

COUNCIL ACTION FORM

SUBJECT: 2012 CONSTRUCTION CODE UPDATES

BACKGROUND:

Updates to a number of nationally recognized codes are adopted on three-year cycles. The codes up for update at this time include the following:

- International Building Code (IBC)
- International Residential Code (IRC)
- International Existing Buildings Code (IEBC)
- International Mechanical Code (IMC)
- International Fuel Gas Code (IFGC)
- Uniform Plumbing Code (UPC)
- International Fire Code (IFC)

These codes are utilized to provide the requirements, consistency and guidance as the City's Inspection Division reviews and inspects projects within the City. During the last adoption cycle Council approved the 2009 codes.

The first step in the code adoption process is an in depth review of the 2012 codes by Inspections staff. Inspections staff reviews not only the 2012 code books, but also reference materials that describe the significant changes between the 2009 and 2012 versions of the code. Research is also conducted with staff from other Iowa jurisdictions to understand their process and any stumbling blocks that they encountered along the way. Once a thorough review is complete, the process moves on to the Building Board of Appeals.

The Building Board of Appeals is a seven member board appointed by the Mayor with approval of the City Council. Each member is qualified by experience and training in matters pertaining to building construction. The membership of the Board consists of the following professionals:

- Licensed Architect
- Professional Engineer
- General Contractor
- Homebuilder
- Licensed Journeyman or Master Electrician, or Electrical Contractor
- Licensed Journeyman or Master Plumber, or Plumbing Contractor
- Licensed Master HVAC Technician, or Mechanical Contractor

The Building Board of Appeals is tasked with reviewing proposed text amendments to Ames *Municipal Code*, Chapter 5, Building, Electrical, Mechanical and Plumbing Code and Chapter 8, Fire Code. Proposed text amendments are reviewed by the Board at a public hearing before forwarding their recommendation to the City Council.

The Building Board of Appeals held a public hearing on September 9th to consider changes to the seven codes shown above, as well as to the International Energy Conservation Code (IECC). However, for reasons explained below, the Board ultimately chose not to recommend changes to the IECC at this time.

The Building Board of Appeals also recommended to the City Council the adoption of the revisions to Ames *Municipal Code* Chapters 5 and 8.

Typically, the adoption process follows the State of Iowa adoption process. This allows the City of Ames to follow the State of Iowa's lead where appropriate. The State of Iowa has not yet adopted the 2012 codes. Staff understands that their adoption process may occur during the spring of 2014.

Ames *Municipal Code* Chapter 5 references the State of Iowa for energy standards, rather than adopting the International Energy Conservation Code (IECC) locally. At the end of the September 9th Building Board of Appeals meeting, the Board questioned a portion of the IECC. At that time, however, a motion was made to adopt the IECC locally.

The Inspection Division subsequently received a letter from Brad Heemstra, representing the Ames Home Builders Association, asking that the City not adopt the 2012 IECC and remove that section out of the International Residential Code (IRC) allowing the continued use of the State of Iowa adopted 2009 IECC. Inspections staff had an opportunity to review this request and to contact other jurisdictions that have moved forward with the 2012 code adoption process (Des Moines and Ankeny). Both jurisdictions chose to exempt the 2012 IECC standards from the IRC and will follow the State of Iowa's lead with the 2012 IECC adoption process. Ames *Municipal Code* Chapter 5 is already following the State of Iowa for energy conservation, so this is not a change.

With this modified understanding, Inspections staff requested another public hearing with the Building Board of Appeals on October 7th to discuss the IECC and the IRC. **The Building Board of Appeals made a motion to recommend that the City Council amend the 2012 IRC by removing energy conservation, which would allow our customers to continue to utilize the same requirements as are currently utilized.**

Inspections staff also hosted a 2012 Code Adoption meeting on September 23. All contractors who have done business with the Inspection Division within the past year were notified by e-mail of the meeting, which was attended by eight of our local contractors. Presentations were given by Inspections staff followed by a discussion of the 2012 codes.

As staff was preparing to take the 2012 codes to the City Council, staff had an opportunity to review the 2012 International Fire Code (IFC) further. We had originally revised Ames *Municipal Code* Chapter 8 to remove portions of IFC Chapter 11, *Construction Requirements for Existing Buildings*, to accurately reflect our current inspection process and our priority to inspect new construction and alterations. The additional review concluded that the City of Ames should make an additional revision to Chapter 8, thereby not removing those portions of the IFC, to make sure that the City of Ames will not be less strict than the State when the State of Iowa adopts the 2012 International Fire Code. The Building Board of Appeals met on December 2nd and made a motion to approve the amended version of Chapter 8, recommending approval to the City Council.

SIGNIFICANT CHANGES

The following is an overview of each of the proposed 2012 Codes and the significant changes from the adopted 2009 Codes:

International Building Code (IBC): The majority of changes to the IBC are for the purposes of clarification and grouping all of the definitions into Chapter 2 instead of some in Chapter 2 and some at the beginning of other chapters. The following are the more significant changes to the IBC:

- Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the International Residential Code (IRC) provided the building is protected by an automatic sprinkler system. Prior to the 2012, a sprinkler system was not required for these situations.
- The 2009 IBC required windows in houses and apartment buildings to not allow passage of a four-inch sphere if the window was more than 72-inches above the exterior finished grade and if the lowest part of clear opening of the window was less than 24-inches above the interior finished floor. The 72-inch dimension is the same, but the interior dimension has been increased to 36-inches. It stays at 24-inches in the IRC.
- Automatic sprinkler systems will be required in Factory occupancies exceeding 2,500 square feet that are used to manufacture upholstered furniture or mattresses, Mercantile occupancies exceeding 5,000 square feet that display and sale upholstered furniture or mattresses, and Storage occupancies exceeding 2,500 square feet used for the storage of upholstered furniture or mattresses,
- Carbon monoxide alarms will be required in Institutional and Residential occupancies that have a fuel-burning appliance or in a building which has an attached garage.

International Residential Code (IRC): The majority of the changes in the IRC were for clarification and reorganization. The following are the significant changes:

- Self-closing devices are now required on doors between the garage and the dwelling unit.
- Safety glazing is required at the bottom of stairs where the bottom exposed edge is greater than 36 inches (previously it was 60 inches).
- The code now recognizes "wireless smoke alarms".

International Existing Buildings Code (IEBC): There are no significant changes in the 2012 IEBC.

International Mechanical Code (IMC): The significant change in the 2012 IMC is as follows:

- Clarified that membrane penetrations of fire rated assemblies by duct systems constructed entirely of minimum No. 26 gauge steel shall be allowed without installation of radiation dampers.

International Fuel Gas Code (IFGC): There are no significant changes in the 2012 IFGC.

Uniform Plumbing Code (UPC): A transition from the 2009 to the 2012 version of the Uniform Plumbing Code brings relatively minor changes. There has been some reorganization of the body of the code and some modernization of the standards. The following is a list of the more significant changes:

- Addition of standards for pressure sealed doors in bathtub and whirlpool enclosures.
- New provisions allowing for the installation of barrier free showers.

- Clarification of the limitation of temperature and backflow protection requirements for bathtub and whirlpool faucets.
- Clarification of waste outlet size and material for tubs.
- Now provides a standard for the installation of emergency eyewash and shower equipment without drains.
- Clarification has been added for the calculation of the required number of plumbing fixtures.
- Added requirements for providing make-up air where gravity vented appliances can be affected by exhaust fans or other ventilation systems.
- Clarification of requirements for clearances for the servicing of appliances.
- Added guidance for appliance vent termination in relationship to openings in adjacent buildings.
- Clarification for gas vent terminations to bring the UPC in alignment with the NFPA 54.
- An update to allow for new methods of joining pipe materials and new fitting types for various water and drainage pipe materials.
- Minor modifications regarding pressure regulators and testing of systems with the addition of new safety requirements for the purging of gas systems with clarification of when purging to the outdoors is required.
- Can now substitute a service valve for the Post Indicator Valve (PIV) for an automatic fire sprinkler system under certain circumstances, if approved by the Fire Inspector.
- Eliminated the use of an air admittance valve on island sinks. Must use a UPC approved island vent.
- Eliminated the requirement for a main stack at least as large as the required building sewer.

International Fire Code (IFC): The 2012 International Fire Code has been completely reorganized into seven parts. The following are the significant changes:

- All definitions have been moved from specific chapters to Chapter 2.
- The requirements limit the area of roof gardens, require the use of roof assemblies designed for severe fire exposures and provide for the installation of a standpipe connection. It sets forth requirements for establishing a maintenance plan for the vegetation installed on rooftop gardens or landscaped roofs.
- The installation of traffic-calming devices on fire apparatus access roads are prohibited unless the devices are approved by the fire-code official. Each jurisdiction has its own traffic pattern emergency response challenges; this requirement ensures the fire department is part of this decision-making process.
- The 2012 IFC provides for the proper installation of photovoltaic (PV) systems and addresses the potential hazards to firefighters by requiring compliance with the provisions of the International Building Code and Section 690 of NFPA 70, identification of PV circuits and disconnects, location of conductors to reduce potential trip hazards and with the creation of pathways where firefighters can perform manual ventilation operations on roofs.
- The 2012 IFC contains requirements for carbon-monoxide alarms in all new residential (Group R) and institutional (Group I) occupancies (and in Section 1103.9 for existing residential and institutional occupancies). These provisions were added to the code to be consistent with the requirements to include carbon-monoxide detectors in all new construction of one- and two-family dwellings that had been added to the 2009 edition of the International Residential Code. Carbon-monoxide alarms are only required when the Group R or I occupancy contains a fuel-burning appliance or has an attached garage.
- Where general-use exit signs are required in Group R-1 occupancies, low-level exit signs must also be provided in the means of egress serving the guest rooms.

- The 2012 IFC has been clarified by removing the word "alterations." This word is used as a trigger point for the International Existing Building Code and defined specifically. The clarification removes potential confusion.
- The 2012 IFC establishes an inspection frequency for fire-escape stairs and balconies on existing buildings.
- The 2012 IFC addresses all LP-gas cylinder exchange stations and provides safety requirements for the operation of exchanges, including security of the cylinders, restricted access to cylinders, warning signs and posting of emergency contact information.
- The 2012 IFC contains provisions regulating automated LP-gas cylinder-exchange stations. The requirements limit access to one cylinder at a time, restrict how return cylinders can be put into the cage, require classified electrical equipment, allow manual override only by authorized persons and require regular safety inspections of the equipment.

ALTERNATIVES:

1. Set the public hearing for January 14, 2014, to review the proposed changes to the Ames *Municipal Code*, Chapter 5 and Chapter 8, and the proposal to adopt the 2012 editions of the International Building Code (IBC), International Residential Code (IRC), International Existing Building Code (IEBC), International Mechanical Code (IMC), International Fuel Gas Code (IFGC), Uniform Plumbing Code (UPC) and the International Fire Code (IFC) with local amendments.
2. Direct staff to work with the Building Board of Appeals to develop further local amendments to the recommended codes.

MANAGER'S RECOMMENDED ACTION:

The Building Board of Appeals has reviewed the proposed code updates and is recommending approval to the City Council. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby setting a public hearing on these code updates for January 14, 2014.

CHAPTER 5

Building, Electrical, Mechanical and Plumbing Code

DIVISION I

Adoption and Administration

Sec. 5.100	Title and Adoption	4
Sec. 5.101	Applicability	5
Sec. 5.102	Inspection Division	6
Sec. 5.103	Permits Required.....	7
Sec. 5.104	Building permits not required.....	9
Sec. 5.105	Electrical permits not required.....	9
Sec. 5.106	Gas system permits not required.....	10
Sec. 5.107	Mechanical permits not required.....	10
Sec. 5.108	Plumbing permits not required.....	10
Sec. 5.109	Public service agencies exempt from some permits.....	10
Sec. 5.110	Submittal Documents.....	10
Sec. 5.111	Temporary Structures.....	12
Sec. 5.112	Fees.....	12
Sec. 5.113	Building inspections.....	13
Sec. 5.114	Electrical inspections.....	14
Sec. 5.115	Mechanical inspections.....	14
Sec. 5.116	Plumbing inspections.....	15
Sec. 5.117	Certificate of Occupancy.....	15

DIVISION II

Amendments to Adopted Codes

Sec. 5.200	Buildings.....	17
Sec. 5.201	Residential Buildings	17
Sec. 5.202	(Reserved) Accessibility	18
Sec. 5.203	(Reserved) Energy	18
Sec. 5.204	(Reserved) Existing Buildings	18
Sec. 5.205	Electrical	18
Sec. 5.206	(Reserved) Mechanical	18
Sec. 5.207	Gas	18
Sec. 5.208	Plumbing.....	19

DIVISION III
Contractor Registration and Trade Licensing

Sec. 5.300	Contractor Registration and Licensing	35
Sec. 5.301	City Electrical Contractor Registration and State Licensing.....	35
Sec. 5.302	State Electrician Licensing Categories	35
Sec. 5.303	State Electrician Licensing Required	35
Sec. 5.304	Exemptions	35
Sec. 5.305	City Plumbing Contractor Registration and State Licensing	36
Sec. 5.306	State Plumbers License Categories	36
Sec. 5.307	State Plumbers Licenses Required	36
Sec. 5.308	Exemptions	36
Sec. 5.309	City Mechanical HVAC Contractor Registration and State Licensing	36
Sec. 5.310	State HVAC Mechanical License Categories	37
Sec. 5.311	State HVAC Mechanical Licenses Required	37
Sec. 5.312	Exemptions	37

DIVISION IV
Dangerous Buildings

Sec. 5.400	Title and Adoption	37
Sec. 5.401	Definitions	38
Sec. 5.402	Authority	40
Sec. 5.403	Procedure to Remedy	40
Sec. 5.404	Abatement by Owner; Time for Compliance	41
Sec. 5.405	Appeal Procedures	41
Sec. 5.406	Demolition or Abatement by City.....	42
Sec. 5.407	Stay of Demolition or Abatement	42
Sec. 5.408	Access for Demolition or Abatement – Penalties	43
Sec. 5.409	Grading of Premises after Demolition	43
Sec. 5.410	Extermination Procedure before Demolition or Abatement	43
Sec. 5.411	Demolition or Abatement Contract.....	43
Sec. 5.412	Removal of Posted Notice and Entry on Posted Premises Prohibited	43
Sec. 5.413	Service by Public Utilities	44
Sec. 5.414	Summary Abatement of Imminently Dangerous Structures	44
Sec. 5.415	Cost of Abatement; Low Income, Elderly Persons	44
Sec. 5.416	Severability	45

DIVISION V
Penalties and Enforcement

Sec. 5.500	Violations.....	45
Sec. 5.501	Municipal Infraction Citation	45
Sec. 5.502	Nuisance Abatement	45
Sec. 5.503	Stop Work Order.....	45

DIVISION VI
Building Board of Appeals

Sec. 5.600	Building Board of Appeals	45
Sec. 5.601	Appeal Application	45
Sec. 5.602	Board Membership and Appointment.....	46
Sec. 5.603	Board Chairperson	46

Sec. 5.604	Conflict of Interest	46
Sec. 5.605	Board Records	46
Sec. 5.606	Member Compensation	46
Sec. 5.607	Meeting Schedule	46
Sec. 5.608	Open Meetings	46
Sec. 5.609	Board Authority	46
Sec. 5.610	Action on Board Decision	46
Sec. 5.611	Stay of Enforcement	46
Sec. 5.612	Code Amendments	46

DIVISION VII - Reserved

DIVISION VIII **Building Moving**

Sec. 5.801	Structure Defined	47
Sec. 5.802	“House Mover” Defined	47
Sec. 5.803	License Required	47
Sec. 5.804	Application for License Required	47
Sec. 5.805	Bond	47
Sec. 5.806	Insurance Required	47
Sec. 5.807	Issuance of License	48
Sec. 5.808	License Fee; Expiration; Transferability	48
Sec. 5.809	Revocation of License	48
Sec. 5.810	Permit Required	48
Sec. 5.811	Application for Permit	48
Sec. 5.812	Permits to Unlicensed Applicants Authorized	49
Sec. 5.813	Permit Fees	49
Sec. 5.814	Compliance with Building, Zoning, Other Ordinances	49
Sec. 5.815	Obstructing Streets Regulated	49
Sec. 5.816	Moving Over Railway Tracks	49
Sec. 5.817	Consent to Move Wires, Cables Required	49
Sec. 5.818	Issuance, Contents of Permits; Denial	49
Sec. 5.819	Authority to Require Planking of Streets	50

DIVISION IX **NOXIOUS WEEDS**

Sec. 5.901	Weed Ordinance	50
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DIVISION I

ADOPTION AND ADMINISTRATION

Sec. 5.100. TITLE & ADOPTION.

These regulations shall be known as the Building Code of the City of Ames, hereinafter referred to as “this code.”

(1) **Scope.** The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

(2) **Intent.** The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations.

(3) **Referenced codes.** The codes listed in the following Sections and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Provisions in the appendices of all referenced codes and standards shall not apply unless specifically adopted.

(4) **Adoption.**

(a) The International Building Code, [20122009](#) Edition, (IBC), except for the deletion of Chapters ~~1, 27,~~ and ~~279,~~ and

(b) The International Residential Code, [20122009](#) Edition, (IRC), except for the deletion of Chapter 1, Scope and Administration; ~~Part IV – Energy Conservation;~~ Part VII - Plumbing; and Part VIII - Electrical; and with the addition of appendix G; are hereby adopted and designated, together with and subject to the additions, deletions and modifications hereinafter stated, plus the ordinances pertaining to plumbing, electrical and mechanical matters, as the Building Code of the City.

(5) **Buildings.** The provisions of the [20122009](#) International Building Code (IBC), as adopted and amended in this municipal code chapter, shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

(6) **Residential Buildings.** The provisions of the [20122009](#) International Residential Code for One- and Two family Dwellings (IRC), as adopted and amended in this municipal code chapter, shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above-grade in height with a separate means of egress and their accessory structures.

(7) **Accessibility.** The provisions of Chapter 11 of the [20122009](#) International Building Code, and by reference, American National Standards Institute (ANSI) Standard A117.1-~~20092003~~, entitled Accessible and Usable Buildings and Facilities, [20092003](#) edition, as adopted in this code, shall apply to the design and construction of all public and private buildings intended for use by the general public, and multiple-unit dwellings with four or more units, including site elements and features.

Exception:

(a) This standard does not apply to single family dwellings or apartment buildings with less than four individual dwelling units.

(b) Any building or facility which is in compliance with the applicable requirements of State of Iowa Code Chapter 103A.7, and Administrative Rule 661-Chapter 302 shall be considered in compliance with this code.

(8) **Energy.** The provisions of the State of Iowa Building Code Section 103A.8A, Energy Conservation Requirements, and Administrative Rule 661-Chapter 303 shall govern the design and construction of buildings for energy efficiency.

(9) **Existing Buildings.**

The provisions of the ~~20122009~~ International Existing Building Code (IEBC), as adopted and amended in this code, shall be an acceptable code compliance standard for repair, alteration, change of occupancy, addition, and relocation of existing buildings.

(10) **Fire prevention.** The provisions of the ~~20122009~~ International Fire Code (IFC), as adopted and amended in Chapter 8 of the Ames Municipal Code, shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, alteration or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

(11) **Electrical.** The National Electrical Code, 2011 edition, published by the National Fire Protection Association, One Batterymarch Park, Quincy, Massachusetts, and as adopted by the Iowa Electrical Examining Board, is hereby adopted as the electrical code of the City of Ames and shall govern electrical work and installations in the City of Ames, except for such specific, higher standards and requirements as have been or may from time to time be enacted by the City of Ames.

(Ord. No. 4110, 05-08-12)

(12) **Mechanical.** The provisions of the ~~20122009~~ International Mechanical Code (IMC), as adopted and amended in this code, shall apply to the installation, alteration, repair and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

Exception: one and two family dwellings shall comply with the International Residential Code.

(13) **Plumbing.** The provisions of the ~~20122009~~ Uniform Plumbing Code (UPC), except for the deletion of Chapter 16 and 17; and with the addition of Appendix A, Appendix B, Appendix C (at the discretion of the AHJ), and Appendix D, are hereby adopted and designated, together with and subject to the additions, deletions, and modifications hereinafter stated in the amendments to this code, shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, all aspects of a medical gas system, and fuel gas piping.

(14) **Gas.** The provisions of the ~~20122009~~ International Fuel Gas Code (IFGC), as adopted and amended in this code, shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories. **Exception:** one and two family dwellings shall comply with the International Residential Code.

(15) **Elevators.** Design review, construction inspections, and periodic maintenance inspections of elevators are all within the scope of authority of the Elevator Safety Board, as detailed in State of Iowa Code Chapter 89A, Elevators, and 875 - Chapter 72, and such work shall comply with those standards and procedures.

(16) **Factory built structures.** The provisions of Iowa Code Section 103A.10 (3) and the administrative rules of the U.S. Department of Housing and Urban Development (HUD) shall be acceptable standards for new units moved into the City. A current HUD label, third party inspection certificate, and proof of compliance with Iowa Codes Section 103A.59, Certification of Manufactured Home Installers, and Iowa Administrative Rule 661 - Chapter 372, Licensing of Manufactured Housing Retailers, Manufacturers and Distributors shall be accepted in lieu of local inspections. Footings, foundations, electrical, mechanical, and plumbing work performed in conjunction with the placement of such factory built structures are subject to permits and inspections as provided in this chapter. Building permit fees for factory built structures are subject to permits and inspections as provided in this chapter. Building permit fees for factory built structures shall be based upon the same square foot construction cost valuations as similar site built structures.

Sec. 5.101. APPLICABILITY.

Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

(1) **Other laws.** The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

(2) **Application of references.** References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

(3) **Referenced codes and standards.** The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

(4) **Partial invalidity.** In the event that any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

(5) **Existing structures.** The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the International Fire Code, or as is deemed necessary by the Building Official for the general safety and welfare of the occupants and the public.

Sec. 5.102. INSPECTION DIVISION.

The Inspection Division of the Fire Department is hereby created and the official in charge thereof shall be known as the Building Official. The Building Official shall be appointed by the Fire Chief.

