

**BUILDING, RESIDENTIAL, EXISTING BUILDING & SWIMMING POOL AND SPA CODES  
NOTICE**

- This is an unofficial user-friendly copy of St. Louis County, Missouri Ordinance 27,654 for the adoption of the 2015 International Building, Residential, Existing Building & Swimming Pool and Spa Codes, with modifications. Said ordinance being approved by the County Executive on December 18, 2019.
- Official copies of St. Louis County ordinances, in total, including certified copies, may be obtained from the St. Louis County Clerk's Office, 41 South Central Avenue, Clayton, Missouri 63105 – Telephone: 314-615-7171

**(Editorial Note: Ordinance to be in full force and effect April 1, 2020)**

Substitute Bill No. 1 for  
BILL NO. 363, 2019  
ORDINANCE No. 27,654, 2019

Introduced by Councilmembers Dunaway and Harder

**AN ORDINANCE**

AMENDING TITLE XI SLCRO 1974, AS AMENDED, "PUBLIC WORKS AND BUILDING REGULATIONS", BY REPEALING AND RE-ENACTING CHAPTER 1115 "BUILDING CODE", CHAPTER 1116 "RESIDENTIAL CODE" AND CHAPTER 1117 "EXISTING BUILDING CODE" AND BY ADDING AND ENACTING CHAPTER 1118 "SWIMMING POOL AND SPA CODE"

BE IT ORDAINED BY THE COUNTY COUNCIL OF ST. LOUIS COUNTY, MISSOURI, AS FOLLOWS:

**SECTION 1.** Title XI SLCRO 1974, as amended "Public Works and Building Regulations" is hereby amended by repealing and re-enacting Chapter 1115 "Building Code" which shall read as follows:

**TITLE XI  
PUBLIC WORKS AND BUILDING REGULATIONS**

**Chapter 1115  
BUILDING CODE**

**1115.010 Short Title.** This Chapter shall be known and may be cited as the "Building Code" of St. Louis County.

**1115.020 Building Code Adopted.** A certain document, three copies of which are on file in the office of the Director of the St. Louis County Department of Transportation and Public Works and the office of the Administrative Director, being marked and designated as the International Building Code, 2015 edition, including "APPENDIX C – GROUP U – AGRICULTURAL BUILDINGS" and "APPENDIX H – SIGNS" as published by the International Code Council, is hereby adopted as the Building Code of St. Louis County, for regulating and governing the conditions and maintenance of all property, buildings and structures; by providing the standards for supplied utilities and facilities and other physical things and conditions essential to ensure that structures are safe, sanitary and fit for occupation and use; and the condemnation of buildings and structures unfit for human occupancy and use and the demolition of such structures as herein provided; providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said International Building Code are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in this ordinance.

**1115.030 General Administrative Definitions.** --Throughout the International Building Code, 2015 edition, whenever the term "jurisdiction" appears it shall be deemed to mean "St. Louis County". Likewise, whenever the term "Department of Building Safety" appears it shall be deemed to mean "St. Louis County Department of Transportation and Public Works." Whenever the terms "Code Official" or "building official" appear they shall mean the Director of St. Louis County Department of Transportation and Public Works or the Director's duly authorized representative; and when the terms "code," "this code," or "Building

Code” appear they shall be deemed to mean the International Building Code, 2015 edition as adopted herein with the additions, deletions and changes as prescribed in this ordinance. The formal title of codes referred to herein refer to those codified in the St. Louis County Revised Ordinances 1974 as amended.

**1115.040 References to Other St. Louis County Adopted Codes.** –Throughout this ordinance and the International Building Code, 2015 edition, wherever a reference appears to the “International Residential Code” it shall mean the “Residential Code” as adopted by Chapter 1116, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the “International Existing Building Code” it shall mean the “Existing Building Code” as adopted by Chapter 1117, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the “International Mechanical Code” it shall mean the “Mechanical Code” as adopted by Chapter 1108, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the “International Fuel Gas Code” it shall mean the “Mechanical Code” as adopted by 1108, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to “NFPA 70” it shall mean the “Electrical Code” as adopted by Chapter 1102, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the “International Plumbing Code” it shall mean the “Plumbing Code” as adopted by Chapter 1103, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the “International Private Sewage Disposal Code” it shall mean the “Plumbing Code” as adopted by Chapter 1103, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the “International Property Maintenance Code” it shall mean the “Property Maintenance Code” as adopted by Chapter 1110, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein.

**1115.050 Contracting with Municipalities and Fire Protection Districts for Code Enforcement Services.**

1. The building official, with the approval of the County Executive, is hereby authorized to contract with municipalities and fire protection districts within St. Louis County, to provide appropriate enforcement of this code and further to collect fees for applicable permits and inspections issued or made pursuant to such contracts. Contracts shall be approved by the building official and the County Executive, and shall be approved as to legal form by the County Counselor. No contract shall be entered into until the municipality or fire protection district desiring to contract with St. Louis County for the enforcement of this code shall first have duly adopted appropriate legislation authorizing said contract (a certified copy to be attached to and made a part of the contract) and duly adopted a code identical in substance to this code.
2. The building official is authorized to contract with fire protection districts in St. Louis County to provide code enforcement services with respect to building construction and application of commercial and multi-family fire codes adopted by the fire protection districts, including administration, application processing, plan review, permit issuance, and inspections and for County to either charge the fire protection districts fees or collect fees for applicable permits and inspections issued or made pursuant to such contracts as set out in Chapter 1100 SLCRO, as amended, to cover the costs of providing such code enforcement services. When the contract is for only certain of the services described in this section, the building official is authorized to prorate the fees set out in Chapter 1100 to cover the costs of performing the service or services. The contract may further provide for the fire protection district, at its option, to refer for prosecution in St. Louis County Municipal Court, violations of such fire protection district’s codes as are enforced within the fire protection district by the County; for the County to retain the proceeds of fines and costs assessed in such prosecutions; and for such other terms and conditions as are approved by the County Counselor.
3. The building official is authorized to contract with municipalities in St. Louis County to provide temporary code enforcement services with respect to building construction and application of the

building codes adopted by the County or municipality, including administration, application processing, plan review, permit issuance, and inspections and for County to either charge the municipality fees or collect fees for applicable permits and inspections issued or made pursuant to such contracts as set out in Chapter 1100 SLCRO, as amended, to cover the costs of providing such temporary code enforcement services. When the contract is for only certain of the services described in this section, the building official is authorized to pro-rate the fees set out in Chapter 1100 to cover the costs of performing the service or services. The term of the temporary contract shall not exceed twelve (12) months except that the contract may be extended by the building official when: a) the services are related to a specific project or projects that are still in progress, or b) the municipality commits in writing to transitioning to a long term contract with the County as set out in Section 1115.050(1).

**1115.051 Municipal Zoning Approval for Buildings and Structures by Contracting Municipalities. --**

All plans for the construction or use of buildings and structures regulated by this code shall be reviewed and approved by the contracting municipality for compliance with the zoning or other local regulatory ordinances or provisions prior to issuance of a permit by the County.

**1115.052 Exterior Fire Protection Features Approval by Contracting Fire Protection Districts. --All**

plans for the construction of buildings and structures within a contracting fire protection district shall be reviewed and approved for compliance with exterior fire protection features prior to issuance of a building permit by the County.

**1115.060 Building Code Review Committee. --**There is hereby established a Building Code Review Committee. The Committee shall be responsible for considering updates and changes to this code and make recommendations to the Building Commission. The Committee shall coordinate with the Mechanical Code Review Committee, the Electrical Code Review Committee and the Plumbing Code Review Committee in making its recommendation to the Building Commission. The Committee shall meet at least annually and report its activities to the Building Commission. The Committee shall consist of eight members appointed by the County Executive. Each committee member shall be appointed for a term of three years or until a successor is appointed and except that length of terms may be for one or two years when necessary to achieve continuity of the Committee. In order to maintain continuity of the Committee, not more than three members' terms shall end in the same year. The Committee shall consist of an architect, a structural engineer, a residential building contractor, a commercial building contractor, a member of the fire service, an energy expert, a St. Louis County homeowner and the building official who shall be the Executive Secretary of the Committee and shall serve as a non-voting member. The architect and engineer shall be registered by the State of Missouri. The committee members shall elect one of their members to be the chairman and one to be vice chairman. The members of the Building Code Review Committee with the exception of the building official shall be compensated in accordance with Chapter 201, SLCRO 1974, as amended.

**1115.101 Amendments to the International Building Code, 2015 Edition – Chapter 1 Scope and Administration. --**The following provisions amend Chapter 1 Scope and Administration in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**101.1 Title.** These regulations shall be known as the Building Code of St. Louis County, hereinafter referred to as "this code."

**101.2 Scope.** The provisions of this code shall apply to the construction, alteration, relocation, 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.

