punishable by a fine not to exceed $2,000. No offense committed and no liability, penalty, or forfeiture, either civil or criminal, incurred prior to the effective date of this ordinance will be discharged or affected by this ordinance. Prosecutions and suits for such offenses, liabilities, penalties, and forfeitures may be instituted, and causes of action pending on the effective date of this ordinance may proceed, as if the former laws applicable at the time the offense, liability, penalty, or forfeiture was committed or incurred had not been amended, repealed, reenacted, or superseded, and all former laws will continue in effect for these purposes.

SECTION 3. That Chapter 57 of the Dallas City Code, as amended, will remain in full force and effect, save and except as amended by this ordinance. Any existing structure, system, development project, or registration that is not required to come into compliance with a requirement of this ordinance will be governed by the requirement as it existed in the former law last applicable to the structure, system, development project, or registration, and all former laws

will continue in effect for this purpose.

SECTION 4. That the terms and provisions of this ordinance are severable and are governed by Section 1-4 of Chapter 1 of the Dallas City Code, as amended.

SECTION 5. That this ordinance will take effect on May 12, 2023, and it is accordingly so ordained.

APPROVED AS TO FORM:

TAMMY L. PALOMINO, Interim City Attorney

By_____
Assistant City Attorney

Passed_____