(1) **Building Official or designees.** Where the term Building Official appears in this Code, it shall also be understood, within context, to include actions performed by inspectors and other members of Inspection Division staff under the direction and authority of the Building Official.

(2) **Inspectors and other staff.** In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the Building Official shall have the authority to appoint the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the Building Official.

(3) **Duties and powers of the Building Official.** The Building Official is hereby authorized and directed to enforce the provisions of this code. The Building Official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

(4) **Applications and permits.** The Building Official shall receive applications, review construction documents and issue permits for the erection, and alteration, demolition and moving of buildings and structures, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

(5) **Notices and orders.** The Building Official shall issue all necessary notices or orders to ensure compliance with this code.

(6) **Inspections.** The Building Official shall make all of the required inspections, or the Building Official shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The Building Official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

(7) **Identification.** The Building Official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

(8) **Right of entry.** Where it is necessary to make an inspection to enforce the provisions of this code, or where the Building Official has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the Building Official is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the Building Official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the Building Official shall have recourse to the remedies provided by law to secure entry.

(9) **Inspection Division records.** The Building Official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained for the period required for retention of public records.

(10) **Liability.** The Building Official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The Building Official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

(11) **Approved materials and equipment.** Materials, equipment and devices approved by the Building Official shall be constructed and installed in accordance with such approval.

(12) **Used materials and equipment.** The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the Building Official.

(13) **Modifications.** Wherever there are practical difficulties involved in carrying out the provisions of this code, the Building Official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the Building Official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the Inspection Division.

(14) **Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the Building Official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

(15) **Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

(16) **Tests.** Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the Building Official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the Building Official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the Building Official for the period required for retention of public records.

Sec. 5.103. PERMITS REQUIRED.

Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the Building Official and obtain the required permit. It is a violation to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, without having first obtained the required permit.

(1) **Contractor registration required.** Each person, firm, or corporation performing work that requires a building, electrical, mechanical, or plumbing permit must possess a valid State Division of

Labor registration number when required, and provide proof of same to the Inspection Division prior to permit issuance.

Exceptions:

(a) A homeowner performing work on his/her primary place of residence, is not required to obtain State Division of Labor registration number.

(b) A building owner or tenant performing work on his/her building/place of business.

(2) **Contractor insurance required.** Each person, firm, or corporation performing work that requires a building, electrical, mechanical, or plumbing permit must possess current Contractor's Commercial General Liability Insurance in an amount not less than \$500,000 combined single limit, and shall provide proof of coverage to the Inspection Division prior to permit issuance. For electrical, plumbing, and HVAC contractors, possession of a State of Iowa contractor license shall serve as evidence of adequate insurance coverage.

Exceptions:

(a) A homeowner performing work on his/her primary place of residence, is not required to obtain Contractor's Commercial General Liability Insurance.

(b) A building owner or tenant performing work on his/her building/place of business.

(3) **Contractor licenses and registration required.** Permits shall not be issued to persons or companies who are not licensed by the State of Iowa and registered with the City of Ames, except as specifically exempted in this code. Permitted electrical, mechanical, and plumbing work must be performed by licensed persons, except as specifically exempted in other sections of this code.

(4) **Homeowner permit required.** Contractor license and registration is not required for alteration or repair work performed on a single family dwelling or accessory structure when the person performing the alteration or repair work is the owner of record and occupies the dwelling as his/her primary residence. An owner-occupant is required to obtain a homeowner building, electrical, mechanical, or plumbing permit for all such work performed, and the work must be inspected for compliance with this code. The scope of work authorized by a homeowner permit is limited by specific provisions in the electrical, mechanical, and plumbing licensing sections of this code.

(5) **Compliance with other codes.**

Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of this code. All work requires separate building, electrical, mechanical or plumbing permits, unless specifically exempted elsewhere in this code. Each building owner, contractor, or project manager is responsible to request clarification of permit requirements from the Inspection Division before doing any work on any building.

(6) **Emergency Repairs.** Where equipment replacements or repairs must be performed in an emergency situation, and a permit is required for the work, the permit application shall be submitted to the Building Official within the next business day.

(7) **Application for permit.** To obtain a permit, the applicant shall first file an application in writing on a form furnished by the Inspection Division for that purpose. Such application shall:

(a) Identify and describe the work to be covered by the permit.

(b) Describe the land on which the proposed work is to be done by street address or similar description that will identify and locate the proposed building or work.

(c) Indicate the proposed use of the building.

(d) Be accompanied by construction plans and documents as required in Section 5.110.

(e) State the total construction cost of the proposed work for building permits - including labor and materials.

(f) Be signed by the building owner, applicant, or the applicant's authorized agent.

(g) Provide other information as required by the Building Official.

(8) **Action on application.** The Building Official shall examine permit applications within a reasonable time after filing. The Building Official may reject applications if the form or other submitted documents do not comply with this code. If rejected, the Building Official will inform the applicant of the reason. If approved, the permit shall be promptly issued.

(9) **Time limitation of application.**

If no work occurs on a permitted project within ~~365~~¹⁸⁰ days after issuance, the project shall be viewed as abandoned, and a new permit must be issued to restart the project. Except, the Building Official may grant one or more 90 day extensions for unusual circumstances, upon receipt of a written request.

(10) **Validity of permit.** The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the Building Official from requiring the correction of errors in the construction documents and other data. The Building Official is authorized to prevent occupancy or use of a structure where in violation of this code.

(11) **Expiration.** Every permit issued shall expire unless the work authorized is completed within 365 days after issuance. If the work is not completed within 365 days, the building official ~~may will~~ issue a permit extension. A permit extension fee, in an amount equal to one half the original permit fee, or \$25.00, whichever is greater, ~~may shall~~ be invoiced to the permit holder. The permit holder shall be given a minimum 30 day advance written notice of impending permit expiration and imposition of extension fee.

Exception: Permit extension fees may be waived for major commercial, industrial, and other projects subject to approval of the Building Official.

(12) **Suspension or revocation.** The Building Official is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any provisions of this code.

Sec. 5.104. BUILDING PERMITS NOT REQUIRED. No building permit is required for:

(1) Residential single family kitchen and bath and basement remodels when no sheetrock or lath and plaster is removed from a single contiguous area greater than 32 square feet, and when no new plumbing or electrical fixtures are installed in different locations than those replaced, and when no new walls, wall framing, openings, structural alterations or wall furring on the interior face of exterior walls occurs.

(2) Residential or commercial door and window replacements when rough openings are not enlarged in width.

(3) One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet.

(4) Fences, ~~not over 6 feet high.~~

(5) Retaining walls that are not more than 4 feet in height above the lowest adjacent grade, unless supporting a surcharge or impounding Class I, II or IIIA liquids.

(6) Sidewalks and driveways ~~not more than 30 inches above adjacent grade, and not over any basement or story below and not part of an accessible route.~~

(7) Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.

(8) Temporary motion picture, television and theater stage sets and scenery.

(9) Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 24 inches deep, do not exceed 5,000 gallons and are installed entirely above ground.

(10) Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.

(11) Swings and other playground equipment, ~~accessory to detached one and two family dwellings.~~

(12) Awnings ~~on Group R-3 and U occupancies.~~

(13) Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches in height.

(14) Repairs. Application or notice to the Building Official is not required for ordinary minor repairs to structures. Except that such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

(15) Replacement of siding.

(16) Replacement of shingles or other roof covering.

Sec. 5.105. ELECTRICAL PERMITS NOT REQUIRED. No electrical permit is required for:

(1) **Repairs and maintenance:** Minor repair work, including the replacement of lamps and fuses, or the connection of approved portable electrical equipment to approved permanently installed receptacles, or for simple replacement of electrical fixtures such as wall plugs, and light fixtures.

(2) **Radio and television transmitting stations:** The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installations of towers and antennas.

(3) **Temporary testing systems:** A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

(4) **Electric utilities:** The installation, alteration or repair of electrical equipment installed by or for the City of Ames Electric Department, or other licensed or franchised electric utility company in the generation, transmission, distribution, or metering of electricity.

(5) **Manufacturing processes:** Moveable process equipment which is independent of the building structure, is subject to being moved, rearranged, and replaced by equipment manufacturers and staff maintenance personnel. In such instances, permits and inspections are required only for the alteration of the building's electrical supply wiring to the point of connection to the equipment.

(6) **Electrical manufacturing:** Work involved in the manufacturing, testing, servicing, altering or repairing of electrical equipment.

(7) **Elevators:** Work involved in the installation, repairing, remodeling or maintenance of elevators, dumbwaiters or escalators. Except: electrical equipment for supplying current to the control panel of elevators, dumbwaiters or escalators does require permits and inspections.

Sec. 5.106. GAS SYSTEM PERMITS NOT REQUIRED. No gas system plumbing or mechanical permit is required:

(1) Portable heating appliances.

(2) Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Sec. 5.107. MECHANICAL PERMITS NOT REQUIRED. No mechanical permit is required:

(1) Portable heating appliances.

(2) Portable ventilation equipment.

(3) Portable cooling unit.

(4) Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.

(5) Repair or replacement of any part that does not alter its approval or make it unsafe.

(6) Portable evaporative coolers.

Sec. 5.108. PLUMBING PERMITS NOT REQUIRED. No plumbing permit is required:

(1) For the stopping of leaks in drains, water, soil, waste or vent pipe, provided however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

(2) For the clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

Sec. 5.109. PUBLIC SERVICE AGENCIES EXEMPT FROM SOME PERMITS.

A permit shall not be required for the installation, alteration or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right. Such agencies include Ames Electric Utility; Alliant Natural Gas Utility; Ames Water Department; Ames Public Works Department; franchised telecommunications companies. Such exemption includes all equipment, lines, and facilities specific to the energy or product produced, processed, conveyed or conducted. Such exemption does not include permanent buildings that house or contain such systems. All buildings constructed, altered, repaired, or removed are subject to the typical plan review, permit, inspection and approval process as described elsewhere in this code.

Sec. 5.110. SUBMITTAL DOCUMENTS.

Construction documents, shall be submitted in one or more sets with each building permit application. Construction documents shall be prepared by a registered design professional where required by the statutes of the State of Iowa, ~~and Construction Document Submittal Guidelines of the Inspection Division.~~ Where special conditions exist, the Building Official is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: The Building Official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional, if it is found that the nature of the proposed work is such that submittal and review of such construction documents is not necessary to obtain code compliance.

(1) **Information on construction documents.** Construction documents shall be dimensioned and drawn to scale upon suitable material. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the Building Official.

(2) **Fire protection system shop drawings.** Shop drawings for the fire protection system(s) shall be submitted to indicate conformance with this code and the project construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in [the 2012 IBC Chapter 9, Fire Protection Systems](#).

(3) **Means of egress.** The construction documents shall show in sufficient detail that the location, construction, size and arrangement of all portions of the means of egress are in compliance with the provisions of this code.

(4) **Exterior wall envelope.** Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to demonstrate compliance with this code.

(5) **Site plan.** The construction documents submitted with the permit application shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. The Building Official is authorized to waive or modify the requirement for a site plan when the application for permit is for interior alteration or repair or when otherwise warranted.

(6) **Examination of documents.** The Building Official shall examine or cause to be examined the construction plans and documents to determine whether the construction indicated and described is in accordance with the requirements of this code.

(7) **Previous approvals.** This code shall not require changes in the approved construction documents, methods, materials, or designated occupancy of a structure for which a permit has been issued, and construction of which has been commenced within ~~365~~¹⁸⁰ days after the effective date of this code and has not been abandoned.

(8) **Phased approval.** The Building Official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the entire building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for the foundation or other parts of a building or structure may proceed with construction at the holder's risk. The City can provide no assurance that a permit for the remainder of the structure will be granted, unless the balance of the plans submitted are determined in compliance with this Code.

(9) **Design professional in responsible charge.** When it is required that documents be prepared by a registered design professional, the owner shall engage ~~and designate on the building permit application~~ a registered design professional for the project. The registered design professional shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building. Where structural observation is required by IBC Chapter 17, Structural Tests and Special Inspections, the individual or firms performing the structural observations and reporting shall be identified.

(10) **Deferred submittals.** For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the application and that are to be submitted to the Building Official within a specified period. Deferral of any submittal items shall have the prior

approval of the Building Official. The deferred submittal items shall not be installed until the design and submittal documents have been approved by the Building Official.

(11) **Amended construction documents.** Work shall be installed in accordance with the approved construction documents. Any changes made during construction must be reviewed, inspected and approved by the Building Official.

(12) **Retention of construction documents.** One set of approved construction documents shall be retained by the Building Official in accord with the City of Ames Record Retention Policy.

(13) An Iowa licensed architect or engineer shall determine footing size and structural design for residential structures supported by post and beam construction and having a common roof with the house.

Sec. 5.111. TEMPORARY STRUCTURES AND USES

(1) **General.** The Building Official is authorized to issue a permit for temporary structures. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The Building Official is authorized to grant extensions for demonstrated cause.

(2) **Conformance.** Temporary structures shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure public health, safety and general welfare.

(3) **Temporary power.** The Building Official is authorized to approve temporary power in part of an electric installation before such installation has been fully completed and approved. The part approved shall comply with the applicable requirements for temporary lighting, heat or power of this code.

(4) **Termination of approval.** The Building Official is authorized to terminate such permit for a temporary structure and to order the temporary structure or use to be discontinued for due cause.

Sec. 5.112. FEES

(1) **Payment of fees.** A permit shall not be valid until the required fees have been paid. **Exception:** the City may invoice permit applicants for permit and inspection fees, as a customer convenience. In such instances, permits shall be considered valid immediately following permit application review and approval. This customer courtesy may be revoked if payment for billed permit fees is not received within 60 days of receipt of notice to the customer. In such instance, cash payments will be subsequently required in accord with this section.

(2) **Schedule of permit fees.** Fees for each permit type shall be paid as required, in accordance with the schedules as established by the City Council in the following referenced Ames Municipal Code Sections:

Building permit fees.

Appendix L, Ames Municipal Code

Electrical permit fees.

Appendix U, Ames Municipal Code

Mechanical permit fees.

Appendix U, Ames Municipal Code

Plumbing permit fees.

Appendix U, Ames Municipal Code

(3) **Building permit valuations.** The applicant for a building permit shall provide an estimated permit value at time of application. The term 'permit value' or 'permit valuation' means the actual cost of construction, including all materials and labor for all building, electrical, gas, mechanical, and plumbing equipment and permanent building systems. If, in the opinion of the Building Official, the valuation is underestimated on the application, the submitted permit valuation shall not be accepted unless the applicant can show verifiable project documents, estimates, or signed contracts to substantiate the submittal. Final building permit valuation shall be determined by the Building Official.

(4) **City assessor valuations to be used.** The Building Official shall use average square foot building construction costs as provided by the Ames City Assessor when calculating building permit fees

for new residential and commercial buildings, additions, and extensive interior renovations, in absence of more specific data. Such average square foot costs are base valuations for typical buildings of good quality. Buildings of higher quality will be valued at appropriately higher valuations. Square foot costs are adjusted periodically to reflect changes in material and labor costs, as reported by the Ames City Assessor.

(5) **Appeal of building permit valuation.** A request to appeal the Building Official's determination of building permit valuation may be filed with the Building Official for cause. Such request must be in writing, and contain a factual basis for review. Such appeals will be reviewed by the Building Official and may also include review by the City Assessor to assure consistency, accuracy, and fairness. If it is found the Building Official erred in the determination of building permit valuation, appropriate adjustment will be made to the permit valuation and the permit fee.

(6) **Work commencing before permit issuance - penalty fees.** Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits ~~may~~shall be subject to a fee established by the Building Official that shall be in addition to the required permit fees. A penalty fee equal to the amount of the permit fee may be added for any work that commences prior to permit approval, i.e., the permit fee may be doubled for such building, electrical, mechanical, or plumbing work that occurs prior to permit issuance. Additional fees may also be charged for actual costs of inspections, project research, site visits, and meetings required to obtain code compliance prior to the point of actual permit approval. Such penalties do not prevent the Division from also issuing separate municipal infraction citations for each violation of this section.

(7) **Related fees.** The payment of permit fees for construction, alteration, removal or demolition work done in connection with the work authorized the permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed elsewhere in this Code.

(8) **Refunds.** The Building Official is authorized to establish a refund policy. Deductions from approved refunds shall be made for the actual costs of services rendered in association with the project up to the date of refund request. Actual costs include, but may not be limited to, plan reviews performed, permits issued, and inspections made by the Inspection Division.

Sec. 5.113. BUILDING INSPECTIONS

(1) **Building inspections.** Work for which a permit is required shall be subject to inspection by the Building Official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the Building Official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

(2) **Preliminary inspection.** Before issuing a permit, the Building Official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

(3) **Required inspections.** The Building Official shall make inspections of the following as necessary to assure compliance with this Code.

(4) **Footing and foundation inspection.** Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place, and before concrete is poured. For concrete foundations, required forms shall be in place prior to inspection. Concrete shall be on the job, except where concrete is ready mixed in accordance with ASTM C 94.,

(5) **Concrete slab, under-floor, and groundwork inspection.** Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor.

(6) **Lowest floor elevation.** In flood hazard areas, upon placement of the lowest floor, including the basement, and prior to further vertical construction, the finish floor elevation certificate shall be submitted to the Building Official.

(7) **Framing and rough-in inspection.** Framing and rough-in electrical, mechanical, and plumbing inspections shall be made after the roof deck, all framing, fireblocking and bracing are in place and all work which is to be concealed is in place.

(8) **Lath and gypsum board inspection.** Inspection of lath and gypsum board that is part of a fire-resistance rated or shear assembly shall be made after lath and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.

(9) **Fire-resistant penetrations.** Protection of joints and penetrations in fire-resistance-rated assemblies shall not be concealed from view until inspected and approved.

(10) **Energy efficiency.** Inspections shall be made to determine compliance with the State of Iowa Energy Code.

(11) **Other inspections.** In addition to the inspections specified above, the Building Official is authorized to make or require other inspections of any construction work to obtain compliance with this code.

(12) **Special inspections.** For special inspections, see IBC Chapter 17.

(13) **Final inspection.** The final inspection shall be made after all work required by the building permit is completed.

(14) **Inspection agencies.** The Building Official is authorized to accept reports of approved inspection agencies.

(15) **Inspection requests.** It shall be the duty of the building permit holder or designee to notify the Building Official when work is ready for inspection. It shall be the duty of the permit holder or designee to provide access and means for inspection of such work. Regardless of notification by the permit holder or designee, the Building Official is authorized to make any inspection required by this code at any time during normal business hours throughout the duration of the project.

(16) **Approval required.** Work shall not be done beyond the point indicated in each inspection without first obtaining the approval of the Building Official. Any work that does not comply shall be corrected and such work shall not be covered or concealed until approved by the Building Official.

Sec. 5.114. ELECTRICAL INSPECTIONS.

(1) **Electrical inspections.** The Building Official shall make inspections of the following as necessary to assure compliance with this Code.

(2) **Underground inspection.** Underground inspection shall be made after trenches or ditches are excavated and before any backfill is put in place.

(3) **Rough-in inspection.** Rough-in inspection shall be made after the roof, framing, fireblocking, firestopping, draftstopping and bracing is in place and all electrical distribution conductors are roughed-in, and prior to the installation of wall or ceiling membranes.

(4) **Final inspection.** Final inspection shall be made after the building is complete, all electrical fixtures are in place and properly connected, and the structure is ready for occupancy.

(5) **Other inspections.** In addition to the inspections specified above, the Building Official is authorized to make or require other inspections of any construction work to obtain compliance with this code.

(6) **Inspection agencies.** The Building Official is authorized to accept reports of approved inspection agencies.

(7) **Inspection requests.** It shall be the duty of the electrical permit holder or designee to notify the Building Official when work is ready for inspection. It shall be the duty of the permit holder or designee to provide access and means for inspection of such work. Regardless of notification by the permit holder or designee, the Building Official is authorized to make any inspection required by this code at any time during normal business hours throughout the duration of the project.

(8) **Approval required.** Work shall not be done beyond the point indicated in each inspection without first obtaining the approval of the Building Official. Any work that does not comply shall be corrected and such work shall not be covered or concealed until approved by the Building Official.

Sec. 5.115. MECHANICAL INSPECTIONS.

(1) **Mechanical inspections.** The Building Official shall make inspections of the following as necessary to assure compliance with this Code.

(2) **Underground inspection.** Underground inspection shall be made after trenches or ditches are excavated and bedded, piping installed, and before backfill is put in place. When excavated soil contains rocks, broken concrete, frozen chunks and other rubble that would damage or break the piping or cause corrosive action, clean backfill shall be on the job site.

(3) **Rough-in inspection.** Rough-in inspection shall be made after the roof, framing, fireblocking and bracing are in place and all ducting and other components to be concealed are complete, and prior to the installation of wall or ceiling membranes.

(4) **Final inspection.** Final inspection shall be made upon completion of the mechanical system. Exception: Ground-source heat pump loop systems tested in accordance with Section IMC 1208.1.1 shall be permitted to be backfilled prior to inspection.

(5) **Other inspections.** In addition to the inspections specified above, the Building Official is authorized to make or require other inspections of any construction work to obtain compliance with this code.

(6) **Inspection agencies.** The Building Official is authorized to accept reports of approved inspection agencies.

(7) **Inspection requests.** It shall be the duty of the mechanical permit holder or designee to notify the Building Official when work is ready for inspection. It shall be the duty of the permit holder or designee to provide access and means for inspection of such work. Regardless of notification by the permit holder or designee, the Building Official is authorized to make any inspection required by this code at any time during normal business hours throughout the duration of the project.

(8) **Approval required.** Work shall not be done beyond the point indicated in each inspection without first obtaining the approval of the Building Official. Any work that does not comply shall be corrected and such work shall not be covered or concealed until approved by the Building Official.

Sec. 5.116. PLUMBING INSPECTIONS.

(1) **Plumbing inspections.** The Building Official shall make inspections of the following as necessary to assure compliance with this Code.

(2) **Underground inspection.** Underground inspection shall be made after trenches or ditches are excavated and bedded, piping installed, and before any backfill is put in place.

(3) **Rough-in inspection.** Rough-in inspection shall be made after the roof, framing, fireblocking, firestopping, draftstopping and bracing is in place and all sanitary, storm and water distribution piping is roughed-in, and prior to the installation of wall or ceiling membranes.