**Exceptions:**

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures not more than three stories above grade plane in height, shall comply with the International Residential Code.
2. The provisions of the International Existing Building Code shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

**101.4 Applicability of St. Louis County, Missouri codes and ordinances.** Throughout this code, whenever the terms NFPA 70, International Plumbing Code, International Mechanical Code, International Property Maintenance Code, International Building Code, International Residential Code, International Existing Building Code, International Swimming Pool and Spa Code, Zoning Ordinance or Floodplain Management Regulations Ordinance appears it shall be deemed to mean the codes adopted by St. Louis County as listed in Chapter 35 Referenced Standards, of this code and as identified in Title XI, Chapters 1102, 1103, 1108, 1110, 1115, 1116, 1117, 1118, and Title X, Chapters 1003 and 1008 SLCRO 1974, as amended, respectively.

**101.4.1 Gas.** – Delete

**101.4.2 Mechanical.** – Delete

**101.4.3 Plumbing.** – Delete

**101.4.4 Property maintenance.** – Delete

**101.4.5 Fire prevention.** – Delete

**101.4.6 Energy.** – Delete

**101.4.7 Existing buildings.** – Delete

**101.5 Code.** When the phrase “this code” is used in Sections 102 through 118, the phrase shall mean the applicable St. Louis County Building Code, Residential Code for One- and Two-Family Dwellings, Existing Building Code or the Swimming Pool and Spa Code containing the origin of the reference to Sections 102 through 118.

**101.6 Correction of violations of other codes.** Repairs or alterations mandated by any property, housing, or fire safety maintenance code or mandated by any licensing rule or ordinance adopted pursuant to law shall conform only to the requirements of that code, rule, or ordinance and shall not be required to conform to this code unless the code requiring such repair or alteration so provides.

**101.7 Appendices.** Provisions in the appendices shall not apply unless specifically adopted.

**102.2.1 Licensing.** Applicable licensing provisions of the Mechanical Code, the Electrical Code and the Plumbing Code shall apply to work regulated under this code.

**102.2.2 Compliance with county and municipal zoning and other applicable codes and ordinances.** Subject to the provisions of this code, neither the granting of a permit, nor the approval of construction documents, nor inspections made by the building official, or the building official's authorized representative, during the erection, movement or demolition of a building or structure, or any alteration or addition thereto, shall in any way relieve the owner or tenant of such building, structure or property from complying with the requirements of this code, the Zoning Ordinance, or other applicable laws of any municipality in St. Louis County. Provided, however, that nothing in this code shall be construed to

subject any land or structure owned or controlled by St. Louis County to any municipal zoning or other ordinances.

**102.4 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 and as further regulated in Sections 102.4.1 through 102.4.3.

**Exception:** Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and manufacturer's instructions shall apply.

**102.4.3 Standards and guidelines for structural evaluation.** The building official shall allow structural evaluation, condition assessment, and rehabilitation of buildings, structures, or individual structural members based on this code's appendix chapters, referenced standards, guidelines, or other approved standards and procedures.

**102.6 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 Existing Building Code, the International Property Maintenance Code or the International Fire Code, where the International Fire Code is referenced by this code, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

**104.1.1 Rule-making authority.** The building official shall have authority, as necessary in the interest of public health, safety and general welfare, to adopt and promulgate rules and regulations to interpret and implement the provisions of this code, to secure the intent thereof and to designate requirements applicable because of local climatic or other conditions. Such rules shall not have the effect of waiving structural or fire performance requirements specifically provided for in this code or of violating accepted engineering practice involving public safety.

**104.2 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, change of occupancy and inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

**104.2.2 Preliminary meeting.** When requested by the permit applicant, the building official shall meet with the permit applicant and the registered design professional prior to the application for a construction permit to discuss plans for the proposed work or change of occupancy in order to establish the specific applicability of the provisions of this code.

**104.2.3 Authorization to proceed.** The building official may authorize the commencement of construction prior to issuance of a building permit, when it can be shown that:

1. The project is in compliance with the applicable regulations of St. Louis County for that portion of the work to be performed; and
2. The applicant agrees to proceed at their own risk.

All necessary inspections shall be performed as required by this code.

**104.2.4 Building evaluation.** The building official is authorized to require a structure to be investigated and evaluated by a registered design professional to determine the existence of any potential nonconformance with the provisions of this code.

**104.6.1 Disasters.** In the event of a disaster such as a windstorm, tornado, flood, fire, earthquake, bomb blast, explosion or similar natural or man-made type event the building official is hereby authorized to

enter and inspect structures within the affected areas, subject to constitutional restrictions on unreasonable searches and seizures. When, in the opinion of the building official, there is imminent danger due to an unsafe condition, the building official shall take emergency measures in accordance with this code. If the building official determines, after inspection, that a structure is unfit, the building official shall declare it a public nuisance, cause a report to be prepared and notify the affected parties in accordance with this code.

**104.6.1.1 Post-disaster inspections.** The building official is authorized to deputize Missouri Structural Assessment and Visual Evaluation (SAVE) Volunteer Inspectors certified by the Missouri State Emergency Management Agency (SEMA) to conduct emergency Post-Disaster Safety Evaluations of Buildings.

**104.10 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 written application of the owner or owner's authorized agent, provided that the building official shall first find that special individual reason makes the strict letter of this code impractical, 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 department of building safety. A copy of the application and the final decision of the building official shall be distributed to the Building Code Review Committee and the Building Commission.

**104.10.1 Flood hazard areas.** The building official shall not grant modifications to any provision required in flood hazard areas as established by Section 1612.3 without the granting of a variance by the Board of Zoning Adjustment (BZA) and unless a determination has been made that:

1. A showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site render the elevation standards of Section 1612 in appropriate.
2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.
4. A determination that the variance is the minimum necessary to afford relief, considering the flood hazard.
5. Submission to the applicant of written notice specifying the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and stating that construction below the design flood elevation increases risks to life and property.

**105.1 Required.** Any owner or owner's authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or install or alter a ground level paved parking lot other than those lots serving a single-family dwelling, or establish a new or relocated lot line that affects an existing 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 performed, shall first make application to the building official and obtain the required permit.

**105.1.1 Disaster damage repair permit required.** It shall be unlawful to repair a structure when such repair is due to a disaster without first registering and filing an application with the building official in writing and obtaining a Disaster Damage Repair Permit. Disaster Damage Repair Permits may be obtained at discounted or no cost at the discretion of the building official if issued within 90 days after the end of a disaster, where such date is determined by the building official, and shall authorize the work indicated therein to be completed within one year of the date of issuance. The building official may extend the 90 day period with justifiable cause. For the purposes of this section, the cost of disaster damage repair shall be defined in accordance with the Federal Emergency Management Agency (FEMA) or Missouri State Emergency Management Agency (SEMA) regulations and definitions.

**105.1.1.1 Disaster contractor registration required.** It shall be unlawful for anyone other than the property owner to make repairs as defined in Section 105.1.1 unless this person is registered with the building official. The building official shall not register an applicant and/or issue a permit hereunder to any person, firm, or corporation, except the property owner, unless the following information is obtained: name, current address, permanent address, social security number or tax identification number, copy of driver's or operator's license, height, weight, eye color, hair color, race, build, at least two work references, and whether applicant is insured or bonded.

**105.1.2 Reroofing.** Permits are required for the recovering or replacement of an existing roof covering when either of the following conditions apply.

1. Permits are required for reroofing of roofs with a slope of less than 4:12. Plans and specifications are only required when reroofing a slope less than  $\frac{1}{4}$  unit vertical in 12 units horizontal.
2. Permits, plans and specifications are required for all changes in a roof covering system regardless of the roof slope.

**105.1.3 Temporary buildings and structures.** No temporary building or structure, either mobile or stationary, shall be erected, operated, used or maintained for any purpose without first obtaining a temporary structures permit. All temporary buildings and structures shall meet the requirements of section 3103 Temporary Structures in the International Building Code.

**105.1.4 Integrated permits.** The building official may issue integrated building, plumbing, electrical and/or mechanical permits on a single permit application.

**105.1.4.1 Applicant responsibility.** The integrated permit applicant shall be responsible for the return to the Department of Transportation and Public Works copies of the plumbing, electrical and/or mechanical permit form with the name, signature and license number of the appropriate sub-contractor. Any change in the identity of the named sub-contractor after issuance of the permit shall result in the assessment of a transfer fee in the amount specified in Chapter 1100, SLCRO 1974, as amended.

**105.1.5 Separate permits.** Permit applicants may submit separate applications for building, mechanical, electrical, or plumbing permits. As a condition of approval the owner or owner's agent shall agree to assume full responsibility for the coordination of all applicable code requirements relating to these permits.

**105.1.6 Additional approval requirements.** In municipalities within St. Louis County that contract with the County for the enforcement of their Building, Residential, Existing Building Codes, all plans for the construction or use of buildings and structures regulated by this code shall be reviewed and approved by the contracting municipality for compliance with the zoning or other local regulatory ordinances or provisions prior to issuance of a permit under this code by St. Louis County.

The building official may issue a partial permit in accordance with section 107.3.3 when clearances pertaining to the scope of the work requested are obtained from the applicable municipality. The holder of such partial permit shall proceed at the owner's own risk without assurance that outstanding reviewing municipality final approvals can be obtained or that a permit for the entire structure will be granted.

