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Lear,
Sponsored by Hosmer, and Schilling

First Reading _____
SUBSTITUTE NO. 1
COUNCIL BILL 2021-045

Second Reading _____
GENERAL ORDINANCE _____

AN ORDINANCE

1 AMENDING Chapter 36, Article XIII of the Springfield City Code, known as the Land
2 Development Code, by repealing Article XIII, 'Residential Building Code,' in
3 its entirety, and enacting in lieu thereof a new Article XIII, 'Residential
4 Building Code' to become effective April 1, 2022; and repealing Section 3 of
5 General Ordinance 6564.
6
7

8 BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD,
9 MISSOURI, as follows, that:

10
11 Section 1 – Effective April 1, 2022, Springfield City Code, Chapter 36, Article XIII,
12 'Residential Building Code,' is repealed in its entirety and a new Article XIII is enacted in
13 lieu thereof, to read as follows:

14
15 (Note: Language to be added is underlined and language being removed is ~~stricken~~.)

16
17 ARTICLE XIII. – RESIDENTIAL BUILDING CODE

18
19 Sec. 36-1301. – Adoption of 2018 Residential Building Code.

20
21 City Council hereby adopts the 2018 International Residential Building Code, as
22 published by the International Code Council, and all referenced standards therein as if
23 spelled out in this Ordinance, except such portions thereof as are hereinafter deleted,
24 modified, or amended. This code shall be designated as Article XIII Residential Building
25 Code of Chapter 36, known as the Land Development Code. One (1) copy of said code is
26 on file in the office of the City Clerk, Busch Municipal Building, 840 Boonville Avenue,
27 Springfield, Missouri.

28
29 Sec. 36-1302. – Deletions, modifications, amendments, and additions.

30
31 The 2018 International Residential Building Code, as adopted, is hereby amended
32 and changed as follows:
33

34 (a) Chapter 1 is repealed in its entirety because code enforcement is covered in
35 Springfield City Code Chapter 36, Land Development Code, Article I,
36 Administration and Enforcement of Codes and Article X, Uniform Enforcement
37 Procedures.

38
39 (b) Because Chapter 1 is repealed in its entirety, any cross references to Chapter 1 in
40 subsequent chapters are replaced by the provisions in Article I that correspond, in
41 content, to such cross references.

42
43 (c) All adopted chapters and appendices include all errata hereafter published by the
44 International Code Council after the date of the first printing of the 2018
45 International Residential Building Code.

46

47 All language referring to flood-hazard areas is repealed and replaced with:

48

49 All structures located within a designated flood-hazard area shall comply with Chapter
50 36 Land Development Code, Article XVII Floodplain Management.

51

52 Section R202 Definitions

53

54 Sleeping Room. A sleeping room is any space, whether finished or not, meeting the
55 minimum room area requirements of Section R304 of the 2018 International
56 Residential Building Code designed for, or intended for, the purpose of a bedroom, as
57 indicated on the approved construction documents.

58

59 R301.2 Climatic and geographic design criteria. Buildings shall be constructed in
60 accordance with the provisions of this code as limited by the provisions of this section.
61 Climatic and geographic design criteria are provided in Table R301.2(1) below, which
62 replaces Table R301.2(1) and footnotes from the published code. Additional criteria
63 shall be established by the local jurisdiction and set forth in Table R301.2(1).

64

**TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

Ground Snow Load	20 PSF
Wind Speed (mph)	115 MPH
Seismic Design Category	B
Weathering	Severe
Frost Line Depth	24 inches
Termite	Moderate to Heavy
Decay	Slight to Moderate
Ice Shield Underlayment Required	Where roof slope is less than or equal to 4:12
Flood Hazard	In accordance with Springfield MO City Code Chapter 36 Article XVII https://library.municode.com/mo/springfield/codes/code_of_ordinances Entry into National Flood Insurance Program 5/8/1989
Air Freezing Index	659
Winter Design Temp	9° F
Air Freezing Index	1500 or less
Mean Annual Temp	56° F
Elevation	1270 feet
Latitude	37° N
Winter Heating	11° F
Summer Cooling	92° F
Altitude Correction Factor	0.96
Indoor Design Temperature	70° F
Wind Velocity Heating	15 mph if site specific speed unknown
Wind Velocity Cooling	15 mph if site specific speed unknown
Coincident Wet Bulb	74° F
Daily Range	M

R302.15 Patio Home Dwelling Unit Separation. The common wall separating the two dwelling units shall be constructed as a 2-hour rated, 8-inch masonry block firewall with the following design criteria, unless otherwise approved by the Building Official:

1. The wall shall be vertically continuous from the foundation to the underside and tight to the roof deck. The small void (no greater than 1/2 inch) between the top of the block to the underside of the deck shall be sealed with tightly compressed fire-safe mineral wool. On the underside of the rafter and extending a minimum of four (4) feet back from the face of the firewall, one layer of 5/8-inch Type "X" gypsum board shall be installed.

2. The wall shall be constructed such that it is totally independent of the adjacent construction and shall resist collapse. It shall not be used as a

107 structural element for the adjoining framing.

108
109 3. The wall shall extend horizontally, tight to a noncombustible exterior wall
110 finish material.

