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P. Hrngs. \_\_\_\_\_  
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Sponsored by: Stephens

First Reading: March 12, 2012

Second Reading: March 26, 2012

COUNCIL BILL NO. 2012- 073

GENERAL ORDINANCE NO. 5983

AN ORDINANCE

1 AMENDING Chapter 36, Article III of the Springfield City Code, known as the Land  
2 Development Code, by repealing Sub-Article XIV, Fuel Gas Code, in its  
3 entirety, and enacting in lieu thereof a new Sub-Article XIV, Fuel Gas  
4 Code.  
5  
6

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

10 Section 1 – General Ordinance No. 5628 is hereby repealed.  
11

12 Section 2 – Adoption of 2012 International Fuel Gas Code. The City Council  
13 hereby adopts the 2012 International Fuel Gas Code as published by the International  
14 Code Council, and all referenced standards therein as if spelled out in this ordinance,  
15 save and except such portions thereof as are hereinafter deleted, modified or amended.  
16 This Code shall be designated as Sub-Article XIV, Fuel Gas Code, of Chapter 36,  
17 Article III of the Springfield City Code, known as the Land Development Code. One (1)  
18 copy of said Code is on file in the office of the City Clerk, Busch Municipal Building, 840  
19 Boonville Avenue, Springfield, Missouri.  
20

21 Section 3 – Deletions, modifications, amendments and additions.  
22

23 The 2012 International Fuel Gas Code, as adopted, is hereby amended and changed as  
24 follows:  
25

26 A. Repeal Chapter 1 in its entirety. Requirements of this chapter are included in  
27 Chapter 36, Article III of the Springfield City Code, known as the Land Development  
28 Code, Sub-Article XII.  
29

30 B. Amend all chapters that make reference to any section contained in the repealed  
31 Chapter 1 by directing all references to Sub-Article XII of the Land Development

32 Code and to those sections in Sub-Article XII that correspond in numbering or  
33 content to the referenced section.  
34

35 C. Amend all adopted chapters and appendices in accordance with all errata hereafter  
36 identified and published by the International Code Council after the date of the first  
37 printing of the 2012 International Fuel Gas Code.  
38

39 D. Amend Section 301, General, by adding a new subsection 301.1.2, as follows:  
40

41 **301.1.2 Unlawful installations. It shall be unlawful for any person to install,**  
42 **or permit the installation of, any fuel gas piping, equipment or apparatus**  
43 **within the corporate limits of the City of Springfield unless the same shall**  
44 **be installed to conform with the standards and provisions of the 2012**  
45 **International Fuel Gas Code, the latest approved edition of the City Utilities**  
46 **Gas Construction Standards, and all other applicable city codes and**  
47 **ordinances. In the event of a conflict between these documents the most**  
48 **stringent or restrictive shall govern.**  
49

50 Note: Language appearing in **bold** is to be added.  
51

52 E. Amend Section 301, General, subsection 301.11, Flood hazard, as follows:  
53

54 301.11 Flood hazard. For structures located in flood hazard areas, the  
55 appliance, equipment and system installations regulated by this Code shall be  
56 ~~located at or above the elevation required by Section 1612 of the International~~  
57 ~~Building Code for utilities and attendant equipment.~~ **comply with General**  
58 **Ordinance No. 5907 dated November 1, 2010.**  
59

60 Note: Language appearing in **bold** is to be added. Language appearing as  
61 ~~stricken~~ is to be removed.  
62

63  
64 F. Amend Section 401, General, subsection 401.5, Identification, as follows:  
65

66 401.5 Identification. ~~For other than black steel pipe, exposed piping shall be~~  
67 ~~identified by a yellow label marked "Gas" in black letters. The marking shall be~~  
68 ~~spaced at intervals not exceeding 5 feet (1524 mm). The marking shall not be~~  
69 ~~required on pipe located in the same room as the equipment served.~~ **All gas**  
70 **piping shall be identified by a yellow background marked "Gas" in black**  
71 **letters. Identification shall be in the form of a tag, stencil or other**  
72 **permanent marking. Such identification shall be clearly and easily read**  
73 **from the floor of the room of its location. Spacing on black steel pipe shall**  
74 **be at intervals of not more than 15 feet in concealed locations, not more**  
75 **than 25 feet in exposed locations, and not less than once in any room**  
76 **space. Spacing for all other piping materials shall be at intervals not**  
77 **exceeding 5 feet and not less than once in any room space.**

78  
79 Note: Language appearing in **bold** is to be added. Language appearing as  
80 ~~stricken~~ is to be removed.