**105.1.7 Addendums to permits.** Once a permit is issued all addendums submitted, as an amendment to the approved construction documents, shall be charged an additional review fee as specified in Chapter 1100, SLCRO 1974 as amended and in accordance with this code.

**105.2 Work exempt from permit.** Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

**Building:**

1. "Repair" work in compliance with requirements of Section 105.2.2 does not require a permit provided such required "repair" work is not the result of a disaster or lack of on-going routine maintenance. Damage repair permits are required for these situations per Sections 105.1.1 and 118.5.1. regardless of the nature of repair required.
2. Work by "Public service agencies" as specified in Section 105.2.3 does not require a permit.
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 (11.15 m<sup>2</sup>).
4. New fencing or replacement of existing fencing not more than 7 feet (2134 mm) in height, except when enclosing swimming pools, spas, or hot tubs, in the rear or side yards.

**Exception:** Fences of any height, which utilize electrified components or barbed wire, razor ribbon, and like material are not exempt from permit requirements. See Section 3111 of the International Building Code for permits and regulations for electrified fences and fences utilizing barbed wire, razor ribbon or like material.

5. Retaining walls which are not over 3 feet (914 mm) in height measured from the finished grade on the non-retained side of the wall to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids, in which case the wall shall not be over 2 feet (610 mm) in height. A building permit is required if the wall is located less than or equal to its height from the property line or if the total height of the retaining wall and guard or fence on top of the wall exceeds 6 feet (1828 mm). Total height is measured from the top of the proposed finished grade at the non-retained side of the wall to the top of the guard or fence. Refer to Section 1807.2.4 for guard requirements.
6. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
7. Prefabricated swimming pools accessory to one- and two-family dwellings, townhouses and Group R-3 occupancies which have a maximum water depth of 24 inches (610 mm), a maximum water volume of 5,000 gallons (18925 L) and are installed entirely above ground.
8. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support when attached to one- and two-family dwellings, townhouses and Group R-3 occupancies.
9. Movable cases, counters and similar fixtures not over 5 feet 9 inches (1753 mm) in height.



10. Clothes poles, arbors, garden trellises, basketball goals and standards, and other similar minor structures accessory to one- and two-family dwellings, townhouses and Group R-3 occupancies.

**Electrical:** Any work exempted from permits by NFPA 70.

**Gas:** Any work exempted from permits by the International Mechanical Code.

**Mechanical:** Any work exempted from permits by the International Mechanical Code.

**Plumbing:** Any work exempted from permits by the International Plumbing Code.

**105.3.1.1 Unpaid fees and prior violations.** If the building official determines that an applicant for a permit governed by this code has failed to pay any permit fees or related charges, the building official shall not issue such permit until the applicant pays such fees and related charges. If the building official determines that an applicant has failed to correct violations of this code, the building official shall not issue permits related to this code to such applicant except to correct such violations.

**105.3.1.2 Substantially improved or substantially damaged existing buildings located in flood hazard areas.** For applications for reconstruction, rehabilitation, addition, or other improvement of existing buildings or structures located in flood hazard areas, the building official shall examine or cause to be examined the construction documents and cost of construction consisting of labor and material costs provided by the applicant. For buildings that have sustained damage of any origin, the value of the proposed work shall include the cost to repair the building or structure to its pre-damage condition. If the building official finds that the value of proposed work equals or exceeds 50 percent of the market value of the building or structure before the damage has occurred or the improvement is started, the entire building or structure shall comply with the International Building Code, the International Residential Code, or the International Existing Building Code, as applicable, as well as the Floodplain Management Regulations Ordinance and the Zoning Ordinance.

**105.3.1.2.1 Decisions by the Board of Zoning Adjustment honored.** Decisions or variances granted by the Board of Zoning Adjustment under the Floodplain Management Regulations and/or Zoning Ordinance regarding the reconstruction, rehabilitation, addition, or other improvement of existing buildings or structures located in flood hazard areas shall be honored under this code without the applicant also having to appeal the same issues to the Board of Building Appeals. The building official may require alternative safety measures under this code relative to construction, equipment, or systems located below the flood plain elevation.

**105.3.1.3 Application transfers prohibited.** The transfer of an application for building permits from one lot to another shall be prohibited. When relocation is necessary the original application shall be canceled and a new application submitted.

**105.3.1.4 Federal, state or county entities.** The building official may withhold issuance of a permit on any site if any federal, state or other public entity determines that such facility or site is in violation of any code or regulation of such entity.

**105.3.2 Time limitation of application.** An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued. The building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. An extension fee equal to the permit application extension fee in the amount specified in Chapter 1100, SLCRO 1974, as amended, shall be paid for each additional extension period of 90 days beyond the initial 180 days allowed after the date of filing. An additional inspection fee may be charged for an inspection to verify that work has not started. The extension shall be requested in writing and justifiable cause demonstrated. The building

official shall notify delinquent applicants in writing and give 14 days notice prior to abandonment of the application and destruction of the plans.

**105.5 Expiration.** Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

**Exceptions:**

1. Demolition permits shall expire as set out in Section 105.5.1.
2. Repair permits for rehabilitating an unfit structure shall expire as set out in Section 118.5.1.1.

**105.5.1 Expiration of demolition permits.** Permits for demolition work shall become invalid if permitted work is not started within 30 days after the date of issuance of a permit or if the permitted work is not completed within 90 days of such issuance date. The building official may, after receiving a written request from the applicant, extend the permit expiration date for one or more additional 30 day period(s) if the permit applicant presents evidence of justifiable cause.

**105.7 Placement of permit.** The building permit or copy shall be kept on the site of the work until the completion of the project. An inspection placard must be posted on the job site in accordance with Section 110.1.1.

**105.8 Responsibility.** It shall be the duty of every person who performs work for the installation or repair of a building, structure, electrical, gas, mechanical or plumbing systems, for which this code is applicable, to comply with this code.

**107.1 General.** The application for permit shall be accompanied by not less than four sets of construction documents. The construction documents and site plans for new construction, alteration, repairs, expansion, addition or modification for structures shall be prepared by a registered design professional. All construction documents and site plans shall be prepared by the appropriate registered design professional consistent with the professional registration laws of the State of Missouri. All construction documents submitted with an application for a building permit shall bear an original embossed or wet ink seal, the date and original ink signature of the registered design professional for each discipline on the front sheet of each discipline within each set of construction documents; or, on the cover sheet of each set of construction documents. In addition, all other sheets of the construction documents other than specifications or calculations shall bear the original embossed, wet ink, or mechanically reproduced seals of the registered design professional. Any addenda or modifications submitted for changes to the construction documents shall also bear an original seal and signature of the registered design professional. Such changes shall be clearly indicated. The construction documents shall include the name and address of the design professional and shall be signed, sealed and dated by the registered design professional.

**Exceptions:**

1. Miscellaneous structures accessory to one- and two-family dwellings and townhouses, such as carports, garages, sheds and other similar structures.
2. Room additions or an aggregation of additions to one- and two-family dwellings and townhouses where the total floor area of the addition does not exceed 50 percent of the existing total floor area or 1,000 square feet (92.9 m<sup>2</sup>). The total floor areas shall include all finished space.

3. Construction documents for the relocation of less than 5 automatic sprinkler heads.
4. Site plans for one- and two-family dwellings, townhouses, and R-2 Use Classification where all of the following occurs:
  - 4.1. The site contains no flood hazard areas.
  - 4.2. The site contains fill in the area of the proposed construction and there is a soils report sealed by a Missouri Professional Engineer on file with the building official.
  - 4.3. Individual site plans for R-2 Use Classification buildings when the entire site plan for the R-2 Use Classification development bearing the seal of a Missouri Registered Design Professional is on file with the building official.
5. Work of a minor nature approved by the building official.

**107.2.1 Information on construction documents.** Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted where approved by the building official. 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. The work areas shall be shown.

**107.2.3 Means of egress.** The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress including the path of the exit discharge to the public way in compliance with the provisions of this code. The construction documents shall designate the number of occupants to be accommodated in every work area of every floor, and in all affected rooms and spaces.

**107.2.4 Exterior wall envelope.** Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane and details around openings.

**107.2.5.1 Information for construction in flood hazard areas.** For buildings and structures in flood hazard areas, construction documents shall include:

1. Delineation of flood hazard areas, floodway boundaries, and flood zones, and the design flood elevation, as appropriate;
2. The elevation of the proposed lowest floor, including basement; in areas of shallow flooding (AO zones), the height of the proposed lowest floor, including basement, above the highest adjacent grade; and
3. The elevation of the bottom of the lowest horizontal structural member in coastal high hazard areas (V Zone); and
4. If design flood elevations are not included on the community's Flood Insurance Rate Map (FIRM), the building official and the applicant shall obtain and reasonably utilize any design flood elevation and floodway data available from other sources.

**107.2.7 Manufacturer's installation instructions.** Manufacturer's installation instructions, as required by this code, shall be available on the job site at the time of inspection.

**107.2.8 Private sewage disposal system.** The site plan shall indicate the location of a private sewage disposal system when a public sewer is not available. All technical data and soil data required by the International Plumbing Code shall be submitted with the site plan.