(4) **Final inspection.** Final inspection shall be made after the building is complete, all plumbing fixtures are in place and properly connected, and the structure is ready for occupancy.

(5) **Other inspections.** In addition to the inspections specified above, the Building Official is authorized to make or require other inspections of any construction work to obtain compliance with this code.

(6) **Inspection agencies.** The Building Official is authorized to accept reports of approved inspection agencies.

(7) **Inspection requests.** It shall be the duty of the plumbing permit holder or designee to notify the Building Official when work is ready for inspection. It shall be the duty of the permit holder or designee to provide access and means for inspection of such work. Regardless of notification by the permit holder or designee, the Building Official is authorized to make any inspection required by this code at any time during normal business hours throughout the duration of the project.

(8) **Approval required.** Work shall not be done beyond the point indicated in each inspection without first obtaining the approval of the Building Official. Any work that does not comply shall be corrected and such work shall not be covered or concealed until approved by the Building Official.

Sec. 5.117. CERTIFICATE OF OCCUPANCY

(1) **Use and occupancy.** No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the Building Official has issued a Certificate of Occupancy (C.O.), or until final inspection and approval has been given for minor projects. Issuance of a C.O. or other final approval shall not be construed as approval of a violation of this code.

(2) **Certificate issued.** After the Building Official inspects the building or structure and finds no violations of this code, a C.O. shall be issued that contains the following:

- (a) The building permit number.
- (b) The address of the structure.
- (c) The name and address of the owner.
- (d) A description of that portion of the structure for which the certificate is issued.

- (e) A statement that the described portion of the structure has received final inspections and may be occupied.
 - (f) The signature of the Building Official.
 - (g) The occupancy type as defined in the IBC.
 - (h) The type of construction as defined in the IBC.
 - (i) The occupant load,
 - (j) If an automatic sprinkler system is provided, whether the sprinkler system is required.
 - (k) Any special stipulations or conditions.
- (3) **Temporary occupancy.** The Building Official is authorized to issue a temporary certificate of occupancy (T.C.O.) before the completion of all work, if it is concluded the incomplete work items present no hazard to occupants or the general public. A fee may be charged for issuance of a T.C.O.
- (4) **Revocation.** The Building Official is authorized to suspend or revoke a C.O. or other approval wherever it is found the C.O. or other approval is issued in error, or on the basis of incorrect information received, or where it is determined the project, or portion thereof, is in violation of this code.
- (5) **Connection of service utilities.** No person shall make connections from a utility, source of energy, fuel or power to any building or system for which a permit is required, unless approved by the Building Official.
- (6) **Temporary connection.** The Building Official shall have the authority to authorize temporary connection of the building or system to the utility source of energy, fuel or power.
- (7) **Authority to disconnect service utilities.** The Building Official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code in case of emergency where necessary to eliminate an immediate hazard to life or property. The Building Official shall notify the serving utility, and wherever possible the owner and occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.
- (Ord. 4044, 9-28-10)

DIVISION II

AMENDMENTS TO ADOPTED CODES

Sec. 5.200. BUILDINGS.

The provisions of the ~~2012~~2009 International Building Code (IBC), are amended with the deletion of Chapters 1 ~~and 27, 27 and 29 and Section 1405.13.2~~; and the revision of the following text as stated:

- (1) Section 717.6.2 Membrane Penetrations is amended by adding the following exception: **Exception;** Duct systems constructed entirely of minimum 0.0187 inch thick steel (No. 26 gauge) shall be allowed without installation of radiation dampers.
- (2) Section 1007.2 Continuity and components. The first paragraph is amended to read: Each required accessible means of egress shall be continuous to a public way, shall be hard-surfaced, and shall consist of one or more of the following components.
- (3) Section 1027.5 Access to a public way is amended to read: The exit discharge shall provide a direct, hard-surfaced, and unobstructed access to a public way.
- (4) Section 1808.1 Foundations, General is amended by adding the following text as stated: Concrete footings for new buildings shall have a minimum of one #4 reinforcing bar or bare copper conductor 20 feet in length installed for use as a concrete-encased electrode
- (5) Section 1809.5 Frost Protection. The first sentence is amended to read as follows: Except where otherwise protected from frost, foundations, permanent supports of buildings and structures, and all exterior landings shall be protected from frost by one or more of the following methods:
- (6) Section 1809.5 Frost Protection is further amended by deleting ~~the text of Exception 2~~ and inserting the following in lieu thereof: Area of 900 square feet or less for light-frame construction or 400 square feet or less for other than light-frame construction: and

(74) Chapter 18 of the IBC is amended ~~to allow for foundations and footings of buildings with Type V wood framed construction of three stories or less to be designed to meet, at a minimum, the specifications of the following table by deleting Table 1809.7 and inserting the following table with footnotes in lieu of:~~

Number of Floors Supported by the Foundations*	1	2	3
Thickness of Foundation Walls (inches) Concrete	8	8	10
Thickness of Foundation Walls (inches) Concrete Block	8	8	12
Width of Footing (inches)	16	16	18
Thickness of Footing (inches)	8	8	12
Minimum Depth of Foundation Below Grade	42	42	42

*Foundations may support a roof in addition to the stipulated number of floors. Foundations supporting roofs only shall be as required for supporting one floor. ~~All other structures shall have footings and foundations engineered to meet the requirements of Section 1807, 1808, and 1809 of the IBC, and Chapter 4 of the IRC. All buildings shall have perimeter footings to 42" below grade, and such footings shall be designed to withstand all forces placed upon them as per Section 1807, 1808, and 1809 of the IBC and Chapter 4 of the IRC or engineering to show equivalency. Trench footings are allowed as a continuous 8" single pass trench for a single story wood frame structure with spans not exceeding 16 feet. The trench must be 42" deep and have at least two (2) horizontal rods fixed in place and tied into the existing structure. Soil bearing capacity shall be a minimum of 2000 psf.~~

~~*Spread footings shall have a minimum of 2 - #4 continuous horizontal reinforcement bars.~~

~~*Foundation walls shall have a minimum of #4 reinforcement bars 18" on center each way.~~

~~*All buildings shall have perimeter footings to 42" below finished grade.~~

~~*Trench footings are allowed as a continuous 8" pass trench for single story wood frame structures with spans not exceeding 16 feet. The trench must be 42" below finished grade and have at least two #4 horizontal reinforcement bars. Bars must tie into abutting adjacent structures.~~

~~(2) Section 1809.5, Exception 2 of the International Building Code is deleted and the following inserted in lieu thereof:~~

~~(a) Area of 900 square feet or less for light frame construction or 400 square feet or less for other than light frame construction (8) Section 2308.6 Foundation plates or sills is amended by replacing "and not spaced more than 6 feet apart" with "and spaced not more than 4 feet apart"~~

Sec. 5.201. RESIDENTIAL BUILDINGS.

The provisions of the ~~2012~~2009 International Residential Code for One- and Two-family Dwellings (IRC), are amended by deleting Chapter 1, Scope and Administration; ~~Part IV – Energy Conservation;~~ Part VII - Plumbing; and Part VIII - Electrical; and adding appendix G; and revising the following text as stated:

(1) **Section R301.2.1.1** Design Criteria, Table R301.2(1), Climatic and Geographical Design Criteria is amended to include the following local values:

Ground Snow Load (lbs)	25
Wind Speed (mph)	90
<u>Topographic Effects</u>	<u>No</u>
Seismic Design Category	A
Weathering	Severe
Frost Line Depth (inches)	42
Termite	Moderate to Heavy
Winter Design Temp (F.)	- 5
Ice Shield Underlayment Required	Yes
Flood Hazards	See FEMA Maps
Air Freezing Index	1896
Mean Annual Temperature (F.)	48.2

(2) Section R302.1 Exterior Walls, Fire-Resistant Construction. Add exception #6: Walls of detached garages and accessory structures greater than or equal to 3 feet from a property line.

(32) **Section R302.2 Townhouses** is amended by deleting the Exception.

(43) **Section R311.3.2 Floor elevations for other exterior doors** is amended by deleting the exception and inserting the following in lieu thereof:

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

(54) **Section R311.7.8.2 Continuity** is amended by adding Exception 3:

(3) Handrails may be interrupted at the point of transition from handrail to guardrail on stairways open on both sides at the bottom of a flight of stairs.

(6) **Section R313.1 Townhouse automatic fire sprinkler systems** is amended by deleting the text of that section and inserting the following in lieu thereof: Automatic residential sprinkler systems shall not be required in townhouses.

(75) **Section R313.2 One- and Two-family dwellings automatic fire systems, of the International Residential Code** is amended by deleting the text of that section and inserting the following in lieu thereof: Automatic residential fire sprinkler systems shall not be required in one- and two-family dwellings.

(8) **Section R314.3.1 Alterations, repairs and additions** is amended by deleting “When alterations, repairs or additions requiring a permit occur, or”.

(9) **Section R315.3, Where required in existing dwellings.** Delete text and replace with “ When one or more sleeping rooms are added or created in an existing dwelling that has an attached garage or within which a fuel-burning appliance exists, carbon monoxide alarms shall be required outside each separate sleeping area and in the immediate vicinity of bedrooms, and on every story of the dwelling. Carbon monoxide alarms shall be hard-wired, interconnected, and shall have battery backup.”

(6) ~~Section R313.1, Townhouse automatic fire sprinkler systems, of the IRC, is amended by deleting the text of that section and inserting the following in lieu thereof:~~

~~Automatic residential sprinkler systems shall not be required in townhouses.~~

(7) ~~Section R315.2 Carbon Monoxide Alarms — Where required in existing dwellings, of the International Residential Code is deleted and the following text is inserted in lieu thereof:~~

~~When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with carbon monoxide detectors located as required for new dwellings.~~

Exceptions:

(a) ~~Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.~~

(b) ~~Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.~~

(10) **Section R315.4 Alarm requirements** is deleted.

(11) **Section R403.1 General** is amended by adding the following text to the end of the section: Where concrete footings are used in new one- and two-family dwellings, an approved concrete encased electrode shall be provided in the vicinity of the panel for each residential electrical service. The electrode shall be accessible and connected to at least twenty feet of #4 reinforcing rod by a minimum of two wire ties.

(128) **Section R403.1.4.1 Frost Protection** is amended by deleting Exception 1 and Exception 3 and= inserting the following in lieu thereof:

(a) Protection of freestanding accessory structures with an area of 900 square feet or less, of light-framed construction, with an eave height of 10 feet or less shall not be required.

(139) **Section R403.1.6 Foundation Anchorage** is amended by deleting “6-foot minimum maximum anchor bolt spacingmaximum of 6 feet” and inserting in lieu thereof a minimum of 4 foot spacing“maximum of 4 feet”.

(14) **Section R404.1.2.2, Reinforcement for foundation walls** is amended by adding the following to the end of the section: Minimum reinforcement for concrete foundation walls shall be #4 bars at 18” on center, each way.

~~(10) Section 903.5 Hail Exposure, of the International Residential Code, is deleted in its entirety.~~

~~(11) Section R907.3, Recovering Versus Replacement, of the International Residential Code, is amended by deleting item 4.~~

(1512) ~~Sections 1807, 1808, and 1809 of the International Building Code are Chapter 4 of the International Residential Code is~~ amended to allow for footings of buildings with Type V wood framed construction of three stories or less to be designed to meet, at a minimum, the prescriptive standards of the following table.

Number of floors supported by foundations*	1	2	3
Thickness of foundation walls (inches) concrete	8	8	10
Thickness of foundation walls (inches) concrete block	8	8	12
Width of footing (inches)	16	16	18
Thickness of footing (inches)	8	8	12
Minimum depth of footing below grade	42	42	42

*Foundations may support a roof in addition to the stipulated number of floors. Foundations supporting roofs only shall be as required for supporting one floor. All other structures shall have footings and foundations engineered to meet the requirements of ~~Sections 1807, 1808, and 1809 of the IBC, and~~ Chapter 4 of the IRC. All buildings shall have perimeter footings to 42" below grade, and such footings shall be designed to withstand all forces placed upon them as per ~~Sections 1807, 1808, and 1809 of the IBC and~~ Chapter 4 of the IRC or engineering to show equivalency.

*Trench footings are allowed as a continuous 8" single pass trench for a single story wood frame structure with spans not exceeding 16 feet. The trench must be 42" deep and have at least two (2) horizontal rods fixed in place and tied into the existing structure. Soil bearing capacity shall be a minimum of 2000 psf.

*Spread Footings shall have two evenly spaced #4 continuous reinforcing rods. For alterations and additions, reinforcing rods shall be tied into the existing footings.

*Concrete foundation walls shall be reinforced with a minimum of # 4 bars at 18 inches on center each way.

(16) Section R501.3 Fire protection of floors is deleted.

(1743) ~~Section G2415.32415.1(404.3404.1)~~ **Prohibited Locations** is deleted and the following text is inserted in lieu thereof:

Piping shall not be installed in or through a ducted supply, return or exhaust, or a clothes chute, chimney or gas vent, dumbwaiter or elevator shaft. ~~Piping installed downstream of the point of delivery shall not extend through any townhouse unit other than the unit served by such piping.~~

Sec. 5.202. ACCESSIBILITY. Reserved.

Sec. 5.203. ENERGY. Reserved.

Sec. 5.204. EXISTING BUILDINGS. Reserved.

Sec. 5.205. ELECTRICAL.

The provisions of the National Electrical Code (NEC), 2011 edition, are hereby amended as follows:

(1) Section 334.10 of the said National Electric Code is amended by deleting Subsection (3) therefrom and inserting in lieu thereof a new Subsection (3): All other structures shall be wired using other methods as allowed by the NEC.

(2) Add the following exceptions to Article 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel (A)(2):

(a) Exception No. 1 to (2): Receptacles that are not readily accessible.

(b) Exception No. 2 to (2): A single receptacle or a duplex receptacle for two appliances located within dedicated space for each appliance that, in normal use, is not easily moved from one place to another, and that is cord-and-plug connected in accordance with 400.7(A)(6), (A)(7), or (A)(8).

(c) Receptacles installed under the exceptions to 210.8(A)(2) shall not be considered as meeting the requirements of 210.52(G).

(3) Add the following exceptions to Article 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel (A)(5):

(a) Exception No. 2 to (5): Receptacles that are not readily accessible.

(b) Exception No. 3 to (5): A single receptacle or a duplex receptacle for two appliances located within dedicated space for each appliance that, in normal use, is not easily moved from one place to another and that is cord-and-plug connected in accordance with 400.7(A)(6), (A)(7), or (A)(8).

(c) Receptacles installed under the exceptions to 210.8(A)(5) shall not be considered as meeting the requirements of 210.52(G).

(Ord. No. 4110, 05-08-12)

Sec. 5.206. MECHANICAL.

The provisions of the 2012 International Mechanical Code (IMC), are amended as follows:

(1) Section 607.6.2 Membrane Penetrations ~~Reserved~~ is amended by adding the following exception: Exception: Duct systems constructed entirely of minimum 0.0187 inch thick steel (No. 26 gauge) shall be allowed without installation of radiation dampers.

Sec. 5.207. GAS.

The provisions of the 20122009 International Fuel Gas Code (IFGC), are amended as follows:

(1) Section 404.3404.1 Prohibited Locations is deleted and the following text is inserted in lieu thereof:

Piping shall not be installed in or through a circulating air duct, clothes chute, chimney or gas vent, ventilating duct, dumbwaiter or elevator shaft.

Sec. 5.208. PLUMBING.

The provisions of the 20122009 Uniform Plumbing Code (UPC), are amended with the deletion of Chapter 16; and with the addition of Appendix A, Appendix B, Appendix C (at the discretion of the AHJ), and Appendix D, and the revision of the following text as stated:

(1) Add new section 101.11.6 Building Demolition ~~101.5.7~~ stating:

Whenever a structure or building is to be demolished, before demolition begins the following must be completed:

- (a) Building sewer capped at curb line with a manufactured plug.
- (b) Foundation line capped at curb line with a manufactured plug.
- (c) Water service capped or plugged at main.
- (d) Plumbing inspector sign-off on demolition sheet given to contractor before demolition permit is issued.

(2) Add new section 101.11.7 Annexed Building ~~101.5.8~~ stating:

When a structure or building is on land that has been or is being annexed into the City of Ames and connection to the public water or sewer system is requested for that building or structure, the City may require that its plumbing system be inspected to determine whether the system has adequate sewer venting and backflow prevention to protect the public water system, and to determine if it is otherwise free from hazards to those exposed or potentially exposed to that system. Based on that inspection, if it is determined that a cross connection or other hazard exists, then the Building Official shall determine what corrective action is needed to eliminate the hazard(s) and the owner shall complete the corrective action before connection to City services is allowed.

(3) Section 411.1 Water Closet Bowls is amended to state:

All water closet bowls shall be of the elongated type with open front seats except in dwelling units and, motel and hotel rooms. In nurseries, schools and other similar places where plumbing fixtures are provided for the use of children under six (6) years of age, water closets shall be of a size and height suitable for children's use. All water closets shall be equipped with seats as required below.

(4) Section 418.3 Location of Floor Drains is amended by adding subsection 418.3.(4)411.2.4 as follows:

In all buildings, a three-inch (3") floor drain shall be located on the lowest floor level and where the water meter is located. A three-inch (3") or larger floor drain shall be located in same room ~~whenever a RPZ-type backflow preventer~~ where a reduced pressure principle backflow prevention assembly is installed that discharges water. A two-inch (2") or larger floor drain shall

be provided in the same room the water heater is located on the lowest floor level.

Exception: Existing water heaters and water meters unless relocated.

(5) **Section 422.3 Fixture Requirements for Special Occupancies** is amended by replacing the last sentence and inserting the following in lieu thereof ~~to read:~~

In food establishments the fixture requirements may be determined by the statutes and regulations of the State of Iowa. The following requirements apply to food establishments, bars and night clubs:

(a) Bars, taverns and nightclubs shall be provided with a three (3) compartment glass washing sink and a drain board with hot and cold running water. The sink shall have an indirect waste with an air gap to a floor sink with a 3" trap, an air gap.

(b) A restaurant shall have either a three (3) compartment ware washing sink or an automatic dish washing machine of commercial type, including a booster heater along with a two-compartment sink.

(c) A hand-washing sink with hot and cold running water shall be installed in each food preparation area in restaurants and behind each bar area of bars, taverns and nightclubs.

(d) A mop/utility sink shall be required with hot and cold running water in each restaurant, bar, tavern or nightclub, for mop and waste water. The mop/utility sink shall not be used as a hand-washing sink.

(6) Further amend UPC Chapter 4 by adding ~~Amend Section 423.0.0 UPC by adding:~~
All single-family dwellings shall be provided with a two-inch (2") future vent stubbed to the basement level. Such vent shall be capped in the floor joist area for future use and labeled or marked as such.

(7) **Table 422.1 Minimum Plumbing Facilities** is amended by adding the following:
With prior approval, Authority Having Jurisdiction may allow use of Chapter 29 of the ~~2009~~ 2012 International Building Code.

(8) **Section 603 Cross-Connection Control** is amended as follows:

(a) **Section 603.2 Approval of Devices or Assemblies** is amended by deleting the last sentence and inserting the following in lieu thereof: "Testing shall be performed by a registered backflow assembly tester approved by the Authority Having Jurisdiction" and by adding: "A completed~~The~~ test report form shall be sent to the

AHJ Administrative Authority no later than ten working days after the test."

(b) **Section 603.4.2 Testing** is amended to read: The premise owner or responsible person shall have the backflow prevention assembly tested by a registered backflow assembly tester at the time of installation, repair, or relocation, and not less than on an annual schedule thereafter, or more often where required by the Authority Having Jurisdiction. The Authority Having Jurisdiction may establish the annual schedule.

~~(c)~~ **Section 603.0 Cross-Connection Control** is further amended by adding after the last numbered section a new **section 603.10**~~603.10~~ as follows:

(i) Purpose. The purpose of these containment regulations is:

a. to protect the City of Ames Public Water Supply (PWS) from the possibility of contamination or pollution by containing within the customer's internal distribution system(s) or the customer's private water system(s) such contaminants or pollutants that could backflow into the PWS; and

b. to provide for the maintenance of a continuing program of containment that will systematically and effectively prevent the contamination or pollution of the PWS.

(ii) Definitions. As used in this section:

a. **Approved Backflow Prevention Assembly For Containment** means: A backflow prevention assembly which is approved by the University of Southern California - Foundation for Cross-Connection Control and Hydraulic Research. The backflow prevention assembly must also be listed by the International Association of Plumbing and Mechanical Officials, or by the American Society of Sanitary Engineering. The approval and listing requirements do not apply to an air gap used as an approved backflow prevention assembly for containment.

b. **Auxiliary Water Supply** means: Any source of water that is available to the customer over which the City of Ames water utility does not have sanitary control to reduce pollution, contamination, or other conditions that make that source of water unacceptable as a potable water supply, such as, but not limited to

1. a public or private water supply other than the City of Ames water utility,

2. public or private wells, or
3. lakes, naturally-fed ponds, storm water basins, and
flowing waters (rivers, creeks, etc.) from which water is drawn.

c. Available to the Customer means: The water utility customer has authority to use, or direct the use of, the auxiliary water supply by virtue of ownership, contract, or other arrangement for control.

d. Backflow means: The undesirable reversal of flow into the public water distribution system.

e. Backflow Prevention Assembly means: An assembly or means to prevent backflow.

1. Air Gap means: This is a physical break between the PWS and the customer's water system. The air gap is to create an unobstructed vertical distance between the opening of any pipe or faucet conveying water to a tank, plumbing fixture, receptor, or other assembly and the flood level of the receptacle. The air gap shall conform to the requirements of UPC **Table 603.3.1 Minimum Airgaps for Water Distribution..**

2. Reduced-Pressure Principle Backflow Prevention Assembly (RP) means: The RP consists of two independently acting check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves. These units are located between two tightly closing resilient-seated valves as an assembly, and equipped with properly located resilient-seated test shutoffs.