111
112 4. In the case where the roof overhang extends beyond the face of the block
113 wall, both rafters and ceiling joist, located next to and on either side of the
114 firewall shall be covered on both sides with a single layer of 5/8-inch Type "X"
115 gypsum board from the fascia board to the firewall as detailed by administrative
116 ruling.

117
118 5. No penetrations of any kind will be allowed in or through the block wall.

119
120 R313.3 Fire-sprinkler offer. RSMo section 67.281 is hereby incorporated into this code
121 by reference.

122
123 R319.1 Address identification. Buildings shall be provided with approved address
124 identification. The address identification shall be legible and placed in a position that
125 is visible from the street or road fronting the property. ~~Address numbers shall be~~
126 ~~Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each~~
127 ~~character shall be not less than 4 inches (102 mm) in height with a stroke width of not~~
128 ~~less than 0.5 inch (12.7mm).~~ Where required by the fire code official, address
129 identification shall be provided in additional approved locations to facilitate emergency
130 response. Where access is by means of a private road and the building address
131 cannot be viewed from the public way, a monument, pole or other sign or means shall
132 be used to identify the structure. Address identification shall be maintained. The
133 assigned address number shall be clearly posted on the site as soon as work
134 commences and shall remain in place until the building is removed from that site.
135 Letters and numbers shall be in conformance with Chapter 26, Section 26-3,
136 Numbering of businesses and dwellings units, of the Springfield City Code.

137
138 R322.1.5 Lowest floor. The lowest floor shall be the lowest floor of the lowest enclosed
139 area, including basement or bottom of crawl space, and excluding any unfinished
140 flood-resistant enclosure that is useable solely for vehicle parking, building access or
141 limited storage provided that such enclosure is not built so as to render the building or
142 structure in violation of this section.

143
144 R325.3 Area limitation. The aggregate area of a mezzanine or mezzanines shall be
145 not greater than one-third of the floor area of the room or space in which they are
146 located. The enclosed portion of a room shall not be included in a determination of the
147 floor area of the room in which the mezzanine is located.

148
149 Exception: The aggregate area of a mezzanine located within a dwelling unit equipped
150 with a fire sprinkler system in accordance with Section P2904 shall not be greater than
151 one-half of the floor area of the room, provided that the mezzanine meets all of the
152 following requirements:

153
154 2. The opening to the room is unobstructed except for walls not more than 42 36
155 inches (~~4067~~ 914 mm) in height, columns and posts.

156
157 R325.5 Openness. Mezzanines shall be open and unobstructed to the room in which
158 they are located except for walls not more than 36 inches (914 mm) in height, columns
159 and posts.

160
161 **Exceptions:**

162 ~~1. Mezzanines or portions thereof are not required to be open to the room in which~~
163 ~~they are located, provided that the aggregate floor area of the enclosed space is not~~
164 ~~greater than 10 percent of the mezzanine area.~~

165
166 ~~2. In buildings that are not more than two stories above grade plane and equipped~~
167 ~~throughout with an automatic sprinkler system in accordance with Section R313, a~~
168 ~~mezzanine shall not be required to be open to the room in which the mezzanine is~~
169 ~~located.~~

170
171 R401.4.1. Geotechnical evaluation. In lieu of a complete geotechnical evaluation, the
172 load-bearing values in Table R401.4.1 shall be assumed. Presumptive load-bearing
173 value of foundation materials shall be assumed to be 1,500 PSF unless otherwise
174 evaluated and certified in writing by a licensed design professional or approved by the
175 building official.

176
177 R403.1 General.

178
179 All exterior walls shall be supported on continuous ~~solid or fully grouted masonry or~~
180 ~~concrete footings~~ except where otherwise approved, prior to design and
181 installation, in writing by the building official, ~~crushed stone footings, wood~~
182 ~~foundations, or other approved structural systems~~ that Footings and foundations
183 shall be of sufficient design to accommodate all loads according to Section R301
184 and to transmit the resulting loads to the soil within the limitations as determined
185 from the character of the soil and in accordance with R401. Footings shall be
186 supported on undisturbed natural soils or engineered fill. Concrete footings shall be
187 designed and constructed in accordance with the provisions of Section R403-or in
188 accordance with ACI 332. Where footings are designed and constructed in
189 accordance with ACI 332, the reinforcement, support and cover, and lap-splice
190 requirements of R404.3.1.1 shall govern. Masonry stem walls shall be solid
191 grouted.

192
193 R403.1.1 Minimum size, reinforcement, support and cover, and lap splices.
194 The minimum width, W, and thickness, T, for concrete footings shall be in
195 accordance with Tables R403.1(1) through R403.1(3), ~~and~~ Figure R403.1(1) with
196 the following exceptions, ~~or R403.1.3, as applicable.~~ The footing width shall be
197 based on the load-bearing value of the soil in accordance with ~~Table~~ R401.4.1.

198 Footing projections, P, shall be not less than 2 inches (51 mm) and shall not
199 exceed the thickness of the footing. Footing thickness and projection for fireplaces
200 shall be in accordance with Section R1001.2. The size of footings supporting piers
201 and columns shall be based on the tributary load and allowable soil pressure in
202 accordance with Table R401.4.1. Footings for wood foundations shall be in
203 accordance with the details set forth in Section R403.2, and Figures R403.1(2) and
204 R403.1(3). Footings for precast foundations shall be in accordance with the details
205 set forth in Section R403.4, Table R403.4, and Figures R403.4(1) and R403.4(2).
206 Support and cover shall comply with R403.1.3.5.3. Lap splices shall comply with
207 R403.1.3.5.4.