**107.3.1 Approval of construction documents.** When the building official issues a permit, the construction documents shall be approved, in writing or by stamp, as "Approved For Issuance". Two sets of construction documents so reviewed shall be retained by the building official. The other two sets shall be returned to the applicant. At least one set of the Site Plan, and Building, Electrical, Plumbing, Mechanical and Grading construction drawings and documents, that have been marked by the building official with the "Approved For Issuance" stamp, may be kept at the site of work or shall be made available at the time of inspection and shall be open to inspection by the building official or a duly authorized representative

**107.3.3.1 Mechanical, electrical and plumbing phased approval.** The building official is authorized to issue mechanical, electrical and plumbing permits prior to the review, approval and/or issuance of other applicable permit applications normally required prior to such issuance subject to the conditions provided for in the respective Mechanical, Electrical and Plumbing codes.

**107.3.4 Design professional in responsible charge.** Where it is required that documents be prepared by a registered design professional, the building official shall be authorized to require the owner or the owner's authorized agent to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible charge. If the circumstances require, the owner or the owner's authorized agent shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original registered design professional in responsible charge. The building official shall be notified in writing by the owner or the owner's authorized agent if the registered design professional in responsible charge is changed or is unable to continue to perform the duties.

The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased submittal items, for compatibility with the design of the building.

Where structural observation is required by Section 1704.6, the inspection program shall name the individual or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur (see also duties specified in Section 1704).

**107.3.4.1 Deferred Submittals.** - Delete

**107.4 Compliance with construction documents.** Work shall be installed in accordance with the approved construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

**108.1 General.** No temporary building or structure, either mobile or stationary, shall be erected, operated, used or maintained for any purpose without first obtaining a temporary structures permit. All temporary buildings and structures shall meet the requirements of Section 105.1.3 Temporary buildings and structures and Section 3103 Temporary structures in the International Building Code.

**108.2 Conformance.** - Delete

**108.3 Temporary power.** - Delete

**108.4 Termination of approval.** - Delete

**109.1 Payment of fees.** A permit shall not be valid until the fees prescribed by law have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid. The total estimated fee for the activity to be performed by the Department of Transportation and Public Works shall be paid in advance.

**109.2 Schedule of permit fees.** The fees for plan examinations, for filing appeals, issuing permits, making inspections, issuing certificates of occupancy and other administrative enforcement activities performed by the Department of Transportation and Public Works shall be paid to the Treasurer of St. Louis County in accordance with the fee schedule set forth in Chapter 1100, SLCRO 1974, as amended. On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established in Chapter 1100, SLCRO 1974, as amended.

**109.3 Building permit valuations.** The applicant for a permit shall provide an estimated permit value at time of application. Permit valuations shall include total value of work, including materials and labor, for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment and permanent systems. If, in the opinion of the building official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the building official. The building official is authorized to estimate the total cost of construction of a structure, building or project, by multiplying the total floor area of the structure in square feet by an appropriate square foot cost rate. Structures or projects for which it is impractical to estimate the total construction cost by said square foot cost method shall be estimated by applying current, commonly accepted unit cost figures to the various components in a commonly accepted manner. In lieu of determining the total cost of construction as outlined above, the building official may accept a bona fide contract or any affidavit of the owner of the building structure or project, in which the total cost of construction, including site improvements related to the permit, is verified by applicant and owner. Final building permit valuation shall be set by the building official.

**109.4 Work commencing before permit issuance.** Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a no permit penalty fee established by the building official in accordance with Section 114.4.1 that shall be in addition to the required permit fees.

**109.5.1 Amending permits.** After a permit has been issued and an amendment or supplemental revision is applied for, the fee or service charge shall be as follows:

1. All amendments, which involve additional or deleted work not originally applied for to complete the project, shall be charged the appropriate fee for the additional or deleted work calculated in the normal manner plus the partial permit fee. The minimum fee shall be as established in Chapter 1100, SLCRO 1974, as amended.
2. All amendments or supplements not involving additional work either by area or dollar value, shall be charged a minimum fee as a service charge even though the project dollar value or building area may decrease. See Chapter 1100, SLCRO 1974, as amended for the amount of the service charge.

**109.5.2 Partial permit.** The fee for a partial permit as described in this code shall be charged in addition to the permit fee as normally computed for that part of the work involved. See Chapter 1100, SLCRO 1974, as amended for amount of fees.

**109.5.3 Permit extension.** Permits that are extended in accordance with this code are charged an extension fee at the rate prescribed in Chapter 1100, SLCRO 1974, as amended.

**109.5.4 Pier permit.** Structures that are to be constructed upon piers shall be charged an additional fee to cover the cost of the additional inspections required. The amount of the permit fee shall be as

prescribed in Chapter 1100, SLCRO 1974, as amended. If the pier permit is issued as a separate permit then the partial permit fee described in this code shall be added to the normal fee.

**109.5.5 Extra inspections.** Extra inspection fees shall apply for each preliminary inspection required and for each re-inspection that the building official must perform due to noncompliance with the approved development or site plans, construction documents or the applicable requirements of this code or work not ready or accessible for inspection when requested. The amount of such extra inspection fee shall be as prescribed in Chapter 1100, SLCRO 1974, as amended.

**109.5.5.1 Work not commenced, suspended or abandoned:** An extra inspection fee may be charged for each inspection made to determine the status of a project when work is not commenced, or is suspended or abandoned, for more than six months.

**109.5.6 Certificate of occupancy (new structures).** The certificate of occupancy described in this code shall require a permit fee to be paid before issuance. The amount of such certificate of occupancy fee shall be as prescribed in Chapter 1100, SLCRO 1974, as amended.

**109.5.7 Certificate of occupancy (existing structures).** The fee for a certificate of occupancy for existing structures as required in this code shall be based upon the normal requirement of two inspections. The amount of such certificate of occupancy fee and the additional charge for extra inspections when required shall be as prescribed for reoccupancy permits in Chapter 1100, SLCRO 1974, as amended.

**109.5.8 Temporary certificate of occupancy.** The fee for a temporary certificate of occupancy, as permitted in this code, shall be charged at the rate prescribed in Chapter 1100, SLCRO 1974, as amended.

**109.5.9 Board of appeals filing.** All appeals filed for review by the Board of Appeals under the procedures described in this code are to be accompanied by a filing fee as prescribed in Chapter 1100, SLCRO 1974, as amended.

**109.5.10 Moving buildings and structures.** The fee for a permit to move a building or structure from one location to another shall be at the rate prescribed in Chapter 1100, SLCRO 1974, as amended. This fee shall be based upon the cost of moving the building or structure plus the cost of excavations, new footings, new foundations and all work necessary to place the structure in its completed condition in the new location. A preliminary inspection shall be made of the structure prior to moving to determine what is necessary for code compliance. The fee for the preliminary inspection shall be paid when the permit is issued.

**109.5.11 Demolition.** The fee for a permit for the demolition of a structure shall include the necessary inspections required by the building official to verify the condition of the original site of the building or structure. A physical inspection of the structure prior to any demolition is also required. The fee for such demolition permits and inspections shall be charged at the rate specified in Chapter 1100, SLCRO 1974, as amended.

**109.5.12 Sign permits.** The fees for sign permits shall be based upon the square footage of sign face area including signs where multiple faces exist. A minimum of one inspection shall be applied to each sign permit, however, where multiple signs of the same type are included on the same application and at the same location fewer inspections may be charged for at the discretion of the building official. Where unusual or complex sign structures are involved additional inspections may be charged for at the rate specified. The sign permit and inspection fees required by this code shall be charged at the rate prescribed by Chapter 1100, SLCRO 1974, as amended.

**109.5.13 Building permit.** The building permit fee shall be composed of the permit processing fee, the inspection fee, the plan review fee, and the partial permit fee, where applicable. The amount of said fee shall be at the rate prescribed in Chapter 1100, SLCRO 1974, as amended.

**109.5.14 Integrated permit.** The amount of all integrated building, plumbing, electrical and/or mechanical permits shall be at the rate prescribed by Chapter 1100, SLCRO 1974, as amended.

**109.5.15 Subcontractor transfer.** A transfer fee shall be charged whenever a subcontractor is replaced by another subcontractor for whatever reason. The amount of the transfer fee shall be at the rate prescribed in Chapter 1100, SLCRO 1974, as amended.

**109.5.16 Parking lot permit.** The amount of a parking lot permit fee shall be at the rate prescribed in Chapter 1100, SLCRO 1974, as amended.

**109.5.17 Reroofing permit.** The permit fee for a reroofing permit in accordance with Section 105.1.2 shall be based upon the permit processing fee, plan review fee when applicable and the inspection fee. The amount of such fees shall be charged at the rate specified in Chapter 1100, SLCRO 1974, as amended. Additional inspections shall be charged at the rate specified.

**109.6 Refunds.** In the case of revocation of a permit no refund shall be permitted. Any excess fee for the incomplete work on abandoned or discontinued projects shall be returned to the permit holder upon written request received not later than 12 months after the date the permit was issued. All plan examination and permit processing fees and all penalties that have been imposed upon the permit holder under the requirements of this code shall be deducted from the refund or paid by the permit holder prior to any refund being issued.