3. Double Check Valve Assembly (DC) means: The DC consists of two internally loaded check valves, either spring loaded or internally weighted, installed as a unit between two tightly closing resilient-seated shutoff valves with properly located resilient-seated test shutoffs.

f. Commercial/Industrial Fluid means: Any liquid, gas, or solution that is a chemical, biological, or other substance in a form, quantity, or concentration that would constitute a hazard (health or non-health) if introduced into the public water supply, such as, but not limited to

1. polluted or contaminated waters;
2. all types of process and used waters (waters which originated from the public water supply but may have deteriorated in sanitary quality);
3. chemicals in fluid form;
4. plating acids and alkalis;
5. circulated cooling waters (except for those solely used for air conditioning);
6. oils, gases, caustic and acid solutions;
7. other liquid and gaseous fluids used industrially, agriculturally, commercially, or for other non-domestic purposes.

g. Commercial/Industrial Fluid System means: Any system used by the water utility customer to store or utilize any commercial/industrial fluid in a manner that may constitute a hazard (health or non-health) to the public water supply, such as, but not limited to

1. car washes,
2. microbreweries,
3. chlorinators,
4. clean-in-place systems,
5. bulk fluid storage with remote dispensing (motor oil, antifreeze, etc.), and

6. injection molding with integral heating and cooling.
However, commercial/industrial fluid systems do not include:

1. fuel gas (propane or natural gas) systems;
2. air conditioning, cooling, refrigeration, and similar systems using only Freon or similar refrigerants;
3. sanitary sewer, rainwater, or storm sewer lines; and
4. boilers.

h. Containment means: A method of backflow prevention which requires the installation of a backflow prevention assembly at the water service connection.

i. Contamination means: An impairment of a potable water supply by the introduction or admission of any foreign substance that degrades the quality of the water and creates a health hazard.

j. Cross-Connection means: An actual or potential connection between any part of a potable water system and any other environment containing other substances in a manner that, under any circumstances, would allow such substances to enter the potable water system.

k. Hazard, Degree of means: The rating of a cross-connection or service connection which indicates if it has the potential to cause contamination or pollution. The term is derived from an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.

1. Hazard - Health means: A hazard upon the PWS involving any substance that, if introduced in the potable water supply, could cause death, illness, spread disease, or have a high probability of causing such effects.

2. Hazard - Non-health means: A hazard upon the PWS involving any substance that generally would not be a health hazard but, if introduced into the PWS, could cause a nuisance by introducing color, taste or odor, or would alter the quality of the PWS physically, chemically, or biologically.

l. Permanent Swimming Pool means: A pool or tub with a capacity of 1,000 gallons or more of chemically treated water that has a filtration system with a pump and rigidly supported walls/sides. Above-ground movable pools and tubs that meet the above criteria shall be deemed "permanent swimming pools."

m. Pollution means: The presence of any foreign substance in water that impairs, alters, or degrades its quality but does not constitute a health hazard.

n. Registered Backflow Prevention Assembly Technician (Technician) means: A person who is registered by the State of Iowa to test or repair backflow prevention assemblies and report on the condition of those assemblies.

o. Service Connection means: The terminal end of the pipe connected to, directly or indirectly, the City of Ames water main; that is, the point of delivery to the customer's water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. Service connections shall also include, but not be limited to, a temporary water service connection from a fire hydrant and all other temporary or emergency water service connections from the public water system.

p. Thermal Expansion means: Volumetric increase of water due to heating resulting in increased pressure in a closed system.

(iii) Administrative Authority

a. The Administrative Authority is the Ames City Council acting through such persons or departments as the City Council shall designate.

b. The Administrative Authority shall have the right to enter, with the consent of the customer or upon the basis of a suitable warrant issued by a court of appropriate jurisdiction, any property to determine if the conditions for a partial or total exemption have been satisfied or if a backflow prevention assembly has been properly installed for containment.

1. All backflow prevention assemblies shall be available for City inspection within a short notice by the Administrative Authority. Short notice is considered to be less than 24 hours.

2. The entrance to the property to determine if the conditions for a partial or total exemption have been satisfied will not be necessary if the customer has properly installed, tested, and maintained an approved RP or air gap on every and all service connections serving the customer's premises.

c. The Administrative Authority may collect fees for the administration of this program.

d. The Administrative Authority shall maintain records of containment hazard surveys, and of the installation, testing, and repair of all backflow prevention assemblies installed for containment purposes

(iv) Where Containment Is Required

a. An RP or air gap is required for containment for every direct or indirect service connection unless such connection:

1. qualifies for a total or partial exemption; or
2. supplies a fire protection system.

b. A DC may be installed for containment in place of an RP or air gap when a partial exemption is granted.

c. A partial exemption shall be granted only if all of the following conditions precedent are met.

1. The entire facilities are within the scope and applicability of the plumbing regulations of the City of Ames, Iowa.

2. All water uses are protected by the “isolation” provisions of Chapter 6 of the Uniform Plumbing Code.

3. There are no auxiliary water supplies.

4. There are no solar heating systems.

5. There are no permanent swimming pools.

6. There are no commercial/industrial fluid systems.

7. The entire facilities and all pertinent circumstances and conditions are fully accessible for inspection by representatives of the City’s Water and Pollution Control Department.

d. No backflow prevention assembly is required for containment when a total exemption is granted.

e. A total exemption shall be granted when a partial exemption has been granted and all of the following conditions precedent are met.

1. There is only one service connection, not including services for fire protection systems.

2. The facility is less than four stories above grade.

f. Failure of the Administrative Authority to notify a customer that they do not qualify for an exemption and that they shall install backflow prevention assemblies for containment shall in no way relieve a customer of the responsibility to comply with all requirements of these regulations.

g. The Director of the City of Ames Water and Pollution Control Department may require installation of an air gap, by and at the customer's sole expense, at the service connection where records indicate a history of threat to the public water supply system because of inappropriate handling of health hazard substances or actual backflow into the PWS.

(v) New Service Connections

a. Plans shall be submitted to the Administrative Authority for review on all new service connections in order to determine if a partial or total exemption shall be granted.

b. The Administrative Authority shall require the installation of the appropriate backflow prevention assembly for containment before the initiation of water service.

(vi) Fire Protection Systems

a. A backflow prevention assembly to be used in a fire protection system shall meet the requirements of Factory Mutual Research Corporation (FM) and Underwriters Laboratory (UL) and the requirements of the fire code and the building code of the City of Ames, in addition to the requirements of paragraph (ii)a. Assemblies sized smaller than 2-1/2 inches which have not been tested by FM and listed by UL may be allowed if approved by the City of Ames Fire Department Chief.

b. An RP shall be installed on all new and existing fire protection systems which the Administrative Authority determines to have any of the following:

1. Interconnections with auxiliary supplies such as reservoirs, rivers, ponds, wells, mills, or other industrial water systems; or

2. Use of antifreeze or other additives in the fire protection system unless an RP is used to isolate the loop or branch containing antifreeze or other additives when a DC is installed at the service connection; or

3. Any other facility, connection, or condition which may cause contamination

c. A DC will be required for all other fire protection systems. The DC shall be required on all new systems at the time of installation and on existing systems at the time that they are modified.

(vii) Portable Tanks. Portable tanks and vessels shall be filled through a properly installed and maintained backflow prevention assembly or vacuum breaker.

(viii) Installation of Backflow Prevention Assemblies

a. All backflow prevention assemblies for containment shall be installed so that they are accessible for testing as stated in the UPC at **Section 603.4.3** thereof. The installation shall also provide the same clearances as called for the water meter in the City of Ames Municipal Code, Section 28.205.(5).

b. No backflow prevention assembly for containment shall be installed in a place where it would create a safety hazard such as, but not limited to, over an electrical panel or above ceiling level.

c. The required backflow prevention assemblies for containment shall be installed in horizontal plumbing immediately following the meter or as close to that location as deemed practical by the Administrative Authority unless approved in writing by the Administrative Authority. In any case, it shall be located upstream of any branch piping. Installation at this point does not eliminate the responsibility of the customer to protect the water supply system from contamination or pollution between the backflow prevention assembly and the water main, and to protect the water supply system from contamination or pollution within the premises.

d. RPs for containment shall be installed so as to be protected from flooding.

e. RPs for containment shall not be installed in underground vaults or pits.

f. All backflow prevention assemblies for containment shall be protected from freezing. Assemblies used for seasonal services may be removed in lieu of being protected from freezing; however, the assemblies must be reinstalled and tested by a technician prior to the service being reactivated.

g. If hot water is used within the water system, thermal expansion shall be provided for when installing a backflow prevention assembly for containment.

h. Provisions shall be made to convey the discharge of water from RPs to a suitable drain.

i. If interruption of water service during testing and repair of backflow assemblies for containment is unacceptable to the customer, another backflow prevention assembly for containment, sized to handle the temporary water flow needed during the time of test or repair, shall be installed in parallel piping.

(ix) Removal of Backflow Prevention Assemblies

a. Approval must be obtained from the Administrative Authority before a backflow prevention assembly for containment is removed, relocated, or replaced.

b. The use of an assembly may be discontinued and the assembly removed from service upon presentation of sufficient evidence that the customer qualifies for an exemption.

c. An assembly may be relocated following confirmation by the Administrative Authority that the relocation will continue to provide the required protection and satisfy installation requirements. A test will be required following the relocation of the assembly.

d. An assembly may be removed and replaced, provided the water use is discontinued until the replacement assembly is installed.

e. An assembly may be removed to protect it from freezing provided that

is reinstalled and tested; and

1. water use is discontinued until the assembly
2. the Administrative Authority is notified in writing within five days of the removal.

(x) Testing of Backflow Prevention Assemblies

- a. Testing of backflow prevention assemblies for containment shall be performed by a registered backflow prevention assembly technician (technician). The costs of required tests shall be borne by the customer.

- b. Backflow prevention assemblies for containment shall be tested and inspected upon installation and at least annually thereafter.

- c. Backflow prevention assemblies for containment which are in place, but have been out of service for more than three months, shall be tested before being put back into operation. Backflow prevention assemblies for containment used in seasonal applications shall be tested before being put into operation each season.

- d. Before being placed back into service, any backflow prevention assembly for containment which fails a test shall be repaired or replaced. In the case when a reported value is less than the minimum, the Director of the City of Ames Water and Pollution Control Department may approve temporary restoration of service before repairs are completed. Backflow prevention assemblies for containment shall be retested by a technician immediately after repair or replacement.

- e. When water service has been terminated for non-compliance, the backflow prevention assembly for containment shall be repaired or replaced and then tested prior to the resumption of water service.

- f. When warranted, the Administrative Authority may require backflow prevention assemblies for containment to be tested at any time in addition to the annual testing requirement. Examples of this include, but are not limited to, assemblies with a history of repeated failures or assemblies that have been subjected to fire, flood, or other unusual environmental conditions.

- g. The technician shall report the results of all inspections and tests of a backflow prevention assembly for containment to the customer and to the Administrative Authority on the form provided by the Administrative Authority within ten working days of the test. The technician shall immediately report to the Administrative Authority when and where a test indicates that an assembly fails to perform and no immediate repair is done to make the assembly function properly.

- h. The Administrative Authority may periodically verify test procedures and results.

(xi) Repair of Backflow Prevention Assemblies For Containment

- a. All repairs to backflow prevention assemblies for containment shall be performed by technicians.

- b. The technician shall not change the design, material, or operational characteristics of a backflow prevention assembly for containment during repair or maintenance and shall use only original manufacturer replacement parts or equivalent parts approved by the University of Southern California - Foundation for Cross-Connection Control and Hydraulic Research.

- c. The repaired assembly must be tested after each repair and pass the test before being placed back into service.

- d. The technician shall report the repair of a backflow prevention assembly for containment to the customer and to the Administrative Authority within ten working days of the repair. The report shall include the list of materials or replacement parts used and subsequent tests.

(xii) Backflow Incidents

- a. The customer shall immediately notify the Administrative Authority when the customer becomes aware that backflow has occurred in the building, property, or private water system receiving water service.

- b. The Administrative Authority may order that water service be temporarily shut off when backflow occurs in a customer's building, property, or private water system. Such shut off is to protect the system from further contamination or pollution and to allow time for locating and mitigating the cause and extent of the contamination or pollution.

(xiii) Existing Backflow Prevention Assemblies For Containment

a. All backflow prevention assemblies for containment installed prior to November 1, 1996, that do not meet the requirements of these regulations but were approved testable assemblies for the purpose described herein at the time of installation and that have been properly installed and maintained, shall, except for the testing, inspection, and maintenance requirements under Section (x) and Section (xi), be excluded from the requirements of these rules so long as the Administrative Authority is assured that they will satisfactorily protect the PWS. Whenever the existing assembly for containment is moved from the present location, requires replacement, or when the use of the service area protected by the assembly changes so that the Administrative Authority determines that the customer no longer qualifies for a partial exemption, the unit shall be replaced by an approved backflow prevention assembly for containment meeting the requirements of these regulations.

(xiv) Customer Non-compliance

a. In case of non-compliance with these regulations, the Administrative Authority shall notify the customer to comply within ten working days. In the event of failure or upon refusal of the customer to comply as ordered, the Administrative Authority may, after notice and reasonable opportunity for hearing, terminate water service. Non-compliance includes, but is not limited to, the following:

1. Refusal to allow the Administrative Authority access to the property to determine if the conditions for a partial or total exemption have been satisfied, except when an RP or air gap is properly installed for containment and properly maintained
2. Providing inadequate backflow prevention
3. Failure to install a backflow prevention assembly for containment which has been required by the Administrative Authority
4. Failure to test, maintain, or properly repair a backflow prevention assembly for containment as required by the Administrative Authority
5. Failure to comply with the requirements of these regulations
6. Refusal to replace a faulty backflow prevention assembly
7. Removal of a backflow prevention assembly for containment which has been required by the Administrative Authority except for seasonal removal as in Section (viii) f
8. Bypassing of a backflow prevention assembly for containment which has been required by the Administrative Authority
9. Failure to report a backflow incident
10. Direct connection between the PWS and a sewer line
11. A situation which presents an immediate health hazard to the PWS

b. For conditions 7, 8, 9, 10, and 11, the Administrative Authority will take the following steps.

1. Make a reasonable effort to advise the customer of intent to terminate water service.
2. Terminate water service and lock service valve. The water service will remain inactive until correction of the violation has been approved by the Administrative Authority.

(xv) COMMITTEE OF ADJUSTMENT There is hereby established the Containment Committee of Adjustment.

a. The Committee shall consist of three members as follows: the Building Official of the City or that official's designee; the Director of Water and Pollution Control or the Director's designee; and a representative of the [Plumbing and Mechanical Building Board of Appeals](#), selected from among the members of that Board by majority vote of the Board's members.

b. The said Committee of Adjustment shall have the following powers.

1. To hear and decide appeals that allege an error in any decision or determination made in the administration and enforcement of Section ~~524.208504(847)(cb)~~ of the Municipal Code of the City of Ames, Iowa

2. To authorize, in specific cases, such exemption from the requirements of Section ~~524.208504(847)(cb)~~ of the Municipal Code of the City of Ames, Iowa, as will not be contrary to the laws of the State of Iowa, when due to special circumstances not of the property owner's own creation, a strict literal interpretation of Section ~~524.208504(847)(cb)~~ would result in undue expenses to the property owner in view of an alternative measure agreed to by the property owner that will not be contrary to the public interest

(xvi) Presumptive Exemptions The following water uses shall generally be presumed exempt from the containment requirements of Section ~~524.208504(847)(cb)~~: water closets, lavatories, bath tubs, showers, water softeners, single-faucet water treatment units, boilers, sinks, irrigation systems, clothes washers, dishwashers, pre-rinse stations, garden hose connections, drinking fountains, urinals, carbonators/beverage dispensers, garbage disposals, ice makers, cleaning chemical dispensers, and private fire hydrants. However, when warranted by the facts and circumstances of a particular situation, the Administrative Authority, with notice and opportunity to be heard extended to the property owners, may apply to the Containment Committee of Adjustment for a determination that containment measures are required under such facts and circumstances.

(9) **Section 603.5.8 Water-Cooled Equipment** ~~603.4.8 UPC the Note~~ is amended to read: Water-cooled compressors, degreasers, or any other water-cooled equipment shall be protected by a listed IAPMO reduced pressure principle backflow ~~prevention assembly~~ preventer.

(10) **Section 603.5.10 Steam or Hot Water Boilers** is amended to read: Potable water make up connections to boilers, sterilizers, chillers, commercial clothes washers, or water heaters for radiant heat, shall have ~~an IAPMO a listed~~ reduced pressure type backflow prevention assembly ~~preventer~~.

~~(11) Section 603.4.12 UPC is amended by adding:
A stainless steel Watts 9Bd dual check valve backflow preventer or equivalent shall be used on all potable water lines that have a carbonated soda fountain or dispensing machine connected.~~

~~(11+2)~~ **Section 604.1 Pipe, Tube, and Fittings** is amended by adding the following:
The following type of pipe and fittings are allowed in the interior/exterior of a building or structure:

Interior

Above concrete floor (lowest level)

- (a) soft copper (Type K, L, M)
- (b) rigid copper (Type K, L, M)
- (c) brass
- (d) cross linked polyethylene (PEX) (as approved by Chapter 14 of the Uniform Plumbing Code),
- (e) ductile iron (four (4) inch or larger).
- (f) CPVC

Below concrete floor (lowest level)

- (a) soft copper (type K) (approved flared or compression fittings only)
- (b) PEX(as approved by Chapter 14 of the Uniform Plumbing Code)
- (c) Polyethylene, IPS 200 p.s.i. SLDR-7, PE3408
- (d) ductile iron (four (4) inch or larger) with flanged mechanical joints.
- (e) C-900 PVC DR 14 (fire line).

Exterior

- (a) PEX(as approved by Chapter 14 of the Uniform Plumbing Code),and which meets manufacturer's specifications.
- (b) Soft copper (Type K) (approved flared or compression fittings only)
- (c) Brass
- (d) Ductile iron (flanged mechanical joint) (bolts shall be teflon coated)
- (e) PVC meeting AWWA C-900 standards, DR14 for fire lines and Dr18 for non-fire lines.
- (f) Polyethylene, IPS 200 p.s.i. SLDR-7, PE3408

Note: Polyethylene, PEX and PVC C-900 shall have a 14-gauge solid copper tracer wire with a blue jacket. The tracer wire will start at the water main and terminate at a weatherproof junction box. The junction box

shall be accessible and be labeled to identify junction box "tracer wire". The tracer wire shall then continue from the junction box and terminate at the water meter. The wire shall run from the main and be exposed at the curb box. The junction box shall be located next to water meter remote on the exterior of the building or structure.

(1243) **Section 604.2 Copper Tube** is deleted.

(1344) **Section 604.5 Cast-Iron Fittings** is deleted.

(1445) **Section 604.6 Malleable Iron Fittings** is deleted.

(1546) **Section 605606.0 Joints and Connections** is amended by adding new subsections 606.0.1 through 606.0.13 as follows:

Sec. 605606.0.1. Curb Stops shall be of the quarter turn ball valve type with the grip joint ends.

Sec. 605606.0.2. The polyethylene to copper adaptor coupling, located at least two (2) feet from the outside footing, shall be a Ford Meter Box Co. C26-44-G (1") or equivalent.

Sec. 605606.0.3. All threaded taps on the main shall be at least 24 inches apart and shall be at least $\frac{3}{4}$ inch in size. If more than one tap is made for a service line, the taps will be staggered on the pipe. No more than three (3) threaded taps shall be made for a service connected to a 4-inch or larger main. Maximum threaded tap size for a 4 inch main is $\frac{3}{4}$ inch. All taps will be made in the top half of the water main, but not more than 45" above the horizontal plane. All services having two (2) taps or more shall be combined through a brass wye pipe connection. The maximum length of service from the main to the wye shall be four (4) feet. The following table lists appropriate number of taps for different service sizes.

Service Size Taps

1 inch = two $\frac{3}{4}$ inch or one 1 inch

1 $\frac{1}{4}$ inch = two 1 inch

1 $\frac{1}{2}$ inch = two 1 inch

Sec. 605606.0.4. Service saddles allowed on four (4) inch or larger water mains when water service is $\frac{3}{4}$ ", 1", 1 $\frac{1}{4}$ ", and 1 $\frac{1}{2}$ " shall be a Smith-Blair, or equivalent, #317, #357, #372, #393 or #397. The saddles shall have a stainless steel strap with two bolts wide minimum. The bolts or nuts shall be either stainless steel or blue coated. When tapping a four (4) inch or larger main for water services for a two (2) inch or larger water service, the Smith-Blair, or equivalent stainless steel full wrap around saddle, #238, #239, #264, or #265 shall be used. The bolts and nuts shall be either stainless steel or blue coated. Any water service that is larger than a two(2) inch shall require a tapping valve and sleeve at the main or private main. The Post Indicator Valve (PIV) for fire line shall not serve as the water service valve after the main. All tapping valve sleeves shall meet the Urban Standard Specifications as follows:

(1) Valve: Tapping valve conforming to ANSI/AWWA C509.

(2) Sleeve:

(a) Minimum 14 gauge

(b) Stainless steel, ASTM A240, Type 304

(c) Working pressure 200 psi.

(d) Must fully surround pipe

(e) Approved sleeves

(i) Cascade Water Works Manufacturing Company, Style CST-EX

(ii) PowerSeal Pipeline Products Corporation, Model 3490AS

(iii) JCM Industries, Inc. Model JCM 432

(iv) Approved equal

(3) Gasket:

(a) To completely surround pipe

(b) Minimum thickness 0.125 inch

(c) Material: nitrile rubber.

(4) Outlet Flange:

(a) Stainless steel, ASTM A240, Type 304

(b) ANSI B 16.1, 125 pound pattern

(5) Bolts: Stainless steel, ASTM A240, Type 304

Sec. 605606.0.5. In the event a curb box is set in any location where a concrete or asphalt surface is to be placed, a sleeve shall be placed around the cap to allow for expansion and contraction.

Sec. 605606.0.6. In a new subdivision the water service line shall be installed at the center of the property unless otherwise approved by the Administrative Authority.

Sec. ~~605606~~.0.7. There shall be a curb cock in every service connection to the main. It shall be located on the property line or as close as possible thereto and in alleys within one foot of the alley line, except two (2) inch and larger, which shall have a street valve box over the valve at the water main. The curb cock to be used for services from three-fourths ($\frac{3}{4}$) inch to two (2) inches shall be the style known as Mueller Mark II Oriseal or Ford Ball Valve with 90° curb cock, or equal, provided with T handle and extension rod keyed and locked to curb cock and shall be the same diameter as the pipe served. The curb cock shall be kept in an operative condition at all times.