208
209 Exceptions:

210
211 1. 2 - #4 continuous reinforcing bars, spaced not less than 6 inches, centered on
212 the footing, shall be installed in monolithic slab-on-ground with turned-down
213 footings, thickened slab-on-ground footings at bearing walls or braced wall lines,
214 spread footings, and footings with concrete stem and footing combined. If the
215 footing width exceeds 24 inches a third #4 bar shall be placed, and all three bars
216 equally spaced across the width of the footing with concrete cover requirements
217 satisfied.

218
219 2. #4 horizontal reinforcing bars shall be placed not more than 6 inches from the
220 top and the bottom of the stem wall and not more than 18 inches on center
221 between the top and bottom reinforcing bars. Horizontal reinforcing bars shall be
222 supported at not less than 48 inches on center, tied to vertical dowels or reinforcing
223 bars or supported by form ties.

224
225 3. Stem walls shall be tied to footings with #4 vertical steel reinforcing dowels
226 spaced not more than 48 inches on center, extending not less than 18 inches into
227 the stem wall; straight dowels shall be embedded not less than 5 inches into the
228 footing, dowels with standard hooks shall be embedded not less than 3 inches into
229 the footing.

230
231 R403.1.3.6 Isolated concrete footings.

232
233 In detached one- and two-family dwellings that are three stories or less in height
234 and constructed with stud bearing walls, isolated plain concrete footings supporting
235 columns or pedestals are permitted. Concrete columns or pedestals shall be tied to
236 isolated concrete footings by not less than one #4 vertical steel reinforcing dowel,
237 extending not less than 18 inches into the column or pedestal; straight dowels shall
238 be embedded not less than 5 inches into the footing, dowels with standard hooks
239 shall be embedded not less than 3 inches into the footing. Columns or pedestals

241 R403.1.4 Minimum depth.

242

243 Exterior footings shall extend to or below the frost line specified in R301.2 unless
244 placed on solid rock. Decks not supported by a dwelling need not be provided with
245 footings that extend below the frost line. ~~be placed not less than 12 inches (305~~
246 ~~mm) below the undisturbed ground surface. Where applicable, the depth of~~
247 ~~footings shall also conform to Sections R403.1.4.1 through R403.1.4.2.~~

248

249 R403.1.4.1 Frost protection.

250 ~~Except where otherwise protected from frost, foundation walls, piers and other~~
251 ~~permanent supports of buildings and structures shall be protected from frost by~~
252 ~~one or more of the following methods:~~

253

254 1. ~~Extended below the frost line specified in Table R301.2.(1).~~

255

256 2. ~~Constructed in accordance with Section R403.3.~~

257

258 3. ~~Constructed in accordance with ASCE 32.~~

259

260 4. ~~Erected on solid rock.~~

261

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

263

264 Exceptions:

265

266 1. ~~Protection of free-standing accessory structures with an area of 600 square~~
267 ~~feet (56 m²) or less, of light frame construction, with an eave height of 10 feet~~
268 ~~(3048 mm) or less shall not be required.~~

269

270 2. ~~Protection of free-standing accessory structures with an area of 400 square~~
271 ~~feet (37 m²) or less, of other than light frame construction, with an eave height of~~
272 ~~10 feet (3048 mm) or less shall not be required.~~

273

274 3. ~~Decks not supported by a dwelling need not be provided with footings that~~
275 ~~extend below the frost line.~~

276

277 R404.1.2 Design of masonry foundation walls.

278

279 Masonry foundation walls shall be designed and constructed in accordance with the
280 provisions of this section or in accordance with the provisions of TMS 402. Where
281 TMS 402 or the provisions of this section are used to design masonry foundation
282 walls, then project drawings, typical details, and specifications are not required to bear
283 the seal of the architect or engineer responsible for design, unless otherwise required
284 by the building official. ~~state law of the jurisdiction having authority.~~ Minimum design

285 lateral soil load/equivalent fluid pressure of soil shall be 60 psf per foot below grade
286 unless otherwise determined by a Missouri licensed design professional or otherwise
287 approved by the building official.
288

289 R404.1.3 Concrete foundation walls.

290
291 Concrete foundation walls that support light-frame walls shall be ~~designed and~~
292 ~~constructed~~ in accordance with the provisions of this section, ACI 318, ACI 332, or
293 PCA 100. Concrete foundation walls that support above-grade concrete walls that are
294 within the applicability limits of Section R608.2 shall be ~~designed and~~ constructed in
295 accordance with the provisions of this section, ACI 318, ACI 332, or PCA 100.
296 Concrete foundation walls that support above-grade concrete walls that are not within
297 the applicability limits of Section R608.2 shall be ~~designed and~~ constructed in
298 accordance with the provisions of ACI 318, ACI 332, or PCA 100. Where ~~ACI 318, ACI~~
299 ~~332, PCA 100 or the provisions of this section~~ are used to design concrete foundation
300 walls, then project drawings, typical details, and specifications are not required to bear
301 the seal of the architect or engineer responsible for design, unless otherwise required
302 by the building official, state law of the jurisdiction having authority. Minimum design
303 lateral soil load/equivalent fluid pressure of soil shall be 60 psf per foot below grade
304 unless otherwise determined by a Missouri licensed design professional or otherwise
305 approved by the building official. Concrete foundation walls designed in accordance
306 with the provisions of ACI 318 shall be designed by a Missouri licensed design
307 professional and construction documents for concrete foundation walls thus designed
308 shall be sealed and signed by the designer.
309