**110.1.1 Inspection placard.** Work requiring a permit shall not commence until the permittee or the permittee's agent posts an inspection placard at the job site for recording inspections. Failure to maintain this inspection placard will not relieve the permittee of responsibility as provided by this code. When work has progressed to a point of having windows, or when the job is an alteration or addition, the placard shall be attached to the available glass in view for recording the balance of inspections required by the code. Absence of inspection placard will result in imposition of fees for additional inspections as specified in Chapter 1100, SLCRO 1974, as amended.

**110.2 Preliminary inspections.** 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. Except as stated in Section 110.2.1, fees for preliminary inspections shall be paid in accordance with Section 109.5.5.

**110.2.1 Preliminary disaster damage inspection report.** Whenever any structure damaged by disaster is vacated pursuant to this code or, when the owner of a structure or a duly authorized agent shall so request, the building official shall inspect such structure regarding its safe occupancy and shall prepare a Preliminary Disaster Damage Inspection Report at no cost.

**110.3 Required inspections.** The building official, upon notification, shall make the inspections set forth in Sections 110.3.1 through 110.3.14.2. These inspections may be made in conjunction with other inspections and are not necessarily required to be conducted as an individual inspection.

**110.3.1 Soil inspection.** A soil inspection shall be made after excavation for the structure is complete, and trenches for footings, column pads, spread footings, or other types of footings are ready for concrete. No concrete is to be poured without this inspection.

**110.3.2 Pier inspection.** A pier inspection shall be made where special foundations are required such as drilled and poured-in-place concrete piers, caissons and driven piles of all types. Additional

inspections will be made when the building official determines that the size of the job warrants it. Reinforcing materials required in the above cases shall be placed to allow adequate inspections.

**110.3.3 Footing or foundation inspection.** Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready-mixed in accordance with ASTM C 94, the concrete need not be on the job.

**110.3.3.1 Lowest floor elevation.** Any building or structure permitted to be constructed on property designated a flood hazard area, shall have an elevation certificate prepared and sealed by a registered design professional certifying the lowest floor elevation, including the basement, submitted to the office of the building official before the required foundation inspection or any subsequent inspection approval can be given.

**110.3.4 Concrete slab or under-floor 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 sub floor.

**110.3.5 Mechanical, gas, electrical, and plumbing systems - rough-in inspections.** Rough inspection of mechanical, gas, electrical and plumbing systems shall be made by the appropriate inspection section prior to covering or concealment, before fixtures or appliances are set or installed, and prior to framing inspection.

**Exception:** Residential ground-source heat pump loop systems tested in accordance with Section M2105.28 in the International Residential Code shall be permitted to be backfilled prior to inspection.

**110.3.6 Frame inspection.** Framing inspections shall be made after the roof deck or sheathing, all framing, fireblocking and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes and ducts are approved.

**110.3.7 Lath and gypsum board inspection.** Lath and gypsum board inspections shall be made after lathing 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.

**Exception:** Gypsum board that is not part of a fire-resistance-rated assembly or a shear assembly.

**10.3.8 Fire- and smoke-resistant penetrations.** Protection of joints and penetrations in fire-resistance-rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.

**110.3.9 Energy efficiency inspections.** Inspections shall be made to determine compliance with Chapter 13 of the International Building Code or Chapter 11 of the International Residential Code, as applicable, and shall include, but not be limited to, inspections for: envelope insulation R and U values, fenestration U value, duct system R value, and HVAC and water-heating equipment efficiency.

**110.3.10 Additional inspections.** In addition to the required inspections specified above, the building official may make other inspections, which in the building official's judgment are reasonably necessary to enforce this code and the Zoning and Land Disturbance codes. The building official shall have the authority to inspect any construction work to verify compliance with this code and to properly enforce the rules promulgated pursuant to this code. These inspections may include, but are not



limited to, examinations to determine whether zoning and land disturbance code requirements are being met and may include all other phases of building construction including forms, back fill, masonry, floors, floor slabs and site grading and other land disturbance or site development work. Fees for additional inspections shall be as specified in Chapter 1100, SLCRO 1974, as amended.

**110.3.11 Special inspections.** For special inspections, see Section 1704 in the International Building Code.

**110.3.12 Mechanical, gas, electrical, and plumbing systems - final inspections.** A final inspection of mechanical, gas, electrical and plumbing systems shall be made by the appropriate inspection section after all work required by the permit issued is completed and under operational conditions.

**110.3.13 Extra inspections.** In addition to the inspections otherwise required, the building official is authorized to perform extra inspections or re-inspections which in the building official's judgment are reasonably necessary due to non-compliance with Building, Zoning and Land Disturbance Code requirements, or work not ready or accessible for inspection when requested. Fees for extra inspections shall be as specified in Chapter 1100, SLCRO 1974, as amended.

**110.3.14 Final inspection.** No permit shall be completed until all work required by the permit is completed and approved by the building official.

**110.3.14.1 Flood hazard area.** All new or substantially improved structures, as defined by the Floodplain Management Regulations Ordinance, permitted to be constructed within a flood hazard area shall have a LOMR (Letter of Map Revision) or a LOMR-F (Letter of Map Revision Based on Fill) obtained from the Federal Emergency Management Agency (FEMA) removing the new or substantially improved building or structure from the special flood hazard area. A copy of this LOMR or LOMR-F shall be submitted to the building official prior to granting occupancy of the new building or structure.

**Exceptions:**

1. Substantially damaged structures, as defined by the Floodplain Management Regulations, that have their low floor elevated at least 1 foot (305 mm) above the base flood elevation in accordance with the Floodplain Management Regulations Ordinance as part of the reconstruction, rehabilitation, or repair.
2. Non-residential substantially damaged structures, as defined by the Floodplain Management Regulations, that are flood-proofed to at least 1 foot (305 mm) above the base flood elevation in accordance with the Floodplain Management Regulations Ordinance as part of the rehabilitation or repair.
3. New non-residential structures, as defined by the Floodplain Management Regulations Ordinance, that are less than 2,000 square feet (185.8 m<sup>2</sup>) in area and either constructed with their low-floor elevated at least one foot (305 mm) above the base flood elevation or are floodproofed to at least one foot (305 mm) above the base flood elevation.

**110.5 Inspection requests.** It shall be the duty of the holder of the permit or their duly authorized agent to notify the building official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code. Failure of the permit holder to request and obtain required inspections shall constitute a violation.

**110.5.1 Duty to request final inspection.** Upon completion of the work described in the permit application, the permit holder shall request and obtain a final inspection before any occupancy of the

structure except as provided in Section 111. Failure of the permit holder to request and obtain a final inspection before occupancy will constitute a violation of this code.

**111.1 Use and occupancy.** A building or structure, an altered area of a building and a relocated building shall not be used or occupied, and a change in the existing use or occupancy classification of a building or structure or portion thereof shall not be made, until the building official has issued a certificate of occupancy therefore as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of St. Louis County.

**Exception:** Certificates of occupancy are not required for work exempt from permits under Section 105.2.

**111.1.1 Existing structure certificates.** Certificates of occupancy for existing structures are required under the conditions described in Sections 111.1.1 through 111.1.3. The provisions of Sections 111.1.2 and 111.1.3 shall not require the removal, alteration, or abandonment or prevent the continuance of, the occupancy of a lawfully existing structure unless such is deemed to endanger public safety and welfare. Except for changes of use and occupancy classification, as defined by this code, or as required in Conservation Districts as stipulated in the International Property Maintenance Code, the provisions of Sections 111.1.1.2 and 111.1.1.3 shall not apply to structures or portions of structures classified as individual dwelling units or sleeping units within an R-2 and R-3 residential use and occupancy classifications and structures regulated by the International Residential Code.

**111.1.1.1 Change in use and occupancy classification.** No change shall be made in the use or occupancy of any building that would place the building in a different division of the same group of occupancy or in a different group of occupancies, unless such building is made to comply with the requirements of the International Existing Building Code for such division or group of occupancy. Subject to the approval of the building official, the use or occupancy of existing buildings shall be permitted to be changed and the building is allowed to be occupied for purposes in other groups without conforming to all the requirements of this code for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

**111.1.1.2 Change of occupant or tenant.** A change of occupant or tenant shall not be made to any structure or portion thereof without the approval of the building official and the issuance of an associated certificate of occupancy. Prior to issuance of the certificate of occupancy, the building official shall verify that:

1. The structure containing the new occupant or tenant complies with applicable provisions of the this code regarding maintenance of all equipment, systems, devices and safeguards required by this code for the applicable use and occupancy classification of the new occupant or tenant as well as applicable provisions of the International Property Maintenance Code and the Zoning Ordinance; and
2. Where the proposed change of occupancy or tenant also involves a change of use and occupancy classification as defined by this code, a permit application has been filed as prescribed by Section 105 of the International Building Code and the structure shall meet the applicable requirements of this code with regard to the newly proposed use and occupancy classification.