Sec. ~~605606~~.0.8. The curb cock shall be covered by a curb box of the Western pattern No. 100, or equal, extending to the curb grade. In cases where the surface of the ground is higher than the curb grade to the extent that the curb box will not extend sufficiently to be in plain view, then the curb box shall be extended to the ground surface. Whenever a water service is renewed the curb box shall be brought to the curb grade or present natural ground level and moved to the property line. In placing the curb cock in position, care must be exercised to provide against settlement of the curb box, by providing a base of brick, stone or concrete block set on solid earth for support. A support shall be placed across the ditch and wired to the curb box near the top to keep it in a vertical position while filling the ditch.

Sec. ~~605606~~.0.9. A corporation cock of either a Mueller or Ford make, or its equivalent, shall be inserted in every tap on one and one half inch or less in diameter made in the water main. The connection to the main shall be made by a regulation corporation cock and copper service with a compression joint if the pipe is plastic SDR-7 200 P 3408. All connections to the water main shall be adequately looped to prevent breakage from ditch settlement.

Sec. ~~605606~~.0.10. A service valve shall be installed immediately following a two (2) inch or larger tap on all take offs from the water main or private main.

Sec. ~~605606~~.0.11. Where a single water service line provides service to a new duplex or is split for any other reason, the service line shall be at least one inch in diameter. Where an existing structure is to be converted to a duplex a 1" equivalent service may be provided by a separate tap. The new service lines shall be divided by a wye at the property line. Existing 1" services may be split inside the building so long as shut-offs are available in a common area. Separate curb boxes shall be installed, and separate $\frac{3}{4}$ inch service lines shall be run to the individual customer units.

Sec. ~~605606~~.0.12. Sprinkler systems used for fire protection may be permitted to be attached to the water mains by registered plumbing contractors by direct connection without meters under the direction and supervision of the City. No open connection can be incorporated in the system, and there shall be no valves except thea post indicator valve at the entrance to the building, which must be sealed open service valve at the main unless a post indicator valve (PIV) is required by the Fire Inspector. One and two family residential sprinkler lines shall be metered through the single meter. The property owner or tenant shall promptly report to the City any seal which has been broken for the closing of the system. A detailed drawing of the sprinkler system shall be filed with the City and free access to the building shall be granted the City for inspection purposes. No charge will be made for water used for fire purposes through a sprinkler system. The fire line shall be a minimum four (4) inch diameter with a shut-off valve installed after the tap into the main. When required, the PIV shall be a minimum of forty (40) feet from the building or at the determination of a location determined by the fire inspector.

Exception: The fire line may be smaller than 4" in size if hydraulic calculations by the fire sprinkler company show that a 4" would not be required. If a 4" fire line is not required a Fire Department connection or P.I.V. may not be required if determined by the fire inspector.

Sec. ~~605606~~.0.13. Where required, a post indicator valve (PIV) must be set at 36" above final grade. The termination flange, inside the building, shall not be more than twelve (12) inches above finished floor level and be set at a true vertical position. When entering through a wall, the termination flange shall not be more than twelve (12) inches from the wall and set in a true horizontal position. The fire line shall have a two hundred (200) pound pressure test done for a minimum of two (2) hours without losing any pressure. The fire line shall be tested from the tap at the main to the termination flange with the PIV open and the curb box closed. No fire line static pressure test shall be started after 1:30 p.m., Monday through Friday.

A certified fire sprinkler installer may install the backflow device to the sprinkler system for containment. The termination flange, inside the building, from horizontal to the vertical position or from horizontal to the horizontal position traveling through an exterior wall or floor, shall have no smaller than $\frac{3}{4}$ inch galvanized or equivalent all-thread rod used between said flanges to keep fire line termination stable. The fire line located in the trench may use mega-lug type supports, however, a concrete thrust block shall be in front of

fire line traveling from horizontal to vertical prior to the termination flange. Only PVC C-900 DR 14, and ductile iron shall be used for the fire line service. The joints shall have bolted flanged fittings. The tapping valve, PIV, and all other fittings and pipe shall be marked to withstand 200 p.s.i. Before requesting a Bac-T test, the fire line shall be flushed thoroughly by the plumbing contractor. The contractor shall request, from the Inspection Division, a Bac-T test form, complete the form and return it to the Inspection Division. Utility Maintenance Division will collect the sample for testing. If the fire line passes Bac-T test, the Inspection Division will contact the plumbing contractor. The termination flange shall have a two (2) inch ball valve to properly flush the fire line.

(a) If the fire line and water service are on one line, the domestic water service shall have the take off so that the domestic service will have a curb stop and stop box at the property line. If a PIV is required, the domestic service will branch off prior to the PIV and have a curb stop and stop box adjacent to the PIV. The take off for the water service shall be either brass, ductile iron, C-900 PVC DR14, or copper to the curb box.

(b) The curb stop and stop box may be installed at another location with prior approval of the Inspections Division and the Water and Pollution Control Department. The post indicator valve (PIV) must be set at 36" above final grade. The termination flange, inside the building, shall not be more than twelve (12) inches above finished floor level and be set at a true vertical position. If the fire line and water service are on one line, the water service shall have the take off prior to the PIV. The take off for the water service shall be either brass, ductile iron, C-900 PVC DR 14, or copper to the curb box. The fire line shall have a two hundred (200) pound pressure test done for a minimum of two (2) hours without losing any pressure. The fire line shall be tested from the tap at the main to the termination flange with the PIV open and the curb box closed. No fire line static pressure test shall be started after 1:30 p.m., Monday through Friday.

A certified fire sprinkler installer may install the backflow device to the sprinkler system for containment. The termination flange, inside the building, from horizontal to the vertical position or from horizontal to the horizontal position traveling through an exterior wall or floor, shall have no smaller than ¾ inch galvanized or equivalent all thread rod used between said flanges to keep fire line termination stable. The fire line located in the trench may use mega lug type supports, however, a concrete thrust block shall be in front of fire line traveling from horizontal to vertical prior to the termination flange. Only PVC C-900 DR 14, and ductile iron shall be used for the fire line service. The joints shall have bolted flanged fittings. The tapping valve, PIV, and all other fittings and pipe shall be marked to withstand 200 p.s.i. Before requesting a Bac-T test, the fire line shall be flushed thoroughly by the plumbing contractor. The contractor shall request, from the Inspection Division, a Bac-T test form, complete the form and return it to the Inspection Division. Utility Maintenance Division will collect the sample for testing. If the fire line passes Bac-T test, the Inspection Division will contact the plumbing contractor. The termination flange shall have a two (2) inch ball valve to properly flush the fire line.

(17) Section 606.2.1 UPC is amended to add the following to the end of the section:

Soft copper water service lines, except fire line, shall be either brazed, silver soldered, or flared with a long shouldered joint. Whenever type "K" soft copper is used for the water service, use of any joints is discouraged whenever possible.

(1618) **Section 608.5 Drains** is amended by deleting "of galvanized steel" and ~~inserting the following in lieu thereof replacing~~ "the outside of the building" with "a properly drained surface".

(1749) **Section 609.1 Installation** is amended by deleting the last two sentences in the section and inserting the following in lieu thereof:

All water service lines shall be installed at least five feet below finish grade. If the water service cannot be buried below frost depth at any point, the trench shall be lined with 1 ½" thick "Blue Board" insulation or equivalent as approved by the Administrative Authority. Sand backfill material shall then be placed to a depth of one foot above the top of pipe, then 1 ½" "Blue Board" or equivalent will be installed so that the entire trench width and length in the area needing protection against freezing is insulated and then backfilled. The insulation shall be at least five (5) feet in depth.

(1820) **Section 609.5 Unions** is amended by adding the following to the end of the section:

Exception: water heaters and boilers.

(1924) **Section 609.10 Water Hammer** is amended by adding:

Exception: Single family dwelling units.

(20) Section 610.1 Size, Size of Potable Water Piping, is amended by deleting the words “each water meter and” from the first sentence and adding “Water meter sizing shall be determined by the Water Meter Division” to the end of the section.

(2122) Section 610.8(6) Size of Meter and Building Supply Pipe Using Table 610.4 is amended by deleting the last sentence and inserting the following in lieu thereof:

No building water service line shall be less than one (1) inch diameter.

(2223) Amend Table 610.4 Fixture Unit Table for Determining Water Pipe and Meter Sizes6-6 UPC by changing footnote is amended by deleting the language in footnote 2 and inserting the following in lieu thereof:

Replace “Building supply, three-quarter(3/4) inch nominal size minimum.” With “Building supply, one (1) inch nominal size minimum.”

~~(24) Section 610.1 Size, Size of Portable Water Piping, is amended by deleting the words “each water meter and” from the first sentence and adding “Water meter sizing shall be determined by the Water Meter Division” to the end of the section.~~

(2325) Section 701.1 Drainage Piping is amended to read as follows:

Drainage pipe and fittings used inside a new building or an existing building for underground shall be copper (type L), brass, ABS (schedule 40), PVC (schedule 40) or cast iron.

Exception: Galvanized may be used on a sewage ejector system when the discharge line is three (3) inch or larger. The galvanized shall only be piped no more than four (4) feet out of pit.

Above ground piping shall be the same as underground except that ABS and PVC pipe may be coextruded and copper tube and fittings may be type M for commercial and structures that are more than a one and two-family dwelling. A one and two-family dwelling may use type DWV copper tube.

(24) Table 702.1 Drainage Fixtures Unit Values (DFU) is amended by adding the following to footnote #8:

Public use shall be any building or structure that is not a dwelling unit. Fraternities and sororities are not classified by this section as a dwelling unit.

(2526) Section 703.1 Minimum Size, Size of Drainage Piping, is amended by adding the following at the end of the section:

No underground drainage piping or vent shall be less than two (2) inches inside diameter.

~~(27) Table Drainage Fixtures Unit Values (DFU) is amended by adding the following to footnote #8:~~

~~Public use shall be any building or structure that is not a dwelling unit. Fraternities and sororities are not classified by this section as a dwelling unit.~~

(2628) Section 704.3 Commercial Dishwashing Machines and Sinks is amended by adding “At the discretion of the Plumbing Inspector and Sanitarian” at the beginning of the section.

(2729) Section 704.3 Commercial Dishwashing Machines and Sinks is further amended by adding the following to the end of the section:

or shall be discharged by an airgap indirect waste to a properly sized floor sink.

(2830) Section 705.0.1 is added705.1.6 UPC is reworded to read as follows:

No molded rubber coupling (Fernco Coupling or equivalent) shall be used on any sanitary sewer or storm sewer. AppropriateA stainless steel shielded molded rubber couplings may be used as connections when connecting to clay pipe or PVC truss pipe on the sanitary or storm sewer.

~~(31) Section 705.1.8 UPC is reworded to add the following to the end of the section:~~

~~ShieldedSingle band shielded~~ -couplings (no hub clamps) are not allowed on any exterior building sanitary sewer, or storm sewer.

(2932) Section 710.9 Alarm is amended by adding the following exception to the end of the section:

Exception: When only discharging a lavatory sink, a general sink, or a floor drain into a sewage ejector receiving tank, dual pumps in public use occupancy will not be required.

(3033) Section 717.1 General, Size of Building Sewers, 0 is amended to read as follows:

The minimum size of any building sewer shall be determined on the basis of the total number of fixture units drained by such sewer, in accordance with Table 717.1 Maximum/Minimum Fixture Unit Loading on Building Sewer Piping7-8. No building sewer shall be smaller than four (4) inches. The building sewer shall not be smaller than the building drain.

In unusual circumstances, with prior approval from the plumbing inspector, a sewage ejector may discharge the building sewer to the public sewer manhole when the public main is too shallow to allow the building

sewer discharge to flow by gravity. The pipe material to be used shall be Polyethylene (P.E.) Two (2) inch SDR 7, 3408. The 2" line shall at all times be a minimum of five (5) feet deep or be blue-boarded. The sewage ejector shall be vented with a minimum two (2) inch pipe. The ejector pumps shall comply with section 710.9

(3134) **Section 718.2 Support** is amended to read as follows:

Building sewer pipe made of cast iron, copper, or extra strength vitrified clay shall be laid on a firm bed. Pipe consisting of Schedule 40 PVC/ABS, PVC SDR 23.5/35 and PVC truss pipe shall be enveloped on bottom, sides and top with a minimum of four (4) inches of either one (1) inch clean or 3/8" minus crushed rock, 3/8" washed chip or "pea gravel". After enveloping the pipe, the remainder of the ditch may be filled once the inspection is complete.

(3235) **Section 718.3 Protection from ~~Damage~~ Drainage** is amended to read as follows:

No building drain or sewer shall be closer than two (2) feet from the building structure or footing that is not made out of cast iron, Schedule 40 PVC, or Type "L" copper. At no point shall the building sewer be less than five (5) feet in depth on new construction or when replacing existing sewers. If less than five (5) feet in depth, the trench shall be lined with 1 1/2" thick blue-board insulation. The insulation of the sides shall be at least five (5) feet below finished grade with a cap over the two sides.

One (1) inch clean 3/8" minus, 3/8" washed chips, and pea gravel rock shall be placed on the bottom, sides and top of pipe whenever any type of PVC is used. Whenever cast iron is used sand may take the place of the one (1) inch rock. Whenever possible, the building sewer shall be at a depth of nine (9) feet below street grade from the main to the property line on new construction. Whenever possible on a duplex or single-family dwelling, the building sewer shall not be located under a driveway.

(3336) **Section 719.6 Manholes** is amended by deleting the second paragraph.

(3437) **Section 801.3 Bar and Fountain Sink Traps**~~Food-Handling Fixtures~~ is amended ~~UPC~~ is reworded to amended to read as follows:

Sinks (except hand sinks) in a bar, nightclub, tavern, or soda fountain shall drain to an approved and properly trapped and vented floor sink through an approved airgap or airbreak. The floor sink, drain line, trap, and strainer inlet shall be at least three (3) inch pipe size. The developed length from the fixture outlet to the floor sink shall not exceed five (5) feet.

(3538) **Section 807.4 Domestic Dishwashing Machine** is amended to read as follows:

No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting on the discharge side of the dishwashing machine, or ~~without~~ looping the discharge line of the dishwasher as high as possible near the flood level of the kitchen sink where the waste disposer is connected, ~~and The looped discharge line of the dishwasher shall will~~ be supported or strapped. Listed air gap fittings shall be installed with the flood level (FL) marking at or above the flood level of the sink or drainboard, whichever is higher.

(3639) **Section 901.0 General, Vents,** is amended by adding new sub-section 901.0.1

Section 901.0.1 All single-family or two-family dwelling units with a basement shall be provided with a two (2) inch future vent. The future vent shall be combined with other vents or terminate through the roof. Such vent shall be capped in the floor joist area of the basement for future use. The two (2) inch vent is for a future basement bathroom or other approved fixtures.

(3740) **Section 902.2 Bars, Soda Fountains, and Counter, Vents Not Required,** is amended to read as follows:

Sinks (except hand sinks) in a bar, nightclub, tavern, or soda fountain shall drain to an approved and properly trapped and vented floor sink through an approved airgap or airbreak. The floor sink, its drain line, trap, and strainer inlet shall be at least three (3) inch pipe size. The developed length from the fixture outlet to the floor sink shall not exceed five (5) feet.

(3841) **Section 903.1 Applicable Standards, Materials,** is amended to read as follows:

Drainage and vent pipe and fitting used inside a new building or an existing building for underground shall be copper (Type L), brass, ABS (Schedule 40), PVC (Schedule 40) and cast iron.

Exception: Galvanized may be used on a sewage ejector system when the discharge line is three (3) inch or larger. The galvanized shall be piped no more than four (4) feet out of pit.

Above ground piping shall be the same as underground except that coextruded PVC and ABS may be used, and copper tube and fittings may be Type M for commercial and structures that are more than a one and two-family dwelling. One and two-family dwellings may use type DWV copper tube.

~~(42) —Section 903.1.1 UPC is deleted~~

(3943) **Section 903.2.1 Underground, Copper Tubing,** is amended to read as follows:

Copper tube for underground drainage and vent piping shall have a weight of not less than that of copper drainage tube type L.

(4044) **Section 903.2.2 Aboveground, Copper Tubing**, is amended to read as follows:

Copper tube for aboveground drainage and vent piping shall have a weight of not less than that of copper drainage tube type M.

Exception: Single-family and two-family dwellings may use copper tube type DWV.

(4145) **Section 904.1 Size, Size of Vents**, is amended to read as follows:

The size of vent piping shall be determined from its length and the total number of fixture units connected thereto, as set forth in Table 702.1 Drainage Fixture Unit Values (DFU) 7-5. The diameter of an individual vent above ground shall not be less than one and one-fourth (1 ¼) inches, or less than two (2) inches for underground, nor less than one-half (½) the diameter of the drain to which it is connected.

Exception: A water closet shall be vented with a vent no smaller than a two (2) inch inside diameter pipe.

~~Each individual building or structure shall have a main vent stack equal in size or larger than the required building sewer. The main vent stack shall extend through the roof a minimum of twelve inches undiminished in size from the underground building drain.~~

~~Exception: In single family, duplexes, apartment, motel and hotel buildings four (4) stories or less, a three (3) inch main stack vent is permitted, as long as other vents through the roof equal the cross-sectional diameter of the required building sewer.~~

(4246) **Section 906.7 Frost or Snow Closure, Vent Termination**, is amended to read as follows:

Change two (2) inches to three (3) inches and ten (10) inches to twelve (12) inches and remove reference to mm.

(4347) **Section 908.2 Horizontal Wet Venting for Bathroom Groups**, is amended by deleting the first sentence and inserting the following in lieu thereof: Water closets, bathtubs, showers and floor drains within one bathroom group located on the same floor level and for private use shall be permitted to be vented by a wet vent.

~~(44) Table 1002.2 Horizontal Lengths of Trap Arms is amended to read as follows:~~

~~Maximum Allowable Horizontal Length Of Trap Arms~~

~~1-1/4" 5' 0"~~

~~1-1/2" 6' 0"~~

~~2" 8' 0"~~

~~3" 12' 0"~~

~~4" and larger 13' 0"~~

~~The developed length between the trap of a water closet or similar fixture (measured from the top of the closet flange to the inner edge of the vent) and its vent shall not exceed six feet.~~

~~(44549) Section 908.2.3-908.3 Batteries of Fixtures (Battery Venting) and subsections are amended by ingadded~~

Section 908.2.3.1-908.3.1 A maximum of eight (8) floor-outlet water closets, showers, bathtubs, or floor drains connected in battery on a horizontal branch drain shall be permitted to be battery-vented. The drain from each fixture being battery-vented shall connect horizontally to the horizontal wet-vented drain branch. The horizontal wet-vented branch drain shall be considered as a vent extending from the downstream fixture drain connection to the most upstream fixture connection.

Section 908.2.3.2-908.3.2 Back-outlet water closets having carriers conforming to Section 402.4 Wall-Hung Fixtures shall be permitted to be battery-vented provided they connect horizontally to the horizontal wet-vented section.

Section 908.2.3.3-908.3.3 Trap arm lengths for fixtures shall not exceed those as indicated in amended Table 10-102.2 Horizontal Lengths of Trap Arms (See (45) above).

Section 908.2.3.4-908.3.4 A battery vent shall be connected to the horizontal wet-vented branch drain between the two (2) most upstream fixture drains.

Section 908.2.3.5-908.3.5 The entire length of the wet-vented section of the horizontal branch drain shall be uniformly sized for the total drainage discharge connected thereto as per Table 703.2 Maximum Unit Loading and Maximum Length of Drainage and Vent Piping. The maximum slope of the horizontal drain shall be three-eighths (3/8) inch (10 mm) per foot (300 mm).

Section ~~908.2.3.6~~ 908.3.6 A relief vent shall be provided on each wet vented horizontal branch drain below the uppermost floor. The relief vent shall connect to the horizontal branch drain between the stack and the first upstream fixture drain.

Section ~~908.2.3.7~~ 908.3.7 Battery vents and relief vent connections shall be taken off vertically from the top of the horizontal drain. Battery vents and relief vents shall not be used as vertical wet vents.

Section ~~908.2.3.8~~ 908.3.8 Lavatories and drinking fountains shall be permitted to connect horizontally to the horizontal wet-vented branch drain provided that they are located on the same floor as the battery-vented fixtures and each is provided with either an individual or common vent.

Section ~~908.2.3.9~~ 908.3.9 Batteries of more than eight (8) battery vented fixtures shall have a separate battery vent for each group of eight (8) or less fixtures, and the horizontal branch drain in each group shall be sized for the total drainage into the branch, including all upstream branches and the fixtures within the particular group.

Section ~~908.2.3.10~~ 908.3.10 All battery vents and relief vents shall be sized according to Section 904.0, but shall be not less than one-half (1/2) the area of the drain pipe that they serve and shall comply with Section 905.0

(45) Table 1002.2 Horizontal Lengths of Trap Arms is amended to read as follows:

Maximum Allowable Horizontal Length Of Trap Arms

1-1/4"	5' 0"
1-1/2"	6' 0"
2"	8' 0"
3"	12' 0"
4" and larger	13' 0"

The developed length between the trap of a water closet or similar fixture (measured from the top of the closet flange to the inner edge of the vent) and its vent shall not exceed six feet.

~~(50) Section 909.0.1 is added to read as follows:~~

~~As an alternative for single family dwellings, an "air admittance valve" may be installed as follows:~~

~~(a) The air admittance valve shall be two (2) inches in size and have the ANSI/ASSE 1051 listing label clearly visible during inspection.~~

~~(b) The stack or horizontal branch drain shall have a 1 1/2" vent. The two (2) inch waste line shall be a designated line with no other connections of any sort.~~

~~(c) The air admittance valve shall be readily accessible in the cabinet area, be removable, and located at least six (6) inches above the 2 x 2 x 1 1/2" tee for the trap.~~

~~Only kitchen or bar island sinks may be auto-vented. The auto vent shall be readily accessible and shall be located above the trap arm and in same cabinet as "P" trap.~~

(4652) Section 1101.2 Storm Water Drainage to Sanitary Sewer Prohibited is amended by adding the following:

Whenever such connection or arrangement is found to exist in violation of the ordinances of this city and ~~Chapter 21~~ **Chapter 5**, whereby surface water runoff, subsoil or footing drainage is discharged or diverted into the sanitary sewer system, the inspector shall issue a written notice to the owner to cause such to be abated by ordering a connection to a public storm main or collector line.