310 R606.1.1 Professional registration not required.

311
312 Where the empirical design provisions of Appendix A of TMS 402, the provisions of
313 TMS 403, or the provisions of this section are used to design masonry, then project
314 drawings, typical details, and specifications are not required to bear the seal of the
315 architect or engineer responsible for design, unless otherwise required by the building
316 official, state law of the jurisdiction having authority.
317

318 R608.1 General.

319
320 Exterior concrete walls shall be ~~designed and~~ constructed in accordance with the
321 provisions of this section or in accordance with the provisions of PCA 100 or ACI 318.
322 Where PCA 100, ~~ACI 318,~~ or the provisions of this section are used to design
323 concrete walls, then project drawings, typical details, and specifications are not
324 required to bear the seal of the architect or engineer responsible for design, unless
325 otherwise required by the building official, state law of the jurisdiction having authority.
326 Exterior walls designed in accordance with the provisions of ACI 318 shall be
327 designed by a Missouri licensed design professional and construction documents for
328 concrete foundation walls thus designed shall be sealed and signed by the designer.
329

330 R802.11.1 Uplift resistance. Roof assemblies shall have uplift resistance in

331 accordance with Sections R802.11.1.1 and R802.11.1.2. Ties, tie-downs, anchors or
332 screws manufactured specifically to resist uplift, as indicated in the manufacturer's
333 literature, are required.

334
335 ~~Where the uplift force does not exceed 200 pounds (90.8 Kg), rafters and trusses~~
336 ~~spaced not more than 24 inches (610 mm) on center shall be permitted to be attached~~
337 ~~to their supporting wall assemblies in accordance with Table R602.3(1).~~

338
339 ~~Where the basic wind speed does not exceed 115 mph, the wind exposure category is~~
340 ~~B, the roof pitch is 5: 12 (42 percent slope) or greater, and the roof span is 32 feet~~
341 ~~(9754 mm) or less, rafters and trusses spaced not more than 24 inches (610 mm) on~~
342 ~~center shall be permitted to be attached to their supporting wall assemblies in~~
343 ~~accordance with Table R602.3(1).~~

344
345 N1101.14 (R401.3) Certificate (Mandatory). A permanent certificate shall be
346 completed by the builder or other approved party and posted on a wall in the space
347 where the furnace is located, a utility room or an approved location inside the building.
348 Where located on an electrical panel, the certificate shall not cover or obstruct the
349 visibility of the circuit directory label, service disconnect label or other required labels.
350 The certificate shall indicate the predominant R-values of insulation installed in or on
351 ceilings, roofs, walls, ~~foundation components such as slabs, basement walls, crawl~~
352 ~~space walls and floors,~~ and ducts outside conditioned spaces; and U-factors of
353 fenestration and the solar heat gain coefficient (SHGC) of fenestration, ~~and the results~~
354 ~~from any required duct system and building envelope air leakage testing performed on~~
355 ~~the building.~~ Where there is more than one value for each component, the certificate
356 shall indicate the value covering the largest area. The certificate shall indicate the
357 types and efficiencies of heating, cooling and service water heating equipment. Where
358 a gas-fired unvented room heater, electric furnace, or baseboard electric heater is
359 installed in the residence, the certificate shall indicate "gas-fired unvented room
360 heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency
361 shall not be indicated for gas-fired unvented room heaters, electric furnaces and
362 electric baseboard heaters.

363
364 N1102.4.1.1 (R402.4.1.1) Installation. ~~The components of the building thermal~~
365 ~~envelope as indicated in Table N1102.4.1.1 shall be installed in accordance with the~~
366 ~~manufacturer's instructions and the criteria indicated in Table N1102.4.1.1, as~~
367 ~~applicable to the method of construction. Where required by the building official, an~~
368 ~~approved third party shall inspect all components and verify compliance. The building~~
369 ~~thermal envelope shall be durably sealed to limit infiltration. Where required by the~~
370 ~~building official, an approved third party shall inspect all components and verify~~
371 ~~compliance. The sealing methods between dissimilar materials shall allow for~~
372 ~~differential expansion and contraction. The following shall be caulked, gasketed,~~
373 ~~weatherstripped or otherwise sealed with an air barrier material, suitable film or solid~~
374 ~~material, in accordance with the manufacturer's instructions for the material being~~
375 ~~used.~~

- 376
377 1. All joints, seams and penetrations.
378
379 2. Site-built windows, doors and skylights.
380
381 3. Openings between window and door assemblies and their respective jambs and
382 framing.
383
384 4. Utility penetrations.
385
386 5. Dropped ceilings or chases adjacent to the thermal envelope
387
388 6. Knee walls (where provided).
389
390 7. Walls and ceiling spaces separating the garage from conditioned spaces.
391
392 8. Behind tubs and showers on exterior walls.
393
394 9. Common walls between dwelling unit.
395
396 10. Other sources of infiltration;

397
398 Delete Table N1102.4.1.1 (R402.4.1.1).