**111.1.1.3 Owner - tenant requests for certificates.** Upon written request from the existing occupant or tenant of an existing structure the building official shall issue a Certificate of Use and Occupancy provided that it is established after inspection and investigation that:

1. The alleged use or tenant of the structure has heretofore lawfully existed, and;

2. The structure containing the existing occupant or tenant complies with applicable provisions of this code for the use and occupancy classification of the existing occupant or tenant as well as applicable provisions of the International Property Maintenance Code and the Zoning Ordinance and;
3. There are no violations of law or orders of the building official pending.

**111.1.2 Required certificate of occupancy.** Failure of the owner or tenant of a structure to obtain a certificate of occupancy or use and occupancy as required by Section 111 and pay the applicable fees, shall be deemed a violation of this code and shall subject said owner or tenant to the penalties prescribed by this code.

**111.2 Certificate issued.** After the building official inspects the building or structure and does not find violations of the provisions of this code or other laws that are enforced by the department of building safety, the building official shall issue a certificate of occupancy that contains the following:

1. The building permit number.
2. The address of the structure.
3. The name and address of the owner or the owner's authorized agent.
4. A description of that portion of the structure for which the certificate is issued. (Including tenant or business name.)
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. The name of the building official.
7. The edition of the code under which the permit was issued.
8. The use and occupancy, in accordance with the provisions of the International Building Code.
9. The type of construction as defined in the International Building Code.
10. The design occupant load.
11. Whether an automatic sprinkler system is provided.
12. Any special stipulations and conditions of the building permit.

**111.5 Vacating dangerous structures.** Any structure vacated by reason of disaster or because it has been determined by the building official to be dangerous as defined by this code shall be deemed unsafe and its occupancy shall be prohibited until such time as the building official shall issue a certificate of occupancy. After said structure is vacated because of a dangerous condition and until such certificate of occupancy is issued it shall be unlawful for any person to enter such structure except for the purpose of securing, making repairs or for demolishing same pursuant to applicable permits where required, unless the building official shall issue a temporary certificate of occupancy which may include conditions within the building official's discretion and then only the persons specified on said temporary certificate of occupancy may enter the said structure pursuant to said certificate.

**113.1 General.** In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, the Building Commission shall

act in the capacity of a Board of Appeals for this code. The board shall adopt rules of procedure for conducting its business.

**113.3 Membership of board.** The Board of Appeals shall consist of the members of the Building Commission.

**113.4 Disqualification of member.** A member shall not hear an appeal in which that member has any personal, professional or financial interest.

**113.5 Chairman, Vice Chairman and Secretary.** The Board shall select one of its members to serve as Chairman and one to serve as Vice Chairman. Both the Chairman and the Vice-Chairman will have full voting privileges on all matters to come before the board. The building official shall designate a representative of the Department of Transportation and Public Works to serve as Secretary to the Board, who shall keep a detailed record of all proceedings on file in the Department of Transportation and Public Works.

**113.6 Application.** The application for appeal shall be filed in writing on a form obtained from the building official.

**113.6.1 Time limitation and filing procedure.** All appeals shall be filed in writing with the building official. An application for appeal may not be filed more than 30 days after the affected individuals are notified of the building official's decision.

**113.6.2 Filing fee.** An application for appeal may not be filed without full payment of the filing fee prescribed in Chapter 1100, SLCRO 1974, as amended.

**113.7 Notice of hearing on appeal.** The board shall meet upon notice of the chairman and no later than 30 days after the notice of appeal is received by the building official or at stated periodic meetings if warranted by the volume of work. The board shall give notice of all appeals by one publication in a newspaper of general circulation in the County, at least seven days in advance of the hearing on that appeal.

**113.8 Postponed hearing.** When five members are not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.

**113.9 Procedure.** Hearings shall be conducted in accordance with the requirements of Chapter 536 R.S.Mo.

**113.9.1 Open hearing.** All hearings before the board shall be open to the public. The appellant, the appellant's representative, the building official and any person whose interests are affected shall be given an opportunity to be heard.

**113.10 Quorum required.** A quorum for the conduct of a hearing before the Building Commission shall consist of three members of the Board.

**113.11 Notification of decision.** The Secretary of the Board shall notify the appellant of the decision of the Board in writing in a timely manner.

**113.12 Judicial review.** Decisions of the Board of Appeals are subject to judicial review pursuant to Chapter 536 R.S.Mo.

**114.2 Notice of violation.** The building official shall notify the person responsible for violating any provision of this code, including the erection, construction, alteration, extension, repair, moving, removal, demolition or occupancy of a building or structure in violation of the provisions of this code, or in violation of a permit or certificate issued under the provisions of this code. The notification shall be in writing and shall be hand delivered to the violator or the violator's legally authorized representative or mailed to the

violator's last known address via Certified Mail. In the event either of the forgoing attempts at service do not result in actual service, other attempts reasonably calculated to achieve actual service shall be made, including publication in a newspaper of general circulation. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation. Any person having been notified that a violation exists by means other than a stop work order and who fails to promptly abate the violation after notification shall be subject to the penalties enumerated in this code.

**114.4 Violation penalties.** It shall be unlawful and deemed a violation of this code for any person, firm, corporation, limited liability company or other business entity to:

1. Fail to comply with any of the requirements of this code; or
2. Erect, construct, alter, occupy, or repair a structure in violation of the approved construction documents, a directive of the building official or a permit or certificate issued under the provisions of this code; or
3. Start any work requiring a permit without first obtaining such permit; or
4. Continue any work in or about a structure after having been served a stop work order, except for such work which that person, firm or corporation has been directed to perform to remove a violation or unsafe condition; or
5. Maintain any structure or premises in which a violation exists or fail to timely correct any deficiencies or violations of this code after notification; or
6. Fail to request a required inspection after a permit is issued; or
7. Perform any act prohibited by this code or fail to perform any act required by this code; or
8. Fail to commence work within six months of permit issuance or suspend or abandon work for more than six months.

A violation of this code may be punished by a fine of not more than \$1,000 or by imprisonment not exceeding 90 days or by both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

**114.4.1 No-permit and no-inspection request penalties.** In addition to the penalties set out above, the following procedure shall be followed where the building official determines that work has been started prior to the acquisition of a permit required by this code or the permit holder failed to schedule the required inspection, or allowed the permit to lapse without requesting a final inspection:

1. The building official may issue a stop work order when work requiring a permit was started prior to the acquisition of that permit. The building official may issue a Notice of Violation when a required inspection was not requested.
2. The building official shall notify the holder of the license or permit of the action to be taken and allow sufficient time for response to such action if appropriate. A no-permit penalty shall not exceed the greater of \$500 or 1 percent of the cost of construction of the work involved. A no-inspection request penalty shall not exceed \$500.

If 180 days has transpired since the last inspection on record or if the permit has automatically expired, a permit extension fee shall be added to a no-inspection request penalty amount.

3. The stop work order for failure to obtain a permit or the violation for failure to request an inspection shall remain in full force and effect until such time as the penalty amount is paid and the violator has complied with all other regulations pertaining to the issuance of the required permit, or requesting the required inspection.
4. No-permit and no-inspection request penalties are appealable to the Board of Appeals in the same manner as other decisions of the building official. The building official may revise the assessment upon notice to both the Board of Appeals and the alleged violator at any time prior to the hearing. At any time prior to the hearing, the violator may accept and pay the assessed penalty amount and the hearing will be canceled.
5. At the hearing before the Board of Appeals, said Board shall afford both the building official and the alleged violator an opportunity to present any evidence or make any statements they wish to have considered.
6. Following the hearing, the Board of Appeals shall determine whether a permit or inspection was required:
  - 6.1. If the Board of Appeals determines that a permit or inspection was required, an appropriate penalty amount shall be assessed, taking into account the same considerations as noted above. The stop work order for failure to obtain a permit or the violation for failure to request an inspection shall remain in full force and effect until such time as the penalty amount is paid and the violator has complied with all other regulations pertaining to the issuance of the required permit, or requesting the required inspection.
  - 6.2. If the Board of Appeals determines that a permit or inspection was not required, the building official shall immediately cancel the stop work order for failure to obtain a permit or abate the no-inspection request violation.

**114.5 Unlawful continuance.** Any person who fails to obtain permits when required, or fails to request a required inspection, or continues any work in or about a structure or premises after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as specified in this code.

**116.5 Restoration.** Where the structure or equipment determined to be unsafe by the building official is restored to a safe condition, to the extent that repairs, alterations or additions are made or a change of occupancy occurs during the restoration of the structure, such repairs, alterations, additions and change of occupancy shall comply with the requirements of Section 105.2.2 and the International Residential Code or the International Existing Building Code, as applicable.

## **SECTION 117 EMERGENCY MEASURES**

**117.1 Imminent danger.** When, in the opinion of the building official, there is imminent danger of failure or collapse of a building that endangers life, or when any building or part of a building has fallen and life is endangered by the occupation of the building, or when there is actual or potential danger to the building occupants or those in the proximity of any structure because of explosives, explosive fumes or vapors, or the presence of toxic fumes, gases, or materials, or operation of defective or dangerous equipment, the building official is hereby authorized and empowered to order and require the occupants to vacate the premises forthwith. The building official shall cause to be posted at each entrance to such structure a notice reading as follows: "This Structure Is Unsafe and Its Occupancy Has Been Prohibited by the building official." It shall be unlawful for any person to enter such structure except for the purpose of securing the structure, making the required repairs, removing the hazardous condition, or of demolishing the same.