(4753) Section 1101.3 Material Uses is amended to read as follows:

Rainwater piping placed within the interior of a building to two (2) feet out of building or footings shall be cast iron, brass, copper (Type M), Schedule 40 PVC or Schedule 40 ABS DWV. Schedule 40 PVC and ABS pipe installed within a duct or plenums shall be insulated with an insulation having a flame-spread index of not more than 25 and a smoke index of not more than 50.

Rainwater piping placed outside a building shall be cast iron, brass, copper (Type M), Schedule 40 PVC or Schedule 40 ABS DWV, reinforced concrete pipe (RCP), vitrified clay pipe (VCP), SDR 23.5 PVC, SDR 35 PVC, PVC truss pipe, PVC A2000 pipe, and corrugated high-density polyethylene (P.E.)

SDR 23.5 PVC, SDR 35 PVC, schedule 40 PVC or Schedule 40 ABS, PVC truss, PVC A2000, and corrugated polyethylene pipe outside a building shall be enveloped with four (4) inches of crushed rock, either one (1) inch clean or 3/8" minus 3/8" washed chips, or "pea gravel", on the top, bottom and sides.

The storm water sewer may be connected to the City storm main at intakes, manholes, or connected directly into the storm main. Whenever a direct connection is made to the storm main, the connection shall be made by a clamping saddle or a fitting with a sealant that makes the joints water and root proof.

If the storm sewer is one-half (½) or more of the size of the storm main, a manhole shall be required at the point of connection to the storm main. All manholes shall meet the Iowa Statewide Urban Standards.

All direct taps into the storm main shall be installed on the top one-half (½) of the main.

The storm sewer shall have a cleanout installed every one hundred (100) feet and every change of direction exceeding 135°. In place of a cleanout every one hundred (100) feet, a manhole shall be placed every three hundred (300) feet (manhole shall meet Des Moines Urban Standards).

No Fernco coupling or no-hub clamp shall be used on the storm sewer or main.

Exception: When converting to PVC truss pipe or clay pipe, a Fernco stainless steel shielded coupling shall be used on storm sewer.

(4854) **Section 1101.5.1** ~~1101.5.2~~ **Discharge, Subsoil Drains**, is amended to read as follows:

The subsoil drains may be allowed to discharge to a pond, or waterway if approved by the Building Official. If not allowed by the Building Official, the subsoil drain shall be discharged to a storm main.

Regardless, the gravity line shall have a backwater valve.

In existing buildings, if granted permission by the plumbing inspector, the perimeter tile may flow by gravity to a storm main, intake, or manhole if there is at least ten (10) feet vertical height difference between the perimeter tile and the storm main, intake, or manhole.

(4955) **Section 1101.5.2** **Sump, Subsoil Drains**, is amended by replacing “fifteen (15) gpm” with “17 gpm with a seventeen (17) foot head” and adding the following to the end of the section:

The sump pump line may be either Schedule 40 PVC or Schedule 80 PVC pipe.

The fittings shall be either schedule 80 PVC deep socket or schedule 40 deep socket pressure fittings. The sump pump line may also be 1 ½" polyethylene (PE) SDR 9, 3408. The PE joints shall be made with ribbed insert fittings secured by stainless steel clamps. The sump line shall be buried no less than five (5) feet in depth from finished grade. If this depth cannot be maintained, the sides and top of pipe wall shall be covered with 1 ½" blue board insulation. The sides of the insulation shall be at least five (5) feet in depth. When the sump line is discharged into a storm manhole, intake, or storm main that is not five (5) feet below final surface grade, a quarter (¼) of an inch hole shall be drilled into the bottom portion of the horizontal 90° elbow before pipe is placed in the vertical position.

If two sump lines are combined together, the sump line shall be a two (2) inch line to the storm main, intake, or manhole. The sump pump shall have an electrical outlet within reach of the manufacturer's cord.

No foundation drain service line shall be discharged onto property, someone else's property, or into the building drain or building sewer. No floor drain, clothes washer, or any other plumbing fixture shall be discharged into the foundation sump pit.

Every sump pit in an elevator shaft shall meet the rules and regulations of the State of Iowa Elevator Inspector. No hydraulic elevator sump shall be discharged into a storm or sanitary sewer.

(5056) **Section 1101.5.3** **Splash Blocks** is deleted.

(5157) **Section 1102.1.1** **Conductors, Materials**, is amended to read as follows:

The inside conductors installed above ground level shall be of seamless copper water tube, Type K, L, or M; Schedule 40 copper pipe or Schedule 40 copper alloy pipe; service weight cast-iron soil pipe or hubless cast-iron soil pipe; or Schedule 40 ABS or Schedule 40 PVC Plastic pipe.

(5258) **Section 1102.3** **Underground Building Storm Drains** is amended by adding the following:

Rainwater piping placed underground within the interior of a building to two (2) feet out of building or footings shall be cast iron, brass, seamless copper water tube (type K, L, or M), Schedule 40 PVC or Schedule 40 ABS DWV.

(5359) **Section 1102.3** **Underground Building Storm Drains** is further amended by adding the following:

Rainwater piping placed outside a building shall be cast iron, brass, copper (Type M), Schedule 40 PVC or Schedule 40 ABS DWV, reinforced concrete pipe (RCP), vitrified clay pipe (VCP), SDR 23.5 PVC, SDR 35 PVC, PVC truss pipe, PVC A2000 pipe, and corrugated high-density polyethylene (P.E.)

SDR 23.5 PVC, SDR 35 PVC, schedule 40 PVC or Schedule 40 ABS, PVC truss, PVC A2000, and corrugated polyethylene pipe outside a building shall be enveloped with four (4) inches of crushed rock, either one (1) inch clean or 3/8" minus 3/8" washed chips, or “pea gravel”, on the top, bottom and sides.

~~(5460)~~ Tables 1101.7 Sizing of Horizontal Rainwater Piping~~11-1~~, 1101.11 Sizing of Roof Drains, Leaders, and Vertical Rainwater Piping~~11-2~~, and 1106.3 Size of Gutters are amended by adding the following note to the end of each table:

Rainfall rates for the City of Ames shall be based at three and one-half (3 ½) inches of rain per hour.

~~(61) — Section 1209.5.1.1 UPC is amended to add:~~

~~Material allowed six (6) inches or higher above lowest finished floor shall be:~~

- ~~(1) standard weight wrought iron or steel~~
- ~~(2) black iron or steel~~
- ~~(3) corrugated stainless steel (csst)~~

~~(62) — Section 1209.5.3.4 UPC is amended to add:~~

~~No corrugated stainless steel tubing (csst) shall be installed outside of a building or installed below ground in a building. Csst shall be installed by manufacturer's recommendations unless it violates this code.~~

~~(63) — Section 1212.1 UPC is amended to add:~~

~~No appliance connector shall penetrate the housing of an appliance, or be used in an exterior location.~~

~~(5564)~~ Section **1302.0 Medical Gas and Vacuum Piping Systems—Installation Requirements** is amended by adding the following at the end of the section:

Applicant must provide a certificate to the Inspection Division from an architect or engineer that the facility, as built, meets the requirements of Chapter 13 UPC.

~~(5665)~~ Section **D1.1 General, Roof Drainage**, ~~D1~~ of Appendix D UPC is amended to read as follows:

The maximum rainfall rate for the City of Ames shall be based on three and one-half (3 ½) inches in Table D1.1 Maximum Rates of Rainfall for Various Cities~~D-1~~ for design.

(Ord. 4044, 9-28-10)

DIVISION III

CONTRACTOR AND TRADE LICENSES

Sec. 5.300. BUILDING CONTRACTOR REGISTRATION.

(1) **Contractor registration required.** Each person, firm, or corporation performing work requiring a building, electrical, mechanical, plumbing, or sign permit must possess a valid State Division of Labor registration number and provide proof of same to the Inspection Division prior to permit issuance. For electrical, plumbing, and HVAC contractors, possession of a State of Iowa contractor license shall serve as evidence of registration with the Division of Labor.

(2) **Contractor insurance required.**

All persons, firms, or corporations performing work that requires a building permit must possess current Contractor's Commercial General Liability insurance in not less than \$500,000.00 combined single limit, and provide proof of coverage to the Inspection Division prior to permit issuance. For electrical, plumbing, and HVAC contractors, possession of a State of Iowa contractor license shall serve as evidence of adequate insurance coverage.

Sec. 5.301. CITY ELECTRICAL CONTRACTOR REGISTRATION AND STATE LICENSING.

Before doing any electrical work governed by this code in the City of Ames, an electrical contractor must register with the City of Ames Inspection Division as an electrical contractor on a form provided by the Division.

(1) **Conditions for Registration.** An electrical contractor must hold a valid State of Iowa license as an electrical contractor.

(2) Information to be provided. An applicant for electrical contractor registration under this section shall provide the following information:

(a) Copy of possession of current State license;
(b) Name, mailing address, email address, phone number of the principal of the registered firm or corporation; and

(c) The names and State license classifications of all employees who may be working on projects in the City of Ames.

(3) Registration not Transferable. Contractor registration is not transferable to any other person, firm or corporation.

Sec. 5.302. STATE ELECTRICIAN LICENSE CATEGORIES.

(1) **Apprentice electrician.** An apprentice electrician is a person who holds an apprentice electrician license issued by the State of Iowa.

(2) **Journeyman electrician.** A journeyman electrician is a person who holds a journeyman electrician license issued by the State of Iowa.

(3) **Master electrician.** A master electrician is a person who holds a master electrician license issued by the State of Iowa.

(4) **Electrical Contractor.** An electrical contractor is a person, firm or corporation that holds an electrical contractor license issued by the State of Iowa.

Sec. 5.303. STATE ELECTRICIAN LICENSE REQUIRED.

(1) Where this code requires electrical work to be performed by a licensed person, such person must hold and have in their immediate possession, a valid Electricians license issued by the State of Iowa that authorizes the work being performed.

Sec. 5.304. EXEMPTIONS.

(1) No license or registration shall be required for minor repair work, including the replacement of lamps and fuses, or the connection of approved portable electrical equipment to approved permanently installed receptacles, or for simple replacement of electrical fixtures such as wall plugs, and light fixtures, in single family dwellings when the person performing the repair work is the owner of the structure, and has his or her primary place of residence there.

(2) No license or registration shall be required for a mobile home dealer or the employee of a mobile home dealer to perform electrical connections in a mobile home space or within ten feet of such space, located in a mobile home park, all within the meaning and intent of Section 103A.52 Code of Iowa. The requirements for permits and inspections remain in effect, and the mobile home dealer shall pay the permit and inspection fees.

Sec. 5.305. CITY PLUMBING CONTRACTOR REGISTRATION AND STATE LICENSING.

Before doing any plumbing work governed by this code in the City of Ames, a plumbing contractor must register with the City of Ames Inspection Division as a plumbing contractor on a form provided by the Division.

(1) Conditions for Registration. A plumbing contractor must hold a valid State of Iowa license as a plumbing contractor.

(2) Information to be provided. An applicant for plumbing contractor registration under this section shall provide the following information:

(a) Copy of possession of current State license;
(b) Name, mailing address, email address, phone number of the principal of the registered firm or corporation; and

(c) The names and State license classifications of all employees who may be working on projects in the City of Ames.

(3) Registration not Transferable. Contractor registration is not transferable to any other person, firm or corporation.

Sec. 5.306. STATE PLUMBERS LICENSE CATEGORIES.

(1) **Apprentice plumber.** An apprentice plumber is a person who holds an apprentice plumber license issued by the State of Iowa.

(2) **Journeyman plumber.** A journeyman plumber is a person who holds a journeyman plumber license issued by the State of Iowa.

(3) **Master plumber.** A master plumber is a person who holds a master plumbers license issued by the State of Iowa.

(4) **Plumbing contractor.** A plumbing contractor is a person, firm or corporation that holds a plumbing contractor license issued by the State of Iowa.

Sec. 5.307. STATE PLUMBERS LICENSES REQUIRED.

(1) Where this code requires plumbing work to be performed by a licensed person, such person must hold and have in their immediate possession, a valid Plumbers license issued by the State of Iowa that authorizes the work being performed.

Sec. 5.308. EXEMPTIONS.

(1) No license or registration shall be required for plumbing work to be performed on a single family residential structure when the person performing the plumbing work is the owner of the structure, and has his/her primary place of residence there.

(2) No license or registration procedure shall be required for a mobile home dealer or employee of a mobile home dealer to perform water, gas, or utility service connections in a mobile home space or within ten feet of such space, located in a mobile home park, all within the meaning and intent of Section 103A.52 Code of Iowa. The requirements for permits and inspections remain in effect, and the mobile home dealer shall pay the permit and inspection fees. No homeowners or mobile home dealer will be allowed to tap a water main, sanitary or storm main or repair nor be allowed to install a building sanitary sewer, water service, foundation drain, or a storm sewer or make repair of such.

Sec. 5.309. CITY MECHANICAL HVAC CONTRACTOR REGISTRATION AND STATE LICENSING.

Before doing any heating, ventilation, air conditioning, or ducted heating work governed by this code, in the City of Ames, an HVAC contractor must register with the City of Ames Inspection Division as an HVAC contractor on a form provided by the Division.

(1) **Conditions for Registration.** An HVAC contractor must hold a valid State of Iowa license as an HVAC contractor.

(2) **Information to be provided.** An applicant for HVAC contractor registration under this section shall provide the following information:

- (a) Copy of possession of current State license;
- (b) Name, mailing address, email address, phone number of the principal of the registered firm or corporation; and
- (c) The names and State license classifications of all employees who may be working on projects in the City of Ames.

(3) **Registration not Transferable.** Contractor registration is not transferable to any other person, firm or corporation.

Sec. 5.310. STATE HVAC MECHANICAL LICENSE CATEGORIES.

(1) **HVAC Mechanical Apprentice.** An HVAC mechanical apprentice is a person who holds an HVAC mechanical apprentice license issued by the State of Iowa.

(2) **HVAC Mechanical Journeyman.** An HVAC mechanical journeyman is a person who holds an HVAC mechanical journeyman license issued by the State of Iowa.

(3) **HVAC Mechanical Master.** An HVAC mechanical master is a person who holds an HVAC mechanical master license issued by the State of Iowa.

(4) **HVAC Mechanical Contractor.** An HVAC mechanical contractor is a person, firm or corporation that holds an HVAC mechanical contractor license issued by the State of Iowa.

Sec. 5.311. STATE HVAC MECHANICAL LICENSES REQUIRED.

(1) Where this code requires mechanical work to be performed by a licensed person, such person must hold and have in their immediate possession, a valid HVAC license issued by the State of Iowa that authorizes the work being performed.

Sec. 5.312. EXEMPTIONS.

(1) No such license or registration procedure shall be required for mechanical work to be performed on a single family residential structure when the person performing the mechanical work is the owner of the structure, and has his/her primary place of residence there.

(2) No license or registration procedure shall be required for a mobile home dealer or employee of a mobile home dealer to perform water, gas, or utility service connections in a mobile home space or within ten feet of such space, located in a mobile home park, all within the meaning and intent of Section [103A.52](#) Code of Iowa. The requirements for permits and inspections remain in effect, and the mobile home dealer shall pay the permit and inspection fees. No homeowners or mobile home dealer will be allowed to tap a water main, sanitary or storm main or repair nor be allowed to install a building sanitary sewer, water service, foundation drain, or a storm sewer or make repair of such.

(Ord. 4044, 9-28-10)

DIVISION IV **DANGEROUS BUILDINGS**

Sec. 5.400. TITLE AND ADOPTION.

These regulations shall be known as the Dangerous Building Code of the City of Ames, hereinafter referred to as "this code".

(1) **Scope.** The provisions of this code shall apply to the use and occupancy, repair, maintenance, removal and demolition of every building or structure or any appurtenances connected with or attached to such buildings or structures, including all electrical, mechanical, plumbing, and fire alarm and suppression equipment and systems. Buildings and structures may be declared dangerous based upon unsafe conditions found in any one or more of these building systems.

(2) **Intent.** The purpose of this code is to establish the minimum standards of structural strength and stability, means of egress, health and sanitation, light and ventilation, necessary to safeguard the public health, safety and general welfare from fire and other hazards, and to provide safety to fire fighters, police, and other emergency responders during routine and emergency operations.

(3) **Referenced codes.** The codes adopted by reference in Section 5.100 of the City of Ames Building, Electrical, Mechanical and Plumbing Code shall be used as the minimum standards to be followed under this chapter.

Sec. 5.401. DEFINITIONS.

The following words when used in this chapter shall have the meanings:

(1) *Abatement* means the repair, modification, stoppage, removal or demolition of that which causes or constitutes a public nuisance.

(2) *Building Official* means the City official designated to administer and enforce the provisions of this code, or designee.

(3) *Dangerous building.* For the purpose of this code, any building, shed, garage, fence, or structure which has any or all of the conditions or defects hereinafter described shall be deemed to be a dangerous building, provided that such conditions or defects exist to the extent that the life, health, property or safety of the public or its occupants are endangered:

(a) Whenever any door, aisle, passageway, stairway or other means of exit is not of sufficient width or size or is not so arranged as to provide safe and adequate means of exit in case of fire or panic.

(b) Whenever the walking surface of any aisle, passageway, stairway or other means of exit is so warped, worn, loose, torn or otherwise unsafe as to not provide safe and adequate means of exit in case of fire or panic.

(c) Whenever the stress in any materials, member or portion thereof, due to all dead and live loads, is more than one and one half times the working stress or stresses allowed in the Building Code for new buildings of similar structure, purpose or location.

(d) Whenever any portion thereof has been damaged by fire, earthquake, wind, flood or by any other cause, to such an extent that the structural strength or stability thereof is materially less than it was before such catastrophe and is less than the minimum requirements of the Building Code

for new buildings of similar structure, purpose or location.

(e) Whenever any portion or member or appurtenance thereof is likely to fail, or to become detached or dislodged, or to collapse and thereby injure persons or damage property.

(f) Whenever any portion of a building, or any member, appurtenance or ornamentation on the exterior thereof is not of sufficient strength or stability, or is not so anchored, attached or fastened in place so as to be capable of resisting a wind pressure of one half of that specified in the Building Code for new buildings of similar structure, purpose or location without exceeding the working stresses permitted in the Building Code for such buildings.

(g) Whenever any portion thereof has wracked, warped, buckled or settled to such an extent that walls or other structural portions have materially less resistance to winds or earthquakes than is required in the case of similar new construction.

(h) Whenever the building or structure, or any portion thereof, because of
(i) dilapidation, deterioration or decay;
(ii) faulty construction;
(iii) the removal, movement or instability of any portion of the ground
necessary for the purpose of supporting such building;

(iv) the deterioration, decay or inadequacy of its foundation; or
(v) any other cause, is likely to partially or completely collapse.

(i) Whenever, for any reason, the building or structure, or any portion thereof, is manifestly unsafe for the purpose for which it is being used.

(j) Whenever the exterior walls or other vertical structural members list, lean or buckle to such an extent that a plumb line passing through the center of gravity does not fall inside the middle one third of the base.

(k) Whenever the building or structure, exclusive of the foundation, shows 33 percent or more damage or deterioration of its supporting member or members, or 50 percent damage or deterioration of its nonsupporting members, enclosing or outside walls or coverings.

(l) Whenever the building or structure has been so damaged by fire, wind, earthquake or flood, or has become so dilapidated or deteriorated as to become

(i) an attractive nuisance to children;
(ii) a harbor for vagrants, criminals or immoral persons; or as to
(iii) enable persons to resort thereto for the purpose of committing
unlawful or immoral acts.

(m) Whenever any building or structure has been constructed, exists or is maintained in violation of any specific requirement or prohibition applicable to such building or structure provided by the building regulations of this city, as specified in the City of Ames Municipal Code Chapter 5, Building, Electrical, Mechanical and Plumbing Code, or City of Ames Municipal Code Chapter 13, Rental Housing Code, or of any law or ordinance of this state or city relating to the condition, location or structure of buildings.

(n) Whenever any building or structure which, whether or not erected in accordance with all applicable laws and ordinances, has in any non-supporting part, member or portion less than 50 percent, or in any supporting part, member or portion less than 66 percent of the:

(i) strength,
(ii) fire-resisting qualities or characteristics, or
(iii) weather-resisting qualities or characteristics required by law in
the case of a newly constructed building of like area, height and occupancy in the same location.

(o) Whenever a building or structure, used or intended to be used for dwelling purposes, because of inadequate maintenance, dilapidation, decay, damage, faulty construction or arrangement, inadequate light, air or sanitation facilities, or otherwise, is determined to be unsanitary, unfit for human habitation or in such a condition that is likely to cause sickness or disease.

(p) Whenever any building or structure, because of obsolescence, dilapidated condition, deterioration, damage, inadequate exits, lack of sufficient fire-resistive construction, faulty electric wiring, gas connections or heating apparatus, or other cause, is determined to be a fire hazard.

(q) Whenever any building or structure is in such a condition as to constitute a public nuisance known to the common law, or in equity jurisprudence.

(r) Whenever any portion of a building or structure remains on a site after the demolition or destruction of the building or structure or whenever any building or structure is

abandoned for a period in excess of six months so as to constitute such building or portion thereof an attractive nuisance or hazard to the public.

(4) *Imminently dangerous structure* is any building, shed, fence or other man-made structure which, is in danger of imminent collapse of all or any part of such structure and is thereby an imminent danger to the health and safety of the general public or adjacent property.

(5) *Owner* means any person, agent, operator, firm or corporation having a legal or equitable interest in the property; or recorded in the official records of the state, county or municipality as holding title to the property; or otherwise having control of the property, including the guardian of the estate of any such person, and the executor or administrator of the estate of such person if ordered to take possession of real property by a court; or a trustee.

(6) *Property* means any real property, premises, structure or location on which a dangerous building is alleged to exist.