399
400 N1102.4.1.2 (R402.4.1.2) Testing.

401 The building or dwelling unit shall be tested and verified as having an air leakage rate of
402 not exceeding ~~five~~ seven air changes per hour ~~in Climate Zones 1 and 2, and three air~~
403 ~~changes per hour in Climate Zones 3 through 8.~~ Testing shall be conducted in
404 accordance with RESNET/ICC 380, ASTM E779 or ASTM E1827 and reported at a
405 pressure of 0.2 inch w.g. (50 Pascals). Where required by the building official, testing
406 shall be conducted by an approved third party. A written report of the results of the test
407 shall be signed by the party conducting the test and provided to the building official.
408 Testing shall be performed at any time after creation of all penetrations of the building
409 thermal envelope.

410
411 Exception: A building or dwelling unit constructed and certified in accordance with
412 N1101.14, to be in compliance with the prescriptive requirements of N1102.1.2 shall not
413 require testing except as provided for in Section 36-148 of the Code of Ordinances of the
414 City of Springfield.

415
416 N1103.3.3 (R403.3.3) Duct testing (Mandatory).

417 Ducts shall be pressure tested to determine air leakage by one of the following methods:

418
419 Exceptions:
420
421 3. A duct air-leakage test shall not be required for ducts serving a building or dwelling
422 unit constructed and certified in accordance with N1101.14, to be in compliance with the
423 prescriptive requirements of N1102.1.2.

424
425 N1105.5.2 Table N1105.5.2 (1) [R405.5.2(1)] Specifications for the standard reference
426 and proposed designs.

427
428 Add the following:

429
430 Exceptions:

431
432 1. Above-grade walls: U-factor = 0.082.

433
434 2. Basement and crawl space walls: U-factor = 0 (no insulation required).

435
436 3. Above-grade floors: U-factor = 0, (no insulation required).

437
438 4. Air-exchange rate: The air leakage rate at a pressure of 0.2 inch w.g. (50 Pa) shall be 7
439 air changes per hour.

440
441 N1106.4 (R406.4) ERI-based compliance. Compliance based on an ERI analysis requires
442 that the rated design be shown to have an ERI less than or equal ~~76 to the appropriate~~
443 ~~value indicated in Table N1106.4 when compared to the ERI reference design.~~ Where on-
444 site renewable energy is included for compliance using the ERI analysis of Section
445 N1106.4, the building shall meet the mandatory requirements of Section N1106.2, and the
446 building thermal envelope shall be greater than or equal to the levels of efficiency and
447 SHGC in Table N1102.1.2 or Table N1102.1.4.

448
449 Delete Table N1106.4 (R406.4) and footnote a.

450
451 N1107.1.1 (R501.1.1) Additions, alterations or repairs:

452 Add the following:

453
454 Exceptions: The following additions or alterations shall not be required to comply with the
455 requirements for new construction provided that the energy use of the building is not
456 increased:

457
458 1. Ceilings with attic spaces shall provide and average R-30 insulation over 100
459 percent of the ceiling area with a maximum insulation depth extended over the wall
460 top plate at the eaves as may be accommodated by framing member depth and

- 461 required eave baffle.
- 462
- 463 2. Additions to existing structures where framing and construction methods
- 464 necessitate matching existing form and architectural characteristic style rendering
- 465 compliance with requirements for new construction infeasible.
- 466
- 467 3. Exposed floor cavities and rim joists may not be required to be insulated.
- 468
- 469 4. Exposed wall cavities and matching wall construction methods of additions shall
- 470 provide a minimum R-13 insulation.
- 471
- 472 5. Existing building envelope shall require an air-barrier seal at all exposed and
- 473 readily accessible breaks, joints and penetrations.
- 474
- 475 6. Any new duct extensions and any new branches shall provide a minimum R-6
- 476 insulation. Air duct leakage test shall not be mandatory.
- 477
- 478 7. All additions and alterations building thermal envelope air leakage test shall not be
- 479 mandatory.
- 480
- 481 8. Mechanical system piping insulation shall not be mandatory.
- 482

483 N1109.1.1 (R503.1.1) Building Envelope

484

485 Exception:

486

- 487 2. Existing ceiling or wall ~~or floor~~ cavities exposed during construction provided that these
- 488 cavities are filled with insulation.
- 489

490 M1411.3 Condensate disposal. Condensate from cooling coils and evaporators shall

491 be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping

492 shall maintain a minimum horizontal slope in the direction of discharge of not less than

493 one-eighth unit vertical in 12 units horizontal (1 percent slope). Condensate shall not

494 discharge into a street, alley, crawl-space or other area where it would cause a

495 nuisance.

496

497 M1504.3

498

499 Exception: Toilet room exhaust fans may exhaust through the soffit provided that:

500

- 501 1. The duct shall terminate at the soffit panel to an approved mechanical louver or
- 502 vent; and
- 503
- 504 2. The adjoining soffit space, for a distance of four (4) feet on either side of the
- 505 exhaust duct penetration, shall be of a solid non-vented material.
- 506

507 G2413.7 (402.7) Maximum operating pressure is repealed and replaced with:
508

509 G2413.7 (402.7) Operating pressure. The standard operating pressure for piping
510 systems located inside buildings shall be 0.25 psig. Design operating pressures other
511 than 0.25 psig shall only be allowed in areas where the gas supplier has sufficient
512 main-line delivery pressure to assure adequate supply. The installer shall be
513 responsible for verifying the availability of elevated pressure with the gas supplier.