**117.2 Temporary safeguards.** Notwithstanding other provisions of this code, whenever, in the opinion of the building official, there is imminent danger due to an unsafe condition, the building official shall order the necessary work to be done, including the boarding up of openings, to render such structure temporarily safe whether or not the legal procedure herein described has been instituted; and shall cause such other action to be taken as the building official deems necessary to meet such emergency.

**117.3 Closing streets.** When necessary for public safety, the building official shall temporarily close structures and close or order the authority having jurisdiction to close sidewalks, streets, public ways, and places adjacent to unsafe structures, and prohibit the same from being utilized.

**117.4 Emergency repairs.** For the purposes of this section, the building official shall employ the necessary labor and materials to perform the required work as expeditiously as possible.

**117.5 Costs of emergency repairs.** Costs incurred in the performance of emergency work shall be paid by the jurisdiction. The legal counsel of the jurisdiction shall institute appropriate action against the owner of the premises where the unsafe structure is or was located for the recovery of such costs.

**117.6 Appeal.** Any person ordered to take emergency measures shall comply with such order forthwith. Any affected person shall thereafter, upon petition directed to the Board of Appeals, be afforded an appeal as described in this code.

## **SECTION 118 UNFIT STRUCTURES**

**118.1 Inspections.** The building official shall inspect or cause to be inspected:

1. Any structure about which complaints are made by any person alleging that it is unfit.
2. Any structure reported by a police department, fire department or any other public agency as apparently unfit.
3. Any structure, which has been classified as apparently, unfit pursuant to any study or inspection program conducted by any County Agency or Department.

**118.2 Unfit structures.** All structures having one or more of the following defects are an unfit structure:

1. Those which are unoccupied and which have interior walls or other vertical structural members which list, lean or have buckled to such an extent that a plumb line passing through the center of gravity falls outside of the middle third of its base.
2. Those which are unoccupied and which have exterior portions, members, appurtenances, ornamentations, or components which are likely to fail or collapse, or to become detached or dislodged, and thereby injure persons or damage property.
3. Those which are unoccupied and are open at door and window.
4. Those which are unoccupied and have been damaged by fire, wind, vandalism or other causes so as to impair the life, health, or safety of persons who are or might reasonably be in or on neighboring structures, or rights-of-way.
5. Those which are unoccupied and are so dilapidated or unsafe as to be likely to cause injury to the health, safety, or welfare of neighbors.

6. Those which have never been lawfully occupied and for which a certificate of occupancy could not be granted by reason of non completion, where construction has been substantially abandoned for more than 18 months.
7. Those unoccupied structures which are considered to be a fire hazard by having accumulations of combustible rubbish or waste materials, or the excess storage of any combustible material, or the storage of dangerous or unlawful amounts of flammable, explosive or otherwise hazardous materials.
8. Those unoccupied structures which have been damaged by fire, earthquake, wind, flood, vandalism, malicious mischief, or other cause, or have become so dilapidated, deteriorated or decayed as to come within any one or more of the following categories as affirmed by the building official and the Office of the County Counselor:
  - 8.1. The structure may attract and result in harm to children;
  - 8.2. The structure is, or is likely to become, a harbor for vagrants, criminals or immoral persons;
  - 8.3. The building or structure enables persons to resort thereto for the purpose of committing unlawful or immoral acts.

**118.3 Notice of nuisance.** If the building official determines, after inspection, that a structure is unfit, the building official shall declare it a public nuisance and shall cause a report to be prepared stating the use of said structure and the nature or extent of the damage, deterioration, dilapidation and or hazard as defined by Section 118.2 that was used in determining the structure to be an unfit structure. Said notice shall order the nuisance abated by repair, demolition or other approved means and that work shall commence within 15 days of the service of notice. The structure shall be posted in accordance with Section 118.4 and a copy of the notice of nuisance shall be posted in a prominent location on the premises.

If the repair, demolition or other approved means of abatement ordered has not begun or is not carried forth promptly within the time period stated above, the building official or a designated Hearing Officer may, after hearing, order the structure secured or demolished and the costs, together with the expenses of administration, assessed against the property as a special tax lien. The order to demolish may be appealed by an affected party as provided by law.

**118.4 Occupancy prohibited.** Upon the determination that a structure is an unfit structure as defined by Section 118.2 or otherwise poses a threat to the general public, a condemnation or Notice of Declaration of Nuisance placard(s) shall be immediately posted in a conspicuous place(s) on the structure as a matter of public safety ordering all persons not directly associated with the securing or permitted repair or demolition of this structure to keep out. It will be considered a violation of this code for any person to enter or occupy a structure or portion thereof after posting of these placards without specific approval from the building official.

**118.4.1 Removal of placard prohibited.** No person shall deface or remove such notice without the prior authorization of the building official or a Court having jurisdiction on review of an order of the building official. Removal of condemnation or warning placard signs shall be considered a violation of this code.

**118.5 Standards for repair or demolition of unfit structure.** The following standards shall govern the building official or Hearing Officer in determining whether to order the repair or demolition of any unfit structure.

**118.5.1 Repairs permitted.** If, at the discretion of the building official or Hearing Officer, any structure found unfit by the building official can reasonably be repaired so that it will no longer be in violation of



this ordinance, or any other applicable law or ordinance, it shall be ordered rehabilitated and completed within a reasonable time. The repair permit shall include a completion date as determined by the building official or Hearing Officer. The issuance of the repair permit shall result in a hold being placed on the demolition order which shall remain in effect as long as progress is made towards rehabilitating the unfit structure in a timely manner relative to meeting the rehabilitation repair completion date.

**118.5.1.1 Expiration of rehabilitation repair permit.** Repair permits for rehabilitating an unfit structure shall become invalid unless the work on site authorized by such permit is commenced within 60 days after it's issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 60 days after the time the work is commenced, or if the work is not completed by the completion date established for the permit, unless an extension is authorized. The building official is authorized to grant, in writing, one or more extensions of time, for periods of 30 days each. The extension shall be requested in writing and justifiable cause demonstrated. If progress is not made towards rehabilitating the unfit structure in a timely manner relative to meeting the completion date or if the repair permit becomes invalid the building official is authorized to execute the demolition order.

**118.5.2 Demolition required.** If at the discretion of the building official or Hearing Officer, it is determined that an unfit structure cannot be reasonably repaired so that it will be in compliance with this code due to being 50 percent or more damaged, decayed or deteriorated or the cost to repair is more than 50 percent of the appraised value of the structure or it has been affirmed by the building official and the County Counselor that the structure is detrimental to the safety, health and welfare of the community, the structure shall be ordered demolished.

**118.5.2.1 Fifty percent damaged.** Fifty percent damaged will be interpreted as meaning 50 percent of the value of the structure or 50 percent of the structural components as determined by the building official.

When making a 50 percent damaged determination in regards to the value of the structure, the cost to repair the damage will be divided by the St. Louis County Assessor's current appraised value for the improvement only. The cost to repair will be determined either by using a square foot multiplier from a nationally recognized publication multiplied by the St. Louis County Assessor's Area Under Roof square foot value, a bona fide cost estimate from a contractor approved by the building official or any other means approved by the building official.

**118.5.2.2 Multiple structures on the same lot.** When there are multiple structures on the same lot, each will be analyzed individually for possible demolition, with the exception that demolition must include all structures accessory to the main structure so as not to cause a violation of the Zoning Ordinance.

**118.5.3 Service of notice of demolition.** The notice may be served personally or by certified mail, return receipt requested. If service is had in this manner, the affected party shall have 15 days from the date of service of the notice to repair or demolish the structure, unless the building official shall extend the time period set forth in said notice. If service cannot be had upon all affected parties by either of the modes set forth above, then notice shall be given by publication, or such other means as is reasonably calculated to actually serve the notice upon the affected party. If notice is given in this manner, the affected party shall have 15 days from the date of publication of said notice to repair or demolish the structure, unless the building official shall extend the time period set forth in said notice. If, at the discretion of the building official, additional time is necessary to perform the work required by the notice, the building official may extend the time period set forth in the notice for the performance of such work by specifying in an additional written notice the date to which said extension is made.

**118.5.3.1 Failure to demolish violation.** Failure of the owner to demolish the structure within the time specified by the building official or Hearing Officer shall be a violation of this code and shall be subject to the penalties specified in this code.

**118.5.4 Subsequent purchases.** The act of subsequent purchases shall not delay the hearing of such matter and shall be an exception to the time requirements of the said notice provided herein, unless at the discretion of the building official or Hearing Officer, such hearing should be continued, or unless such subsequent purchaser shall apply for and receive written authorization from the building official to either rehabilitate or demolish such structure, and shall perform the work within the time period allowed under such authorization.