(7) *Public nuisance* means any fence, wall, shed, deck, house, garage, building, structure or any part of any of the aforesaid; or any tree, pole, smokestack; or any excavation, hole, pit basement, cellar, sidewalk subspace, dock, wharf or landing dock; or any lot, land, yard, premises or locations which in its entirety, or in any part thereof, by reason of the condition in which the same is found or permitted to be or remain, shall or may endanger the health, safety, life, limb or property, or cause any hurt, harm, inconvenience, discomfort, damage or injury to any one or more individuals in the City, in any one or more of the following particulars:

(a) By reason of being a menace, threat and/or hazard to the general health and safety of the community.

(b) By reason of being a fire hazard.

(c) By reason of being unsafe for occupancy, or use on, in, upon, about or around the aforesaid property.

(d) Is an imminently dangerous structure.

(e) By reason of the existence of any condition set forth in Section 5.401(3) of this code.

(8) *Summary abatement* means abatement of the dangerous building by the City, or a contractor employed by the City, by removal, repair, or other acts without prior notice to the owner, agent, or occupant of the property.

Sec. 5.402. AUTHORITY.

(1) City Officials. The Building Official, City Sanitarian, Fire Inspector, or their designees are authorized to conduct inspections and take any other actions to carry out and enforce the provisions of this chapter relating to dangerous buildings.

(2) Abatement. All buildings or portions thereof which are, on inspection, determined to be dangerous, as provided in subsection 5.401(3) above, are hereby declared to be public nuisances and shall be abated by repair, rehabilitation, vacation, securing against entry, demolition or removal.

(3) Summary Abatement. Where it has been determined that a structure is imminently dangerous the City may proceed by Summary Abatement.

(4) Failure to Obey Notice. If any person, firm, or corporation shall refuse to comply with a notice issued by the Building Official in regard to a dangerous structure, the Building Official may cause the person to be prosecuted or institute actions to abate the building as a public nuisance by securing against entry, initiating repair or initiating demolition.

Sec. 5.403. PROCEDURE TO REMEDY.

Whenever the Building Official or other inspector determines that any structure is dangerous the Building Official shall:

(1) Post Notice. Cause to be posted in a conspicuous place on the structure a notice which shall read substantially as follows: "Danger - Unsafe or Unfit Structure."

(2) Serve Notice. Cause to be served upon the owner thereof and the occupants, if any, a written notice which shall contain:

(a) The street address and a legal description sufficient for identification of the premises upon which the structure is located;

(b) A statement that the Building Official has found the structure to be a dangerous structure with a description of the conditions found to render the structure dangerous under the provisions of Section 5.401(3);

(c) A statement that the structure must be vacated by all occupants within a specified time, which shall be reasonable under the circumstances;

(d) A statement of the corrective action to be taken as determined by the Building Official including a time for commencing and completing such corrective action. Corrective action may include repair, removal, demolition, or other abatement, as determined by the Building Official. All repair or modification or demolition work ordered shall be commenced within a reasonable time as determined by the Building Official. When required action is repair, such work shall be completed within a reasonable time as determined by the Building Official. Requests for time extensions shall be submitted in writing to the Building Official.

(e) A statement that the Building Official may require the owner to obtain structural, or other appropriate evaluations and reports to be prepared by a structural engineer or other appropriately licensed persons for use in developing a complete and detailed corrective action plan. The notice shall set a date for submittal of such professional evaluations and reports. If the owner is unwilling or unable to obtain such required evaluations and reports, the Building Official may contract with qualified persons and invoice the building owner to recover costs for such services, or assess the costs against the property in the manner of a special assessment

(f) A statement that if the required repair, modification or demolition work is not commenced or completed within the time specified, the City may cause the structure to be abated or demolished and assess all costs thereof.

(g) A statement that the Building Official will report the failure of the owner to repair, modify or demolish the structure to the Building Board of Appeals (as established in Municipal Code Chapter 5 Division VI, hereinafter referred to as "the Board"), City Manager, and City Council; and

(i) that the Board will conduct a public hearing on the report and may direct the Building Official to proceed with demolition of the structure or abatement of the dangerous condition and assessment of costs in accord with procedures set forth in this code, and

(ii) that the owner may file written objections with the Building Official, and appear at the public hearing and be heard orally in relation to the matter at the time of the public hearing before the Board.

(h) A statement that the owner has the right to request a hearing by the Board to appeal the notice.

(i) A statement that any person who is the record owner of the premises, location or structure at the time an order pursuant to this Ordinance is issued and served upon him, shall be responsible for complying with that order, and liable for any costs incurred by the City therewith, notwithstanding the fact that the Building Official conveys his interests in the property to another after such order was issued and served.

(3) Form of Notice. Such notice may be in the form of an ordinance, or by certified mail, or by personal service to the property owner as shown by the records of the city assessor and to the occupants, if any, and shall state the time within which action is required. However, in an emergency, the city may perform any action which may be required under this section without prior notice, as a Summary Abatement and assess costs.

(4) File Notice. The Building Official shall file a copy of such written notice with the county recorder.

Sec. 5.404. ABATEMENT BY OWNER; TIME FOR COMPLIANCE.

(1) Duties. The owner or occupant of a Dangerous Building who has been served notice under Section 5.403 shall:

(a) Promptly take action to make the dangerous building as safe, secure, and free from danger to others as is possible pending repair or demolition.

(b) Within fifteen (15) days after date of the notice file with the Building Official a written statement of intent to comply which includes plans detailing the repairs or demolition to be done, and includes a completion date.

- (c) Obtain approval from the Building Official of the repair or demolition plans submitted.
- (d) Within a reasonable time after filing a statement of intent and receiving approval, commence actual repairs or modification in accord with the statement of intent.
- (2) Time Extensions. Extensions of time may be granted as follows:
 - (a) The owner may request one extension of time from the Building Official for the owner to abate the dangerous conditions by demolition or to make required repairs, provided such extension is limited to a specific time period.
 - (b) If the owner has been granted one extension of time by the Building Official, any additional request for an extension of time shall be taken as an appeal to the Building Board.

Sec. 5.405. APPEAL PROCEDURES.

- (1) Manner. The owner or occupant of the property who has been served with a notice pursuant to this Code that a dangerous building exists and that it must be abated or repaired as set forth in the Building Official's notice may make a written request to the Building Official for a hearing before the Building Board. This request shall be made within fifteen (15) days after the date of such notice.
- (2) Grounds. A request for a hearing shall be based on one or more of the following grounds:
 - (a) That the Building Official erred in the determination that a building is dangerous; or
 - (b) where the Building Official rejects or refuses to approve the mode or manner of construction and/or material to be used in the repair or abatement of the building; or
 - (c) where it is asserted that the true intent of this code has been incorrectly interpreted; or
 - (d) where it is asserted that the provision of this code do not fully apply; or
 - (e) that specific proposed alternative actions will remove or eliminate the condition such that it no longer endangers the health, safety, life, limb or property, or causes any hurt, harm, inconvenience, discomfort, damage or injury to any one or more individuals in the City; or
 - (f) additional time for compliance is sought and one extension of time has already been granted by the Building Official.
- (3) Date. The Building Official shall, within fifteen (15) days after receipt of such a written request, set a date for a hearing by the Board. The hearing shall be held as soon as practicable following receipt by the Building Official of the written request and at least seven (7) days notice of the hearing shall be given to the individual who made the written request for the hearing.
- (4) Authority of Board. The hearing shall be heard and conducted by the Board. When acting on a dangerous building appeal, the Board may uphold the notice as issued, or amend or modify the notice, or extend the time for compliance with the notice by such time limit as the majority of the Board may determine, all in accord with the scope of authority as follows:
 - (a) In determining whether a building is dangerous, the Board shall consider whether a building or structure has any or all of the conditions set forth in Sec. 5.401(3) of this code to the extent that the life, health, property, or safety of the public or its occupants, are endangered
 - (b) In considering alternative methods of compliance, the Board may approve any alternate if it finds that the proposal is satisfactory and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety; and that application of such alternative will eliminate or remove all of the conditions identified as dangerous, as set forth in Sec. 5.401(3) of this code.
 - (c) In considering alternative methods of compliance, the Board may require that sufficient evidence or proof be submitted to substantiate any claim that may be made regarding the use of alternative methods or materials.
 - (d) The Board shall have no authority to waive the requirements of this code.
 - (e) In considering interpretations of the Code, the Board shall follow the intent, spirit and purpose of the code.
 - (f) The Board shall have no authority relative to interpretation of the procedural provisions of this code.
 - (g) A decision of the Board to vary the application of any provision of this Code or to modify an order of the Building Official shall specify in what manner such variation or

modification is made, the conditions upon which it is made, and the reasons therefore.

(h) The Board may find that the Building Official erred in the determination that a dangerous building exists. To make this finding, the Board must conclude the building has none of the conditions or defects described in Section 5. 401(3) of this Code, to the extent that the life, health, property or safety of the public or the building occupants are endangered.

(i) When an owner has applied for an extension of time, the Board may grant one extension of time to comply with an order to repair or modify or demolish a structure when the owner affirmatively shows the financial ability to perform the work; and the work cannot practicably be completed within the time provided. Such extension shall be for a reasonable period of time generally not to exceed ninety (90) days for repairs or modifications and generally not to exceed sixty (60) days for demolition, except when extraordinary circumstances can be shown, the Board may exceed these general time periods.

(5) No Defense. It shall not be a defense to the determination that a dangerous building exists that the structure is boarded up or otherwise enclosed.

Sec. 5.406 DEMOLITION OR ABATEMENT BY CITY.

(1) When the owner fails to commence or complete the required repairs, removal or demolition within the specified time period and does not timely appeal, the Building Official shall report the owner's failure to the Board, City Manager, and City Council.

(2) The Board shall then hold a hearing and may, by majority vote of approval, authorize the Building Official to demolish the structure, or may take other abatement action as deemed appropriate, including the granting of a stay pursuant to Section 5.407.

(3) Following Board action, the Building Official shall file a certified copy of the Board's decision with the county recorder, and shall issue a notice of intent to demolish or abate to the owner of the structure.

Sec. 5.407. STAY OF DEMOLITION OR ABATEMENT.

(1) The owner may request a delay in the demolition or abatement of a structure at the time of hearing on the Building Official's recommendation for Board action approving demolition or abatement. Such request shall be made in writing. The Board may grant such request when in its opinion it is practical, economical and structurally possible to rehabilitate the structure to comply with this code, and the owner complies with the following conditions.

(2) No stay granted shall be effective, however, unless and until such person signs a written agreement with the city wherein the owner agrees:

(a) To make all of the necessary repairs consistent with the approved plans within a time limit to be determined by the Board; and

(b) To grant the city the right to award a contract and to enter in and upon such premises for the purposes of demolishing same upon the failure of the person to complete all required repairs within the agreed time limit; and

(c) To reimburse the City for its actual costs incurred in inspection and administration expenses until the structure is brought into compliance with the original notice, through repair or demolition; and

(d) To file with the city a corporate surety performance bond, a cashier's check, a certified check drawn on an Ames bank or credit union, a letter of credit from an Ames bank or credit union, or other surety approvable by the City, in an amount sufficient to pay the estimated cost of demolition or abatement as determined by the Building Official, and to assure payment of the reimbursement of costs to the City. The surety shall be conditioned upon performance of the repairs within the agreed time period, together with any subsequent written time extensions thereto, and conditioned upon payment of the City's reimbursement as same shall become due. Upon such owner's failure to make all of the repairs in a manner acceptable to the city within the agreed time period, together with written extensions thereto, the Building Official may proceed to demolish or abate the structure.

(3) The proceeds of the surety given pursuant to this Section shall be applied by the City first against any unpaid reimbursement and then against the assessment for demolition.

Sec. 5.408. ACCESS FOR DEMOLITION OR ABATEMENT – PENALTIES.

The owner of the structure who has received notice of the intent of the Building Official to demolish or abate, shall give entry and free access to the property to the Building Official and all other persons acting on behalf of the City. Any owner who refuses, impedes, interferes with or hinders or obstructs entry by such agent pursuant to a notice shall be subject to enforcement actions which may include arrest and prosecution for Interference with Official Acts, or other civil or criminal charges.

Sec. 5.409. GRADING OF PREMISES AFTER DEMOLITION.

Whenever the premises is demolished, whether carried out by the owner or by the Building Official, such demolition shall include the filling of the excavation on which the demolished structure was located in such manner as to eliminate all potential danger to the public health, safety, or welfare arising from such excavation. This includes, but is not limited to the removal of the entire basement including walls, floor, footings, and foundations; cisterns or wells; accessory buildings and structures; abandoned utility services: water, sewer, gas, and electric.

Sec. 5.410. EXTERMINATION PROCEDURE BEFORE DEMOLITION OR ABATEMENT.

Demolition or abatement shall be preceded by an inspection of the premises by the Building Official to determine whether or not extermination procedures are necessary. If the premises are found to be infested, appropriate extermination to prevent the spread of rats, insects, or other vermin to adjoining or other areas or properties shall be instituted before demolition, as appropriate. The costs for such actions shall be included in the final assessment against the property and/or the owner.

Sec. 5.411. DEMOLITION OR ABATEMENT CONTRACT.

The Building Official shall commence demolition as follows:

- (1) Pursuant to the Board's decision to proceed with demolition or abatement, the City shall award a contract in accordance with the City's purchasing policies, for that work.
- (2) A contract for demolition ordered by the Building Official or other designated City official in response to an emergency condition shall be approved by the City Manager.

Sec. 5.412. REMOVAL OF POSTED NOTICE AND ENTRY ON POSTED PREMISES PROHIBITED.

- (1) No person shall deface, cover, obliterate, or remove the notice posted pursuant to this Code from any structure which has been so posted by the Building Official as unsafe or unfit. The Building Official shall remove such posted notice when the defect or defects which caused the posted notice have been eliminated, or when the demolition or removal of the structure is commenced.
- (2) No such structure shall again be occupied or used until such posted notice is removed by the Building Official. No persons shall enter a posted building except with the express permission of the Building Official. This provision shall not apply to emergency fire, medical or police personnel responses.

Sec. 5.413. SERVICE BY PUBLIC UTILITIES.

- (1) It is unlawful for any public utility corporation or company to furnish gas or electrical service to any structure which has been posted as unsafe or unfit after the Building Official has notified the public utility of the posting, and the date by which services shall be discontinued. The utility service shall not be restored to a posted structure until notice, authorizing the restoration of such service is received from the Building Official by the utility corporation or company. The Building Official may authorize temporary or limited restoration of service to be used in connection with the renovation, repair or remodeling of the structure to enable compliance with the provisions of this title.

Sec. 5.414. SUMMARY ABATEMENT OF IMMINENTLY DANGEROUS STRUCTURES.

- (1) Whenever a complaint is made to the Building Official or the Building Official otherwise becomes aware of the existence of an imminently dangerous structure the Building Official shall promptly inspect such structure. Should the Building Official find that an imminently dangerous structure exists, and that the public health, safety or welfare may be in immediate danger, then summary abatement may commence and the Building Official may promptly cause the structure or any portion of it, to be demolished, removed or abated.
- (2) When a summary abatement is used, notice to the owner, agent or occupant of the property is not required prior to abatement. Following summary abatement, the Building Official shall

cause written notice to be served promptly to the owner describing the action taken to abate the imminently dangerous structure.

Sec. 5.415. COST OF ABATEMENT; LOW INCOME, ELDERLY PERSONS.

(1) Policy. Notwithstanding the other provisions of this code, the cost of abating a dangerous building may be waived for low income and elderly persons, if upon application it appears to the Building Official that the conditions set forth in subsection (2) are met.

(2) Eligibility. To be eligible for waiver of abatement costs a person must be classified as “low income”, defined as having household income of not more than 50% of the Story County median income.

(3) Other eligibility requirements. Additionally, all persons wishing to qualify for waiver or nuisance abatement costs must:

(a) Furnish proof of the income requirements as set forth above in the manner and form designated by the Building Official; and

(b) Must own, or be in the process of purchasing the property from which the nuisance is abated; and

(c) The property from which the nuisance is abated must be their primary residence.

(4) Official Notice. The abatement of the dangerous building in question must have been required by the Building Official and the person requesting the waiver of costs must have been officially notified by the Building Official to remove the same.

(5) Application. Applications for waiver of abatement costs shall be filed with the Building Official on forms supplied by the City. All information required to be given on such form shall be supplied and verified by the applicant.

(6) Amount. The Building Official shall have authority to waive up to \$1,000 per calendar year, for any one parcel of real property or any one person. Requests for waiver in excess of that granted by the Building Official shall be subject to approval of the City Council.

Sec. 5.416. SEVERABILITY.

If any section, subsection, sentence, clause, phrase or portion of this code is for any reason held to be invalid or unconstitutional by the final decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this code. The City Council declares that it would have adopted this code and each section, subsection, sentence, clause, phrase, or portion thereof, despite the fact that any one or more section, subsection, sentence, clause, phrase, or portion would be declared invalid or unconstitutional.

(Ord. 3986; 03-03-09)

DIVISION V

PENALTIES AND ENFORCEMENT

Sec. 5.500. VIOLATIONS.

Any violation of any provision of Chapter 5, Building Code, or any model code adopted in Chapter 5, is hereby declared a municipal infraction, and a public nuisance.

Sec. 5.501. MUNICIPAL INFRACTION CITATION.

Any violation of any provision of Chapter 5 is punishable by a penalty of \$500 for a first offense, and a penalty of \$750 for a second offense, and \$1,000 for each succeeding offense.

Sec. 5.502. NUISANCE ABATEMENT.

Any violation of any provision of Chapter 5 may be abated as a Public Nuisance, in the manner that public nuisances are now or may hereafter be commonly abated, in accord with provisions of the State Code of Iowa.

Sec. 5.503. STOP WORK ORDERS.

Any work being performed in violation of any provision of Chapter 5 may be ordered immediately stopped, in accord with provisions of this code.

DIVISION VI **MEANS OF APPEAL**

Sec. 5.600. BUILDING BOARD OF APPEALS

There is established a Building Board of Appeals to hear appeals of persons in matters of building construction, safety and code compliance within the scope of the building, electrical, mechanical, and plumbing codes as adopted by the City of Ames.

Sec. 5.601. APPEAL APPLICATION.

Any person directly affected by a decision of the Building Official or a notice or order issued under this code shall have the right to appeal. That appeal shall be heard by the Building Board of Appeals. An appeal shall be made in writing and be filed no later than twenty (20) days after the date of the notice or order. An application for appeal shall be based on a claim that:

- (1) the true intent of this Code or the rules legally adopted hereunder have been incorrectly interpreted, or
- (2) the provisions of this Code do not fully apply, or
- (3) the requirements of this Code are adequately satisfied by other means, and the specific proposed alternative action will increase the degree of general code compliance of the specific system or the building and premises, or
- (4) there are specific fixed conditions that make strict compliance with this Code impracticable, or
- (5) required actions cannot be completed within the time limit specified by the Building Official

Sec. 5.602. BOARD MEMBERSHIP AND APPOINTMENT.

(1) The Board shall consist of seven members who are qualified by experience and training to pass on matters pertaining to building construction and who are not employees of the City of Ames. The Building Official shall be an ex-officio member but shall have no vote on any matter before the Board.

(2) Board members shall be appointed by the Mayor with the approval of the City Council. The term of office shall be for three (3) years, except for the terms of office for the Board when initially established. The Mayor may prescribe a shorter than a full term of appointment in order to stagger terms. No member who has served two (2) full consecutive terms is eligible for reappointment.

- (3) Membership shall consist of:
- 1 licensed architect
 - 1 professional engineer
 - 1 general contractor
 - 1 homebuilder
 - 1 licensed journeyman or master electrician, or electrical contractor
 - 1 licensed journeyman or master plumber, or plumbing contractor
 - 1 licensed master hvac technician, or mechanical contractor

Sec. 5.603. BOARD CHAIRPERSON.

The Board shall annually elect one of its members to serve as chairperson.

Sec. 5.604. CONFLICT OF INTEREST.

A member shall not hear an appeal in which the member or immediate family member has a personal, professional or financial interest.

Sec. 5.605. BOARD RECORDS.

The Building Official shall designate a qualified person to serve as secretary to the Board. The secretary shall file a detailed record of all proceedings in the offices of the Inspection Division and the City Clerk.

Sec. 5.606. MEMBER COMPENSATION.

Members shall receive no compensation.

Sec. 5.607. MEETING SCHEDULE.

The Board shall meet upon notice from the Building Official within 20 days of the filing of an appeal, or at stated periodic dates. An appellant may waive a timely hearing by filing a written waiver explaining the cause for seeking a delay.

Sec. 5.608. OPEN MEETINGS.

The Board shall adopt and make available to the public, procedures under which hearings will be conducted.

Sec. 5.609. BOARD AUTHORITY.

The Board has authority to affirm, modify or reverse the decision of the Building Official.

Sec. 5.610. ACTION ON BOARD DECISION.

The Building Official shall take prompt action in accordance with the decision of the Board.

Sec. 5.611. STAY OF ENFORCEMENT.

Appeal of a notice and order (other than an Imminent Danger notice) shall stay enforcement of the notice and order until the appeal is heard by the Board.

Sec. 5.612. CODE AMENDMENTS.

- (1) Authority - The Board of Appeals may recommend revisions to this Code.
- (2) General - The model codes adopted in this chapter shall be retained in their entirety, unless compelling factual evidence indicates that deviation from them is necessary to accomplish the objective of the codes. Local geographic and climatic conditions, for example, require local modification of structural design parameters, and are included in this code.
- (3) Process - Proposed revisions are subject to public hearing and action at the Board level, followed by Council discussion, public hearing, and action.

DIVISION VII – Reserved

**DIVISION VIII
BUILDING MOVING**

Sec. 5.801. STRUCTURE DEFINED.

The term "structure" as used in this division means any house, building, or other structure eight (8) feet or more in width, which is to be moved from one location to another upon, along, across, over, or near any street, avenue, alley, highway, sidewalk, or other public ground of the city.
(Code 1956, Sec. 46-1; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.802. "HOUSE MOVER" DEFINED.

The term "house mover" as used in this chapter means a person who has been issued a valid license to move structures.
(Code 1956, Sec. 46-2; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.803. LICENSE REQUIRED.