81  
82 G. Amend Section 402, Pipe sizing, subsection 402.6, Maximum design operating  
83 pressure, as follows:  
84

85 402.6 Maximum design operating pressure. ~~The maximum design operating~~  
86 ~~pressure for piping systems located inside buildings shall not exceed 5 psig (34~~  
87 ~~kappa gauge) except where one or more of the following conditions are met:~~

- 88 1. ~~The piping system is welded.~~  
89 2. ~~The piping is located in a ventilated chase or otherwise enclosed for~~  
90 ~~protection against accidental gas accumulation.~~  
91 3. ~~The piping is located inside buildings or separate areas of buildings used~~  
92 ~~exclusively for:~~  
93 3.1 ~~Industrial processing or heating,~~  
94 3.2 ~~Research,~~  
95 3.3 ~~Warehousing, or~~  
96 3.4 ~~Boiler or mechanical equipment rooms.~~  
97 4. ~~The piping is a temporary installation for buildings under construction.~~  
98

99 **Typical design operating pressure shall be 0.25 psig. Design operating**  
100 **pressures other than 0.25 psig shall only be allowed in areas where the gas**  
101 **supplier has sufficient main-line delivery pressure to assure adequate**  
102 **supply. The installer shall be responsible for verifying the availability of**  
103 **elevated pressure.**  
104

105 **402.6.1 For design operating pressures of 2 psig or less, the piping material**  
106 **shall be in conformance with Section 403 of the 2012 International Fuel Gas**  
107 **Code as amended herein.**  
108

109 **402.6.2 Design operating pressures above 2 psig shall only be allowed if all**  
110 **of the following conditions are met:**

- 111 1. **The piping system is located in an area zoned to allow**  
112 **commercial, industrial or heavy manufacturing uses.**  
113 2. **The connected load is 1000 CFH or greater and the facility has**  
114 **connected equipment that requires higher pressures for proper**  
115 **operation.**  
116 3. **The installation is approved by the Code Official and the fuel gas**  
117 **supplier.**  
118 4. **The piping system is welded steel pipe.**  
119 5. **Adequate pressure is available from the fuel gas supplier.**  
120 6. **All connected equipment is provided with regulators rated for the**  
121 **pressure provided.**  
122

123 402.6.4 **3** Liquefied petroleum gas systems. The operating pressure for  
124 undiluted LP-gas systems shall not exceed 20 psig (140 kPa gauge). Buildings  
125 having systems designed to operate below -5°F (-21°C) or with butane or a  
126 propane-butane mix shall be designed to either accommodate liquid LP-gas or  
127 prevent LP-gas vapor from condensing into a liquid.  
128

129 Note: Language appearing in **bold** is to be added. Language appearing as  
130 ~~stricken~~ is to be removed.  
131

132 H. Repeal subsection 403.4.3, Copper and brass, in its entirety.  
133

134 I. Repeal subsection 403.5.2, Copper and brass tubing, in its entirety.  
135

136 J. Amend Section 404, Piping system installation, subsection 404.5, Piping in  
137 concealed locations, by adding new subsection 404.5.1, as follows:  
138

139 **404.5.1 Corrugated Stainless Steel Tubing (CSST) Physical damage**  
140 **protection. All CSST piping located within a wall cavity shall be protected**  
141 **by installing the CSST inside a metal sleeve made of Schedule 40 steel pipe**  
142 **or floppy galvanized steel conduit as provided by the CSST manufacturer.**  
143