514
515 G2413.7.1 (402.7.1) Operating pressures of 2 psig or less. For operating
516 pressures of 2 psig or less, the piping material shall be in conformance with
517 Section 403 of the 2018 International Fuel Gas Code, as amended.

518
519 G2413.7.2 (402.7.2) Pressures above 2 psig. Operating pressures above 2 psig
520 shall only be allowed if all the following conditions are met:

- 521
522 1. Adequate pressure is available from the fuel-gas supplier; and,
- 523
524 2. The piping system is in an area zoned to allow commercial, industrial, or heavy
525 manufacturing uses;
- 526
527 3. The connected load is 1000 CFH or greater and the facility has connected
528 equipment that requires higher pressures for proper operation;
- 529
530 4. The installation is approved by the code official and the fuel-gas supplier;
- 531
532 5. The piping system is welded steel pipe;
- 533
534 6. All connected equipment is provided with regulators rated for the pressure
535 provided.

536
537 (G2413.7.3) 402.7.3 Liquefied petroleum gas systems. The operating pressure for
538 undiluted LP-gas systems shall not exceed 20 psig (140 kPa gauge). Buildings
539 having systems designed to operate below -5°F (-21°C) or with butane or a
540 propane-butane mix shall be designed to either accommodate liquid LP-gas or
541 prevent LP-gas vapor from condensing into a liquid.

542
543 G2414.5.3 (403.5.3) Copper or copper-alloy tubing

544 ~~G2414.5.3 (403.5.3) Copper or copper-alloy tubing. Copper tubing shall comply~~
545 ~~with Standard Type K or L of ASTM B88 or ASTM B280. Copper or copper-alloy~~
546 ~~tubing is not approved and shall not be used.~~

547 ~~Copper and copper-alloy tubing shall not be used if the gas contains more than an~~
548 ~~average of 0.3 grains of hydrogen sulfide per 100 standard cubic feet of gas (0.7~~
549 ~~milligrams per 100 liters).~~

550 G2415.2 (404.2) CSST. CSST piping systems shall be installed in accordance
551 with the terms of their approval, the conditions of listing, the manufacturer's

552 instructions, requirements stipulated by administrative ruling, and this code.

553 G2415.9 (404.9) Above-ground outdoor piping

554 G2415.9.1 (404.9.1) Gas meter set connection. The gas-meter-set location and
555 design shall be in accordance with the local gas operator's standards.

556
557 G2417.1.3 (406.1.3) New branches. Where new branches are installed to new
558 appliances, ~~only the newly installed branches shall be required to the new branch~~
559 ~~and existing system shall be pressure tested. Connections between the new~~
560 ~~piping and the existing piping shall be tested with a noncorrosive leak-detecting~~
561 ~~fluid or other approved leak-detecting methods.~~

562 Exceptions:

563
564 1. Where a new branch is installed to a new appliance with a connection made by
565 removing a fitting (an elbow, for example) between the gas meter and where
566 the gas piping enters the structure, and is replaced with another fitting (a tee,
567 for example), to which the branch is connected, only the newly installed
568 branches shall be required to be pressure tested. Connections between the
569 new piping and the existing piping shall be tested with a noncorrosive leak-
570 detecting fluid or other approved leak-detecting methods.

571 2. Where otherwise approved by the Code Official's duly authorized
572 representative.

573
574 G2417.4.1 (406.4.1) Test pressure and duration. ~~The test pressure to be used~~
575 ~~shall be no less than 1 ½ times the proposed maximum working pressure, but not~~
576 ~~less than 3 psig (20 kPa gauge), irrespective of design pressure. Where the test~~
577 ~~pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a~~
578 ~~value that produces a hoop stress in the piping greater than 50 percent of the~~
579 ~~specified minimum yield strength of the pipe.~~ The test on all gas piping designed
580 for 2 PSIG and less, shall be made by closing all openings and subjecting the
581 pipes to a minimum of 20 PSIG with a 15-minute duration. The test on all gas
582 piping designed for greater than 2 PSIG shall be a minimum of 20 PSIG with 120-
583 minute duration. The measurement range of the test gauge shall be from 0 to no
584 more than 30 PSIG and shall be readily visible for reading.

585
586 G2417.4.2 (406.4.2) Test duration is repealed in its entirety.

587
588 G2422.1 (411.1) Connecting appliances. Appliances shall be connected to the
589 piping system by one of the following:

590
591 2. Corrugated stainless-steel tubing (CSST) where installed in accordance with
592 the manufacturer's instructions and with approval prior to design or installation.
593 Installations with prior approval are listed and installation requirements are
594 itemized by administrative ruling where installed in accordance with the
595 manufacturer's instructions.

596

597 3. Listed and labeled appliance connectors in compliance with ANSI Z21.24/CGA
598 6.10 and installed in accordance with manufacturer's instructions and located
599 entirely in the same room as the appliance and with approval prior to design or
600 installation. Installations with prior approval are listed and installation
601 requirements are itemized by administrative ruling.
602

603 Section P2801 General

604 P280.6 Required pan.

605 Exception:

606
607
608
609 1. A pan will not be required if the floor is concrete and a floor drain is adjacent
610 to the device or the floor is defined as a slab on grade concrete floor.