No person shall engage in the business of moving structures within the city without first obtaining a

license therefore, as hereinafter provided.
(Code 1956, Sec. 46-3; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.804. APPLICATION FOR LICENSE REQUIRED.

Any person, intending to carry on the business of house mover in the city shall file in the office of the city manager an application in writing upon forms furnished by the city, and among other things such application shall state:

- (1) The name and address of the applicant.
- (2) The person who will have charge of work done, qualifications and experience as such, and that the person has knowledge of the provisions of this Code and the city ordinances relating thereto.
- (3) The applicant agrees to reimburse the city or others for all costs incurred in the moving of structures under the provisions of the license and permit issued therefore.

Sec. 5.805. BOND.

The applicant must, before the license shall be issued, file with the city clerk a corporate surety bond executed to the city in the amount of two thousand, five hundred dollars (\$2,500.00) with sureties approved by the city clerk, conditioned that all work done under such license shall be done in a good, competent manner and in accordance with the ordinances of the city relating thereto and that the applicant or a surety will pay to the city or any person injured all damages for injuries to persons or property caused by the negligence, fault or mismanagement of said applicant, or due to any other cause, in doing any work under said license or any permit issued for such work, and will pay to the city any cost or expense incurred in repairing or restoring any pavement, curbs, sidewalks, electric facilities or other public works injured and of restoring such works to its previous condition.

(Code 1956, Sec. 46-5; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.806. INSURANCE REQUIRED.

Applicant shall procure and maintain, for the duration of the license period, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the function for which the license is issued. Applicant shall furnish the City of Ames with certificates of insurance evidencing the following coverages:

- (1) Comprehensive General Liability with limits of no less than \$1,000,000 combined single limits per occurrence for bodily injury, personal injury and property damage.
- (2) Automobile Liability with limits of no less than \$1,000,000 combined single limits per occurrence for bodily injury, personal injury and property damage.
- (3) Worker's Compensation and Employee's Liability as required by the laws of the State of Iowa. The certificate must be on file in the office of the City Clerk, City of Ames before a license shall be issued.

(Code 1956, Sec. 46-6; Ord. No. 3043, Sec. 1, 4-11-89; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.807. ISSUANCE OF LICENSE.

Upon approval of the application for a license, the filing and approval of the bond and certificate of insurance set forth herein, and the payment of the license fee, the city clerk shall issue a license to the applicant as a house mover.

(Code 1956, Sec. 46-7; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.808. LICENSE FEE; EXPIRATION; TRANSFERABILITY.

A fee for a license as a house mover shall be set by the city clerk to cover costs of administration and issuance. The license shall expire on the first day of January next ensuing after issuance therefore. The license shall not be transferable.

(Code 1956, Sec. 46-8; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.809. REVOCATION OF LICENSE.

Any licensed house mover who shall, in any application for a permit, make any untrue or false statements, or who shall be guilty of a violation of this chapter, or who shall be guilty of acts of negligence in the conduct of the business, shall upon such finding have the license revoked by the city council.
(Code 1956, Sec. 46-17; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.810. PERMIT REQUIRED.

No person shall move any structure upon, across or over any street, avenue, alley, highway, sidewalk or public ground of the city, or raise, lower or move any structure within twenty (20) feet of any public sidewalk, without first obtaining a permit therefore from the city manager as herein provided.
(Code 1956, Sec. 46-9; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.811. APPLICATION FOR PERMIT.

All applications for a permit as herein required shall be in writing on forms furnished by the city, filed in the office of the city manager, and among other things, shall state:

- (1) The name and license number of the house mover.
 - (2) The present and proposed location of the structure to be moved together with the name and address of the owner thereof.
 - (3) The building permit number as issued for the structure in the proposed location.
 - (4) A description of the structure to be moved, with the size, maximum height when loaded and ready to be moved and the maximum width of the structure in the direction of travel.
 - (5) The route over which the structure is to be moved.
 - (6) The day and hour of the day when the structure will first be moved into the limits of the public way and the approximate length of time the structure will be within said limits.
 - (7) Whether any, and what electric lines, telephone or telegraph wire, cables or guys will have to be cut or moved or will be interfered with and the locations thereof.
 - (8) What railway tracks, if any, will be crossed, their location, and the day and approximate hour when such crossing will be made.
 - (9) Whether any street structures will be removed or interfered with, including sidewalks, curbing, fire hydrants, and street signs and signals.
 - (10) What shade trees, if any, will require trimming and the location of the property and name of property owner thereof and whether consent for such trimming has been obtained from such owners.
 - (11) A description of the type of moving equipment to be used.
 - (12) Said application shall state that all work will be done in strict accordance with the provisions of this chapter and under the direction and supervision of the city manager.
- (Code 1956, Sec. 46-10; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.812. PERMITS TO UNLICENSED APPLICANTS AUTHORIZED.

The city manager may issue moving permits for structures to persons, whether licensed or not, when the maximum width of such structure along the line of travel does not exceed fourteen (14) feet, and when they may be moved on rubber tired vehicles or trucks in such a manner as will not substantially interfere with traffic, damage any street structure or trees, require the removal of any electric, telephone or telegraph wires, or damage any street pavements or sidewalks. Before issuing such a permit the city manager shall designate the route to be followed and the date and time when such moving shall take place, and shall supervise the operation of moving thereof.
(Code 1956, Sec. 46-13; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.813. PERMIT FEES.

The City Council shall establish and charge reasonable fees to cover the costs of issuing house moving permits. Additionally, the city manager may charge the house mover for the costs of special services rendered by police units, utility or street crews or any special city expense caused by the moving of a house or building.
(Code 1956, Sec. 46-19; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.814. COMPLIANCE WITH BUILDING, ZONING, OTHER ORDINANCES.

No moving permit shall be issued unless the structure, if moved to a new location in the city, will comply with the zoning, building code and all other ordinances of the city.
(Code 1956, Sec. 46-11; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.815. OBSTRUCTING STREETS REGULATED.

No moving permit shall be issued to move any structure over the paved streets, avenues or highways of the city when the maximum width of such structure in the direction of travel shall occupy more than two (2) feet less than the total width of paving between curbs, and no structure shall be allowed to obstruct the free passage of any street, avenue or highway for a greater length of time than set forth in the permit issued therefore, except in case of unavoidable delay and through no fault or negligence on the part of the permit holder, the city manager may grant such extension of time as is reasonable.
(Code 1956, Sec. 46-12; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.816. MOVING OVER RAILWAY TRACKS.

No permit shall be issued for the moving of any structure across the tracks of any railway or street railway until the mover thereof shall have given the superintendent of such railway or street railway companies not less than twenty-four (24) hours notice before such crossing of the tracks is to be made and satisfactory arrangements for such crossing have been made and the city manager advised in detail of such arrangements.
(Code 1956, Sec. 46-14; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.817. CONSENT TO MOVE WIRES, CABLES REQUIRED.

No permit shall be issued for the moving of any structure which requires the removal of electric, telephone or telegraph wires or cables until not less than twenty-four (24) hours notice has been given of the time and place such removal is desired and the consent of the electric department of the city and/or the telephone or telegraph company has been secured for such removal and the city manager advised of such satisfactory arrangements.
(Code 1956, Sec. 46-15; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.818. ISSUANCE, CONTENTS OF PERMITS; DENIAL.

When an application has been made for a moving permit as provided herein and is approved by the city manager, the city manager shall, after being presented with a receipt for payment of the permit fee by the house mover to the city clerk, issue to the applicant a permit, in duplicate, numbered in consecutive order, one copy being furnished the applicant and a record thereof retained in the manager's office. Such permit shall contain the name and address of the person to whom issued, the route to be followed, and the time of starting and completing the moving operation within public ways, an abstract of the information and agreements contained in the application, and such regulations, conditions, and instructions as the city manager may deem necessary to protect public and private property and secure compliance with the provisions of this chapter. Such permit shall not take effect, and the work shall not be commenced until the time therein stated and shall at all times be under the supervision and control of the city manager or the manager's designee. The city manager may deny an application for a permit when it is necessary to protect public or private property; or public safety; or to secure compliance with this Code or the laws of the State of Iowa.
(Code 1956, Sec. 46-16; Ord. No. 2163, Sec. 2, 10-18-66; Ord. No. 3194, Sec. 1, 9-24-92)

Sec. 5.819. AUTHORITY TO REQUIRE PLANKING OF STREETS.

When in the judgment of the city manager it is necessary to protect streets or street improvements, the city manager may require the house mover to properly and adequately plank such streets and all rollers, trucks or other devices used in conveying and moving same shall run upon and rest upon such planks at all times.
(Code 1956, Sec. 46-18; Ord. No. 3194, Sec. 1, 9-24-92)

DIVISION IX

Noxious Weeds

Sec. 5.901. WEED ORDINANCE.

(1) Words and Terms Defined

(a) Noxious Weeds: Primary and secondary classes of weeds as defined by Iowa Code Section 317.1A.

(b) Weed Official: Person designated by the city manager to enforce this section.

(2) Nuisance Declared; Penalty

(a) It shall be a public nuisance for any owner or person in the possession or control of any land to allow any noxious weeds to grow thereon.

(b) Duty To Cut Noxious Weeds: Each owner and each person in the possession or control of any land shall cut or otherwise destroy, in whatever manner prescribed by the weed official, all noxious weeds thereon and shall keep said lands free of such growth.

(c) Interference With Weed Official: No persons shall interfere with the weed official or any appointed assistant while engaged in the enforcement of this chapter.
(Ord. No. 4114, 6-12-12)

CHAPTER 8

FIRE CODE

DIVISION I ADOPTION

Sec. 8.101. INTERNATIONAL FIRE CODE ADOPTED.

The ~~2009-2012~~ Edition of the International Fire Code (IFC) as published by the International Code Council, including Appendix Chapters B, Fire Flow; D, Fire Apparatus Access Road; and E, Hazard Categories; is hereby adopted by the City of Ames, Iowa, for the purpose of prescribing regulations pertaining to conditions hazardous to life from fire and explosives, together with the deletion, additions and modifications hereinafter stated.

DIVISION II AMENDMENTS, ADDITIONS AND DELETIONS

Sec. 8.201. PERMITS.

Delete Section 105 of the International Fire Code relating to permits, except, add the following text:

Section 105.7.1 Automatic fire-extinguishing systems. A construction permit is required for installation of or modification to an automatic fire-extinguishing system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

Section 105.7.5-6 Fire alarm and detection systems and related equipment. A construction permit is required for installations of or modification to fire alarm and detection systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

Sec. 8.202. AMENDMENTS

(1) Amend Section 104.8 Modifications, by deleting the text and inserting the following in lieu thereof: Whenever there are practical difficulties involved in carrying out the provisions of this code, the fire chief shall have the authority to grant modifications for individual cases, provided the fire chief shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the files of the fire department.

(2) Amend Section 307.4.3 Portable Outdoor Fireplaces, by deleting the exception and inserting the following in lieu thereof:

Recreational fires are permitted in approved containers, such as chimineas, contained fire pit/ring, screened devices. Such fires shall be located more than 15 feet from any structure, including decks, porches, roofs, garages, sheds, and fences. The immediate area within 15 feet of the fire shall be clear of combustible materials, such as weeds, shrubs, and furniture.

(23) Amend Section 308.1.4 Open-flame cooking devices, by deleting the text and inserting the following in lieu thereof: Charcoal burners and other open-flame cooking devices shall not be operated or located on

combustible balconies or within 10 feet of combustible construction. Exceptions: Such devices are permitted in (1) one and two family dwellings; and (2) where buildings, balconies and decks are protected by an automatic sprinkler system.

- (43) Amend **Section 503.2.4, Turning radius**, by deleting the text and inserting the following in lieu thereof:

Radius. The inside turning radius of a 20 foot wide fire apparatus road shall be a minimum of 20 feet, and the outside turning radius of such road or lane shall be a minimum of 50 feet.

- (54) Amend **Section 503.4, Obstruction of fire apparatus access roads**, by deleting the text and Inserting

the following in lieu thereof: Where fire apparatus access roads are established and are signed or marked as required by the fire chief, parking or obstructing in any manner of those roads shall be prohibited. The fire chief, traffic engineer and police chief or their representatives are authorized to enforce this subsection by the issuance of citations, or removal and impoundment of the obstructions, or both. Exception: Attended vehicles may be stopped in a fire apparatus access road for loading and unloading.

- (65) Amend **Section 506.1 Where required**, by deleting the text and inserting the following in lieu thereof:

Knox® brand key boxes are required for new buildings equipped with monitored fire alarms, sprinkler systems, or as otherwise ordered by the fire code official. Key boxes shall be installed in an approved location and shall contain keys to gain necessary access for life-saving or fire-fighting purposes.

- (7) Amend **Section 903.4, Sprinkler system monitoring and alarms**, by adding the following exception:

Water supply valves that are locked in the open position.

- (8) Amend **Section 903.4.2, Alarms**, by inserting the following text:

Approved audible devices shall be connected to every automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Alarm devices shall be provided on the exterior of the building in an approved location and can be required on the interior of the building in an approved location. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.

- (9) Amend **Section 905, Standpipe systems**, by adding the following general provision:
The requirements of this section shall be at the discretion of the fire chief.

(10) Amend Chapter 11, Construction Requirements for Existing Buildings, by adding the following to the end of this chapter: Compliance with the provisions of this Chapter shall be completed within a time schedule approved by the fire chief.

- (11) Add the following local provision:

ZONING DISTRICTS IN WHICH STORAGE OF FLAMMABLE OR COMBUSTIBLE LIQUIDS IN BURIED OR UNDERGROUND TANKS IS PROHIBITED.

Installation of underground flammable or combustible liquid storage tanks is prohibited in the following zoning districts: RL, RM, RH, RLP, UCRM, ~~F-S, FS-RL, FS-RM, F-PRD, S-SMD, F-VR, and~~ S-HM Zoning Districts. The fire chief, or designees, will have the authority to alter or allow installations in prohibited zones after the consideration of special features including but not limited to topographical conditions, nature of occupancy and proximity to buildings, capacity of proposed tanks, and degree of fire protection to be provided and available. Any installation shall be in compliance with state and local codes. This section shall not apply to underground heating oil installations.

- (12) Add the following local provision:

ZONING DISTRICTS IN WHICH STORAGE OF FLAMMABLE OR COMBUSTIBLE LIQUIDS IN OUTSIDE ABOVE GROUND TANKS IS PROHIBITED.

The limits in which the storage of flammable or combustible liquids is restricted are hereby established as follows:
RL, RM, RH, RLP, UCRM, ~~F-S, FS-RL, FS-RM, F-PRD, S-SMD, F-VR, and~~ S-HM Zoning Districts. The fire chief, or designees, will have the authority to alter or allow installations in prohibited zones after the consideration of special features including but not limited to topographical conditions, nature of occupancy, proximity to buildings,

capacity of proposed tanks and degree of fire protection to be provided and available. Any installation shall be in compliance with state and local codes. This section shall not apply to heating oil installations.

(1341) Add the following local provision:

ZONING DISTRICT RESTRICTIONS ON STORAGE OF MORE THAN 100LBS LIQUEFIED PETROLEUM GASES.

The limits in which storage of liquefied petroleum gas is restricted, are hereby established as follows: RL, RM, RH, RLP, UCRM, F-S, FS-RL, FS-RM, F-PRD, S-SMD F-VR, and -S-HM Zoning Districts. The fire chief, or designees, will have the authority to alter or allow installations in prohibited zones after the consideration of special features including but not limited to topographical conditions, nature of occupancy and proximity to buildings, capacity of proposed tanks, and degree of fire protection to be provided and available. Any installation shall be in compliance with state and local codes.

**DIVISION III
SPRINKLER SYSTEM RETROFIT**

Sec. 8.301 EXISTING BUILDINGS TO HAVE SPRINKLER SYSTEMS.

- (1) The following terms as used in this article shall have the meaning respectively ascribed to them in this section.

Automatic Sprinkler System. An automatic sprinkler system within the meaning of this section shall consist of piping designed in accordance with fire protection engineering standards, that includes a suitable water supply, and which is activated by heat or the products of combustion, to discharge water over the fire area.

Fire Chief means the Fire Chief of the Ames Fire Department or said Fire Chief's designee.

High-Rise buildings shall mean buildings having occupied floors located more than 75 feet above the lowest level of fire department vehicle access.

~~**Impaired evacuation capability occupant**, for the purposes of this article, shall mean an occupant that cannot reliably evacuate a building in a timely manner because of that occupant's physical and/or mental limitations or disabilities.~~

- (2) **Retrofit Requirements.** The following existing buildings shall be retrofitted with an automatic sprinkler

system in accordance with Section 403.2 of the 2003 International Building Code and Section 903 of the 2003 International Fire Code.

(a) Existing high-rise buildings having occupied floors located more than 75 feet above the lowest level of fire department vehicle access.

(b) Institutions. Buildings housing more than 16 persons on a twenty-four hour basis to be cared for or provided a supervised environment because of their physical or mental condition, including hospitals, nursing homes, and assisted living facilities.

~~(c) **Mobility Impaired.** Buildings with 16 or more dwelling units of which eight are occupied by one or more persons who have an impaired evacuation capability. The Fire Chief, or his/her designee, shall have the authority to determine whether a person is an occupant with an impaired evacuation capability as aforesaid, and to conduct a timed evacuation drill to determine the extent to which an apartment building may contain occupants with such impaired evacuation capabilities.~~

(d) **Dormitories.** A building in which sleeping accommodations are provided for more than 16 persons, who are not related by marriage or consanguinity, in one room or a series of closely associated rooms, with or without meals, including fraternity and sorority houses, barracks, and dormitories.

(3) Each and every existing building that comes within the scope of this section shall be retrofitted as aforesaid not later than October 1, 2011.

- (4) Should a facility be unable to meet the prescribed date of October 1, 2011, the owners can request up to two extensions. Requests for extension will be heard by the Building Board of Appeals.
- (a) A first request for extension must be brought to the Building Board of Appeals prior to October 1, 2010. If granted an extension for three years, the implementation period would end on October 1, 2014.
- (b) Should a facility be unable to meet the extended compliance date of October 1, 2014, a second request for extension must be brought to the Building Board of Appeals prior to October 1, 2013. If granted an extension for two years, the implementation period would end on October 1, 2016.
- (5) In order to grant an extension, the Board must find all of the following five criteria have been met:
- (a) The owners have made a compelling case that they cannot be Code compliant by the prescribed ordinance date.
- (b) The owner's request for extension is based upon financial need.
- (c) The owners have made substantial and unsuccessful efforts to acquire necessary funds.
- (d) Complete and thorough cost estimates, construction plans, and Code compliant sprinkler system designs have been developed.
- (e) The owners have a viable plan for compliance if an extension is granted.

DIVISION IV OPEN BURNING

Sec. 8.401 OPEN BURNING.

(1) Prohibition.

The burning of garbage, refuse, leaves, landscape waste and all other combustible materials is prohibited except as specifically permitted by the fire chief as provided in the following exceptions.

EXCEPTIONS:

(a) Landscape waste.

Landscape waste produced in clearing, grubbing and construction operations may be burned on site at such locations and under such conditions as are granted advance written approval of the fire chief or designee. No building materials, trade wastes, rubber tires, material left from demolition of any structure, landscape waste originating from a different location nor any other material may be mixed with the landscape waste when burned. Gasoline shall not be used to ignite landscape waste

(b) Open burning on public or private property.

Open burning of prairies, pastures, fields, yards and road ditches may occur at such locations and under such conditions as are granted advance written approval of the fire chief or designee.

(c) Training Fires.

Fires set for the purpose of training of public or industrial employees in fire fighting methods are permitted at such locations and under such conditions as are granted in advance written approval of the fire chief or designee. When structures are to be burned as part of the training, advance written approval must also be obtained from the State of Iowa Department of Natural Resources.

(d) Storm damaged trees.

Downed and damaged trees, limbs, and brush may be burned, immediately following severe storm events, at such locations and under such conditions as are granted advance approval by the fire chief, public works director, and City Manager, as part of a declared public emergency. The site authorized and designated for such burning shall not be located in a residential area.

(2) General Conditions for Open Burning.

(a) Fire Chief may prohibit. The Fire Chief may prohibit any or all open burning when atmospheric conditions or local circumstances make such fires hazardous or a nuisance.

- (b) Attendance of Open Fires. Open fires shall be constantly attended by an adult person until such fire is extinguished. This person shall have a hose connected to the water supply, or other fire extinguishing equipment readily available for use.
- (c) Offensive Smoke and Odors. Upon receipt of a complaint regarding the smoke or odors from open fires, the fire chief's designee shall investigate and have the discretion to have the fire extinguished.

DIVISION V
BUILDING CODE BOARD OF APPEALS

Sec. 8.501. BUILDING BOARD OF APPEALS HAS JURISDICTION.

The provisions of Section 108.1 of the IFC notwithstanding, the Ames Building Board of Appeals as established and constituted under the ordinances of the City of Ames shall have jurisdiction to determine the suitability of alternative materials and types of construction and to provide for reasonable interpretations of the provisions of this Fire Code, except those relating to open burning.

The Ames Building Board of Appeals is authorized to grant two year extensions for the implementation period for sprinkler systems as defined in Section 8.301.

When so acting, the Fire Chief may designate an individual knowledgeable in fire safety to render professional advice to the Board on matters related to the Fire Code.

The Building Board of Appeals, when acting pursuant to this subsection, shall have authority to review and make recommendations on any and all proposed changes to this chapter of the Code. Recommendations shall be forwarded to the City Council for final action.

DIVISION VI
PENALTY

Sec. 8.601 PENALTIES FOR OFFENSES PERTAINING TO THE FIRE CODE.

A violation of any provision of Chapter 8, Fire Code, shall be a municipal infraction punishable by a penalty of \$500 for a person's first violation thereof, and a penalty of \$750 for each repeat violation.

(Ord. No. 3196, Sec. 1, 8-24-92; Ord. No. 3497, Sec. 5, 8-25-98; Ord. No. 3196, Sec. 1, 8-24-92; Ord. No. 3218, Sec. 2, 3-23-93; Ord. No. 3491, Sec. 1, 7-14-98; Ord. No. 3789, 7-27-04; Ord. No. 3924, 06-26-07; Ord. No. 4045, 9-28-10)