144 Note: Language appearing in **bold** is to be added.  
145

146 K. Amend Section 404, Piping system installation, by adding new subsections 404.7.1  
147 and 404.7.2, as follows:  
148

149 **404.7.1 Gas meter connections. Gas piping shall not be stubbed out of the**  
150 **building wall for connection to the gas meter within three feet of all**  
151 **electrical devices, or 30 inches of any foundation vent, building vent, fresh**  
152 **air vent, combustion air vent, door or window (other than non-operable**  
153 **windows.) All residential gas meter settings shall be located within ten feet**  
154 **of the front corner of the building. All gas meter settings shall be located**  
155 **at the building wall and the outlet piping of the meter shall enter the**  
156 **building above grade. Meter locations other than those specified shall be**  
157 **approved by the Code Official and the gas supplier.**  
158

159 **404.7.2 Commercial gas meter connection. Gas piping shall not be stubbed**  
160 **out of the building wall for connection to the gas meter within three feet of**  
161 **any hose bibs, electric devices, fire connections, air intakes, vents or other**  
162 **obstructions. All gas meter settings shall be located at the building wall**  
163 **and the outlet piping of the meter shall enter the building above grade.**  
164

165 Note: Language appearing in **bold** is to be added.  
166

167 L. Amend Section 404, Piping system installation, subsection 404.11, Protection  
168 against corrosion, as follows:

169  
170 404.11 Protection against corrosion. Metallic pipe or tubing exposed to corrosive  
171 action, such as soil condition or moisture, shall be protected in an approved  
172 manner. Zinc coatings (galvanizing) shall not be deemed adequate protection for  
173 gas piping underground. Ferrous metal exposed in exterior locations shall be  
174 protected from corrosion in a manner satisfactory to the Code Official. Where  
175 dissimilar metals are joined underground, an insulating coupling or fitting shall be  
176 used. Piping shall not be laid in contact with cinders. **Buried steel piping shall**  
177 **be coated and insulated with insulating fittings or unions on both ends**  
178 **above grade outside the building within 6 inches to 18 inches above grade**  
179 **with a minimum of one-5lb magnesium anode installed for every 200 feet of**  
180 **buried pipe.**

181  
182 Note: Language appearing in **bold** is to be added.

- 183  
184 M. Amend Section 404, Piping system installation, by adding new subsection 404.20,  
185 as follows:

186  
187 **404.20 Corrugated Stainless Steel Tubing (CSST) at the meter location. All**  
188 **CSST piping shall terminate utilizing the pipe manufacturer's approved**  
189 **meter termination fitting securely anchored to the structure in such a**  
190 **manner to properly support the meter. No CSST fitting connections shall**  
191 **be concealed within the structure at the meter location.**

192  
193 Note: Language appearing in **bold** is to be added.

- 194  
195 N. Amend Section 405, Piping bends and changes in direction, by adding new  
196 subsection 405.5, as follows:

197  
198 **405.5 Corrugated Stainless Steel Tubing (CSST) The minimum bending**  
199 **radius For CSST shall be as follows:**

200 **Pipe Size 3/8, 1/2, and 3/4 inch diameter – minimum radius 3 inches**

201 **Pipe Size 1, 1-1/4, 1-1/2 inch diameter - minimum radius 5 inches**

202 **Pipe Size 2 inch and larger - minimum radius 6 inches**

203  
204 Note: Language appearing in **bold** is to be added.

- 205  
206 O. Amend subsection 406.4.1, Test pressure, as follows:

207  
208 ~~406.4.1 Test pressure **and duration**. The test pressure to be used shall be no~~  
209 ~~less than 1 1/2 times the proposed maximum working pressure, but not less than 3~~  
210 ~~psig (20 kPa gauge), irrespective of design pressure. Where the test pressure~~  
211 ~~exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value~~  
212 ~~that produces a hoop stress in the piping greater than 50 percent of the specified~~  
213 ~~minimum yield strength of the pipe.~~