611
612 2. A pan will not be required on a water heater changeout if the pre-existing
613 conditions did not contain a pan.
614

615 P2902.3 Backflow protection. A means of protection against backflow shall be
616 provided in accordance with Sections P2902.3.1 through P2902.3.7. Backflow
617 prevention applications shall conform to Table P2902.3, except as specifically
618 stated in Sections P2902.4 through P2902.5.5, and to and Missouri Department
619 of Natural Resources regulations for backflow prevention in effect at the time of
620 installation. Where requirements differ the requirement that provides the highest
621 level of protection shall govern.
622

623 P2903.3.1 Maximum pressure is repealed and replaced with:

624
625 P2903.3.1 Maximum pressure. An approved water-pressure reducing valve
626 conforming to ASSE 1003 with strainer shall be installed on the domestic water
627 branch main or riser at the connection to the water-service pipe to reduce the
628 pressure in the building water distribution piping to not more than 80 psi (552 kPa)
629 static.
630

631 P3005.2.12 Building Sewer and public sewer junction. Connections to a public
632 sewer shall conform to Public Works Standard Drawing Details for Public
633 improvements, including Standard Drawing Details.
634

635 P3114.3.1 Limited Usage. The use of air admittance valves shall be permitted
636 only in the remodel of existing buildings and shall not be permitted in new
637 buildings and building additions, except for island fixtures, unless prior approval is
638 granted by the building official.
639

640 P3302.2 Subsoil drains. Subsoil drains, sumps and pumps shall not be
641 discharged to the building drain or sewer.
642

643 E3405.1.1 Clearance Requirements. All buildings and structures are required to
644 meet clearance requirements from all wires, conductors, cables and rigid live
645 parts as stipulated in the National Electric Safety Code (“NESC”), latest edition, or
646 as dictated by the utility service provider. In case of a conflict between the two
647 requirements, the requirement providing the greater level of safety shall apply.

648
649 E3601.8 Residential Service Upgrades.

- 650
651 1. All structures used for residential purposes, requiring a service upgrade or
652 modification shall mandate the following electrical system improvements.
653 a. GFI receptacles in the kitchen(s) and bathroom(s) shall be installed if
654 outlets are in existence at the time of the service upgrade.
655 b. Approved hard-wired dual powered, interconnected smoke detectors shall
656 be installed and located as per the adopted building code.
657 c. The kitchen shall be provided with a minimum of two (2) 20 Amp grounded
658 small appliance branch circuits.
659 d. Carbon monoxide detectors shall be installed in accordance with R315.1
660 where the structure has an attached garage or fuel fired appliances.
661 e. All apparent hazards shall be corrected.

662
663 2. If a fire occurs, or other similar incident that damages any part of the
664 electrical system within a residential structure, in addition to all damaged
665 systems being repaired, it is mandated that all apparent hazards within the
666 structure be corrected. Hard-wired, dual powered, interconnected smoke
667 detectors and a carbon monoxide detector if required shall be installed and
668 located as per the adopted building codes. If the service portion of the
669 electrical system is damaged or upgraded as a result of a fire or other
670 incident, it shall require that all items listed in paragraph E (1) of this section
671 shall be provided.

672
673 3. A total or partial upgrade of the electrical system may be required, if in the
674 opinion of the Code Official, or his designee, the condition of the existing
675 electrical system constitutes a potential threat to the safety and welfare of
676 current or future occupants.

677
678 3901.13, Basement finish requirement. Where a portion of the basement is
679 finished into one or more habitable rooms, each separate unfinished portion shall
680 have a receptacle outlet installed in accordance with this section. When interior
681 walls for separate rooms are framed, these areas shall be considered as finished
682 areas and shall be provided with the required branch circuits as required by Article
683 210, and any required smoke detectors. All wiring shall be protected from physical
684 damage by the wall framing or the wall shall be covered with sheetrock on at least
685 one side.

686
687 E3902.2 Garage and accessory building receptacles. 125-volt, single-phase, 15-
688 or 20- ampere receptacles installed in garages and grade-level portions of

689 unfinished accessory buildings used for storage or work areas shall have ground-
690 fault circuit-interrupter protection for personnel. [210.8(A)(2)]

691
692 Exception:

693
694 A single receptacle installed solely for electrical supply of a garage door opener.

695
696 E3902.16 Arc-fault circuit-interrupter protection. Branch circuits that supply 120-
697 volt, single-phase, 15- and 20- ampere outlets installed in ~~kitchens, family rooms,~~
698 ~~dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms,~~
699 ~~recreations rooms, closets, hallways, laundry areas and similar~~ sleeping rooms or
700 areas shall be protected by any of the following: [210.12(A)]

701
702 E4002.14 Tamper-resistant receptacles. In bedrooms, areas specified in Section
703 ~~E3901.4~~, 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles shall
704 be listed tamper-resistant receptacles. [406.12(A)]

705 706 AQ101.1 Scope

707
708 This appendix shall be applicable to tiny houses used as single dwelling units. Tiny
709 houses shall comply with this code except as otherwise stated in this appendix. Tiny
710 houses shall meet the requirements of all applicable codes and shall be placed on an
711 attached to footings that comply with Section R403 Footings. A certificate of
712 compliance signed by an authorized agent of the manufacturer or constructor
713 certifying the tiny house was constructed in compliance with this code shall be
714 submitted with the application for a permit to the building official for review and
715 approval. Tiny houses shall not be placed on site without a permit.