215 The test on threaded gas piping designed for 2 PSIG and less, shall be  
216 made by closing all openings and subjecting the pipes to a minimum of 20  
217 PSIG with a 15-minute duration. The test on all gas piping designed for  
218 greater than 2 PSIG shall be a minimum of 20 PSIG with 120-minute  
219 duration.  
220

221 Note: Language appearing in **bold** is to be added. Language appearing as  
222 ~~stricken~~ is to be removed.  
223

224 P. Repeal subsection 406.4.2, Test duration, in its entirety.  
225

226 Q. Amend Section 407, Piping support, by adding new subsection 407.2.1, as follows:  
227

228 **407.2.1 Corrugated Stainless Steel Tubing (CSST.) All CSST greater than**  
229 **16 inches in length, and run horizontally, shall be continuously supported**  
230 **and shall be attached to the continuous support member at intervals not to**  
231 **exceed six (6) feet on center.**  
232

233 Note: Language appearing in **bold** is to be added.  
234

235 R. Amend Section 409, Shutoff valves, by adding new subsection 409.1.4, as follows:  
236

237 **409.1.4 Shutoff valve support. All shutoff valves shall be supported in such**  
238 **a manner as to prevent movement of the valve body when the valve is**  
239 **operated. Connection of the valve to a section of iron pipe either**  
240 **immediately upstream or downstream of the valve shall be considered an**  
241 **acceptable support.**  
242

243 Note: Language appearing in **bold** is to be added.  
244

245 S. Amend Section 410, Flow controls, by adding new subsection 410.3.2, as follows:  
246

247 **410.3.2 All regulator relief vents terminating outdoors shall be provided**  
248 **with a manufactured termination fitting equipped with an internal stainless**  
249 **steel screen. The termination point shall be a minimum of eighteen (18)**  
250 **inches above grade or roof surface.**  
251

252 Note: Language appearing in **bold** is to be added.  
253

254 T. Amend subsection 411.1, Connecting appliances, to read as follows:  
255

256 411.1 Connecting appliances. Except as required by Section 411.1.1, appliances  
257 shall be connected to the piping system by one of the following:  
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- 259 1. Rigid metallic pipe and fittings.

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2. Corrugated Stainless Steel Tubing (CSST) where installed in accordance with the manufacturer's instructions.
  3. Semi-rigid metallic tubing and metallic fittings. Lengths shall not exceed 6 feet (1829 mm) and shall be located entirely in the same room as the appliance. Semi-rigid metallic tubing shall not enter a motor-operated appliance through an unprotected knockout opening. **Flexible connectors are allowed with the approval of the Code Official.**
  4. Listed and labeled appliance connectors in compliance with ANSI Z21.24 and installed in accordance with the manufacturer's installation instructions and located entirely in the same room as the appliance.
  5. Listed and labeled quick-disconnect devices used in conjunction with listed and labeled appliance connectors.
  6. Listed and labeled convenience outlets used in conjunction with listed and labeled appliance connectors.
  7. Listed and labeled appliance connectors complying with ANSI Z21.69 and listed for use with food service equipment having casters, or that is otherwise subject to movement for cleaning, and other large movable equipment.
  8. Listed and labeled outdoor appliance connectors in compliance with ANSI Z21.75/CSA 6.27 and installed in accordance with the manufacturer's installation instructions.

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Note: Language appearing in **bold** is to be added.

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U. The following Appendices shall, by adoption of the 2012 International Fuel Gas Code, be considered as part of this Code.

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Appendix A, Sizing and Capacities of Gas Piping

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Appendix B, Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I Appliances, and Appliances listed for use and Type B Vents

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Appendix C, Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems

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Section 4 – Savings Clause. Nothing in this ordinance shall be construed to affect any suit or proceeding now pending in any court or any rights acquired or liability incurred nor any cause or causes of action accrued or existing, under any act or ordinance repealed hereby, or shall any right or remedy of any character be lost, impaired, or affected by this ordinance.

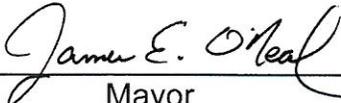
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Section 5 – Severability Clause. If any section, subsection, sentence, clause, or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance. The Council hereby declares that it would have adopted the ordinance and each section, subsection, sentence, clause, or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared invalid.

306 Section 6 – Penalty Clause. Any person violating any of the provisions of this  
307 ordinance, or failing to comply with any order issued pursuant to any section thereof, or  
308 who shall erect, construct, alter or repair a building structure or system in violation of an  
309 approved plan or directive of the Code Official, or of a permit or certificate issued under  
310 the provisions of these Codes, shall be guilty of a violation of a municipal ordinance and  
311 upon conviction thereof shall be punished as provided for in Section 1-7 of the City  
312 Code, except that any fine imposed shall not be less than Two Hundred Dollars (\$200)  
313 for the first offense, Four Hundred Dollars (\$400) for the second offense, and Five  
314 Hundred Dollars (\$500) for every offense thereafter. Each day that a violation  
315 continues, after a service of notice as provided for in these Codes, shall be deemed a  
316 separate offense. Notice as set forth in Section 36-1267 shall not be required in order  
317 to prosecute a person for a violation of any provision of this article or these Codes,  
318 except such notice shall be required to prosecute a person for failure to comply with an  
319 order.

320  
321 Section 7 – This ordinance shall be in full force and effect from and after  
322 May 1, 2012.

323  
324 Passed at meeting: March 26, 2012

325  
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327 \_\_\_\_\_  
328 Mayor

329  
330 Attest: Brenda M. Cinto, City Clerk

331  
332 Filed as Ordinance: March 26, 2012

333  
334 Approved as to form: Duke McDonald, Assistant City Attorney

335  
336 Approved for Council action: Greg Burt, City Manager

Affected Agency Notified: \_\_\_\_\_  
Emergency Required: \_\_\_\_\_  
Budget Adjust. Required \_\_\_\_\_  
Board Rec. Required \_\_\_\_\_  
Public Hearing: \_\_\_\_\_  
Sponsor: \_\_\_\_\_  
Date: \_\_\_\_\_

EXPLANATION TO COUNCIL BILL NO. 2012-073

**ORIGINATING DEPARTMENT: BUILDING DEVELOPMENT SERVICES**

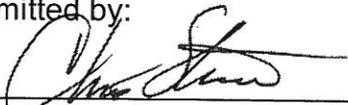
**PURPOSE:** To amend certain Sections of Chapter 36, Article III of the Springfield City Code known as the Land Development Code, to provide the City of Springfield with the most recent Fuel Gas Code.

**BACKGROUND AND REMARKS:** The current fuel gas code enforced by the City is the 2006 International Fuel Gas Code. With the adoption of the 2012 International Fuel Gas Code, the City will be adopting the most up-to-date, nationally recognized fuel gas code. The provisions contained within this ordinance do not unnecessarily increase construction costs; do not restrict the use of new materials, productions, or methods of construction; and do not give preferential treatment to particular types or classes of materials, products, or methods of construction.

The Building Development Services Department has met with representatives of the local design and construction industry over the course of the past nine months to discuss the ramifications of adopting this new code. Comments were requested from designers, electricians, plumbers, mechanical contractors, gas fitters, general contractors, developers, and others that may be affected by the adoption of this code. The language of this ordinance was placed on the City website for review by the members of the Home Builders Association, Springfield Contractors Association, Missouri Society of Professional Engineers, the local chapter of the American Institute of Architects, and the Development Issues Input Group. Discussions with the Development Issues Input Group resulted in a consensus to move forward with the adoption of this code, provided a mechanism is put in place to allow the staff of Building Development Services to consider alternative design standards and practices beyond those described in the 2012 Fuel Gas Code.

This provision has been made as part of the compilation of the administrative chapters of the codes being adopted. The compilation is known as Article XII, Administrative and Enforcement of Codes, of the Land Development Code.

Submitted by:

  
\_\_\_\_\_  
Building Development Services

Approved by:

  
\_\_\_\_\_  
City Manager