716 717 Sec. 36-1303. – Adoption of appendices.

718
719 By adoption of the 2018 International Private Sewage Disposal Code, the following
720 appendices are part of this Code.

721
722 Appendix A: Sizing and Capacities of Gas Piping

723 Appendix B: Sizing of Venting Systems Serving Appliances Equipped with Draft
724 Hoods, Category-I Appliances, and Appliances Listed for use with
725 Type B Vents

726 Appendix C: Exit Terminals of Mechanical Draft and Direct-Vent Venting
727 Systems

728 Appendix D: Recommended Procedure for Safety Inspection of an Existing
729 Appliance Installation

730 Appendix G: Piping Standards for Various Applications

731 Appendix I: Private Sewage Disposal

732 Appendix J: Existing Buildings and Structures

733 Appendix P: Sizing of Water Piping System

734 Appendix Q: Tiny Houses

735
736 Sec. 36-1304. – Penalty clause.

737
738 Any person convicted of: violating this article; failing to comply with any order
739 issued under it; or, erecting, constructing, altering, or repairing a building, structure, or
740 system in violation of an approved plan or directive of the code official or of a permit or
741 certificate issued under these codes shall be punished as provided in section 1-7 of the
742 City Code. A fine must be at least \$200.00 for the first offense, \$400.00 for the second
743 offense, and \$500.00 for every offense thereafter. Notice under section 36-166 is not
744 necessary to prosecute a violation of any provision of this article or these codes, unless
745 the violation involves failure to comply with an order. Each day a violation continues is a
746 separate offense.

747
748 Section 2 – City Council hereby repeals Section 3 of General Ordinance 6564. All
749 other provisions of General Ordinance 6564 remain in effect.

750
751 Section 3 – Savings Clause. Nothing in this Ordinance shall be construed to
752 affect any suit or proceeding now pending in any court, any rights acquired or liability
753 incurred, any cause or causes of action accrued or existing under any act or ordinance
754 repealed hereby, nor shall any right or remedy of any character be lost, impaired, or
755 affected by this Ordinance.

756
757 Section 4 – Severability Clause. If any section, subsection, sentence, clause, or
758 phrase of this Ordinance is, for any reason, held to be invalid, such decision shall not
759 affect the validity of the remaining portions of this Ordinance. City Council hereby
760 declares that it would have adopted the Ordinance and each section, subsection,
761 sentence, clause, or phrase thereof, even if any one or more sections, subsections,
762 sentences, clauses, or phrases were declared invalid.

763
764 Section 5 – This Ordinance shall be in full force and effect from and after
765 passage.

766
767 Passed at meeting: _____

768
769 _____
770 Mayor

771
772 Attest: _____, City Clerk

773
774 Filed as Ordinance: _____

775
776
777 Approved as to form: Rhonda Lewsader, City Attorney

778
779
780 Approved for Council action: Jason R. Page, City Manager

EXPLANATION TO SUBSTITUTE NO. 1 COUNCIL BILL 2021-045

FILED: 02-16-21

ORIGINATING DEPARTMENT: Law

PURPOSE: To adopt the 2018 International Residential Building Code as Chapter 36, Article XIII of the Springfield City Code, known as the Land Development Code, by repealing the existing Article XIII, 'Residential Building Code,' in its entirety, and enacting in lieu thereof a new Article XIII, 'Residential Building Code' to become effective April 1, 2022; and repealing Section 3 of General Ordinance 6564.

BACKGROUND INFORMATION: On November 18, 2019, City Council passed General Ordinance 6564 which adopted the 2018 International Residential Building Code with certain deletions and amendments. Additionally, Section 3 of General Ordinance 6564 declared the intent of City Council to adopt either the 2018 or 2021 International Residential Building Code to become effective January 1, 2022, and established certain deadlines for staff to meet with stakeholders to solicit input about whether minor deletions, modifications, amendments, and/or additions should be made to the Code adopted and to present a report to City Council regarding stakeholder input and staff recommendations.


The City recently hired a new Director of Building Development Services ("BDS") who will be critical in facilitating stakeholder input and staff recommendations. The Springfield City Council Priorities document addresses a variety of needs that involve BDS including: stricter enforcement of nuisance violations, improving the efficiency and value of the development process, and addressing chronic nuisance properties in Springfield's neighborhoods. The review of residential energy efficiency code provisions will likely consume a significant amount of time. Council Bill 2021-045 proposes to delay this review by one year, so that the new director and BDS staff can apply focused attention this year on those City Council Priority items that have plagued Springfield for some time.

This substitute bill would forgo delaying the review by repealing Section 3 of General Ordinance 6564, which established the existing deadlines for review, and adopting the 2018 International Building Code with certain exceptions. All other provisions in General Ordinance 6564 would remain in effect.

REMARKS: Councilman Lear requested this Council Bill.

Submitted by:

Approved by:


Rhonda Lewsader, City Attorney


Jason Gage, City Manager