**118.5.5 Authorization of affected parties to demolish unfit structure.** If, after a structure has been declared a public nuisance by the building official and it shall be determined by the building official that said structure must be demolished, and if one or more of the affected parties shall not cause the demolition of said structure, and if all affected parties and any subsequent purchaser shall agree in writing to the demolition of said unfit structure by St. Louis County, then such matter shall immediately be placed on the building demolition docket. A hearing shall then be held relative to such structure at which time evidence shall be presented to establish the location of the structure, the physical condition of the structure, and the fact that all affected parties and any subsequent purchaser have agreed in writing to the demolition of the structure. If the Hearing Officer shall so find, the Hearing Officer shall issue written findings-of-fact and shall issue an order to demolish the structure.

**118.5.6 Cost of demolition.** If the Hearing Officer issues an order whereby the structure is demolished, the costs of such demolition plus a reasonable cost, not to exceed the amount specified in Chapter 1100, SLCRO 1974, as amended, for the administration of the provisions of this ordinance shall be imposed against the property to be prepared and collected by the Collector of Revenue in the same manner as other real property taxes. At the election of the taxpayer, the tax bill may be made in equal installments over a period of not more than ten years. The tax bill shall be a lien upon the property from the date of its issuance until paid.

**118.6 Securing required.** If in the judgment of the building official or Hearing Officer a structure is less than 50 percent decayed, damaged or deteriorated and such structure could reasonably be restored to useable condition, the building official shall post the structure in accordance with Section 118.4 and send a notice by certified mail to the owner of record as identified by the Department of Revenue records that they shall have no less than 15 days from the date of the notice to secure the structure or to show cause why the structure should not be secured. All board-ups used as a means of securement shall be painted to blend with the color of the structure.

**118.6.1 Responsibility and cost of securing.** Work needed to secure a structure shall be the responsibility of the owner. If the owner is unable, unwilling or fails to secure the structure within the time specified by the building official, then the building official is authorized to have such work done and a lien to ensure payment of all expenses related thereto shall be placed on the property. Evidence of the expenses associated with securing the structure shall be presented to the building official and forwarded to the Collector of Revenue.

**118.6.2 Service of notice to secure.** The notice may be served personally or by certified mail, return receipt requested, or by such other means as is reasonably calculated to achieve actual service upon the owner of record. If service is had in this manner, the owner of record shall have 15 days from the date of service of the notice to secure the structure, unless the building official shall extend the time period set forth in said notice. If service cannot be had upon the owner of record by either of the modes set forth above, the building official shall cause the structure to be secured.

**118.6.2.1 Failure to secure violation.** Failure of the owner to secure the structure within the time specified by the building official shall be a violation of this code and shall be subject to the penalties specified in this code.

**118.7 Notice of declaration of nuisance.** Upon the declaration of public nuisance by the building official, a notice of declaration of nuisance shall be filed and recorded in the office of the Recorder of Deeds. Such notice shall be signed by the building official, or the building official's designated representative, and shall be notarized. A copy of such recorded instrument shall be retained by the building official. Upon the completion of the work necessary to cause the structure to comply with all applicable county ordinances, and the approval thereof by the building official, or upon the satisfaction and release of any and all liens imposed pursuant to the provisions of this Chapter, the building official shall provide to the affected party a notice of said compliance or satisfaction to be filed in the office of the Recorder of Deeds. A copy of such notice shall be retained by the building official.

**118.8 Hearing.** The building official may appoint a Hearing Officer. The Hearing Officer shall be a registered design professional and shall be appropriately compensated.

**118.8.1 Duties of hearing officer.** The Hearing Officer shall preside at all hearings held pursuant to Section 118 and shall hear and receive evidence, shall make rulings relating thereto, and shall perform all other usual or necessary functions of the presiding officer in an administrative hearing, all in accordance with the Missouri Administrative Procedure and Review Act, Chapter 536 R.S.Mo. and the St. Louis County demolition hearings procedures.

**118.8.2 Duties of building official.** Upon the refusal or neglect of the affected parties to commence the work of rehabilitation, completion or demolition within the time specified in the notice or upon the failure to proceed continuously with the work without unnecessary delay, the building official shall either:

1. Advise the County Counselor of all the facts, whereupon the County Counselor shall institute the appropriate legal action to compel the compliance; or
2. Set the matter on the building demolition docket for a full evidentiary hearing. All hearings shall be recorded by electronic recording device or court reporter. Prior to any such hearing, all affected parties shall be given at least 15 days written notice of the hearing, which notice may be served in the same manner as required in Section 118.5.3. Any party may be represented by counsel at such hearing, and any interested person may be heard. If the Hearing Officer finds that the structure is unfit, the Hearing Officer shall issue an order making specific findings of fact, based upon competent and substantial evidence, which shows the structure to be a nuisance and detrimental to the health, safety or welfare of the residents of St. Louis County and the Hearing Officer shall order the structure to be demolished and removed or repaired and completed. If the evidence does not support a finding that the structure is a nuisance or detrimental to the health, safety or welfare of the residents of St. Louis County, no order shall be issued.

**118.8.3 Appeal.** Any party aggrieved by the Hearing Officer's order may petition for judicial review of such order as provided in Chapter 536 R.S.Mo.

## **SECTION 119 DEMOLITION OF STRUCTURES**

**119.1 Demolition of buildings or structures.** No person, firm or corporation shall demolish a building or other structure without first obtaining a demolition permit.

**119.1.1 Service connections.** Before a demolition permit is issued, the owner or agent shall provide proof that it notified all utilities having service connections within the building or structure such as water, electric, gas, sewer and other connections, and such utilities confirmed that their respective service connections and appurtenant equipment, such as meters and regulators, have been removed or sealed and plugged in a safe manner.

**119.1.1.1 Septic tanks.** In accordance with the Plumbing Code, abandoned individual sanitary sewage systems shall be disconnected from buildings, pumped out and the septic tank bottom shall be broken out. The septic tank shall be backfilled with crushed limestone, gravel or clean compacted dirt. Prior to issuance of a demolition permit, written verification from a licensed waste hauler which states that the septic tank has been pumped out shall be provided.

**119.1.1.2 Wells.** Wells shall be located by the demolition contractor, clearly marked and reported to St. Louis County in the demolition permit application.

**119.1.1.3 Propane tanks.** Propane tanks are the property of the company named on the tank. The demolition contractor must notify the propane tank company to have the tank properly disconnected and removed from the premises.

**119.1.2 Demolition permit fee.** The fee for a demolition permit and inspection for the demolition of any building or structure shall be as specified in Chapter 1100, SLCRO.

**119.2 Lot regulation.** Whenever a building or structure has been removed, the premises shall be maintained free from all unsafe or hazardous conditions.

**119.2.1 Slabs and foundation walls.** All on grade slabs and pavement, except public sidewalks, shall be removed unless directed otherwise by the building official. All foundation walls shall be broken down to at least two feet (610 mm) below grade and debris must not be larger than three feet (914 mm) in width and length. All concrete basement or crawl space slabs shall be broken into sections not exceeding eight feet (2438 mm) in any dimension. Cracks shall be of sufficient size to permit drainage.

**119.2.2 Grading and backfilling.** All grading and backfilling operations shall be conducted in such a manner as to provide clean, uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinder blocks and bricks. Demolition rubble, or any other rubble brought in from another site to be used as fill, shall be subject to laboratory testing for any contaminants at the discretion of the building official.

**119.2.3 Lot maintenance.** Whenever a building or structure has been demolished and no building or construction operation has been contemplated or projected in the immediate future, as evidenced by the fact that no application for a building permit has been filed with the building official, the excavation remaining after such demolition, including pavement removal, shall be immediately filled, graded and maintained in conformity with the existing grade immediately adjacent to such excavation, or stabilized as directed by the building official. The top six inches (152 mm) of fill shall be clean top soil and shall be planted with grass seed or other vegetation approved by the building official and covered with straw.

**119.2.4 Improper fill.** The building official shall be permitted to require the demolition contractor to reopen a completed excavation to determine if proper fill procedures have been followed. The cost of reopening shall be borne by the demolition contractor.

**119.2.5 Burial of debris.** On any demolition site where there is no basement or below grade crawl space, all demolition debris must be removed from the site. Excavation for the purpose of burying debris will not be allowed.

**Exception:** Demolition debris may be buried on-site in a manner and location approved by the building official.

**119.2.6 Open burning.** Open burning shall not be allowed unless permitted by the fire jurisdiction.

**119.3 Expiration of demolition permits.** Permits for demolition work shall become invalid if permitted work is not started within thirty days after the date of issuance or if the permitted work is not completed within ninety days of such issuance date. The building official, after receiving a written request from the applicant may extend the permit expiration date for one or more additional thirty day period(s) if the permit applicant presents written evidence of justifiable cause. An extension fee equal to the permit application extension fee in the amount specified in Chapter 1100, SLCRO 1974, as amended, shall be paid for each additional extension period of 30 days beyond the initial 90 days allowed after the date of filing. An additional inspection fee may be charged for an inspection to verify that work has not started. The building official shall notify delinquent applicants in writing and give 14 days notice prior to abandonment of the application.

**1115.102 Amendments to the International Building Code, 2015 Edition – Chapter 2 Definitions. --**

The following provisions amend Chapter 2 Definitions in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**201.3 Terms defined in other codes.** Where terms are not defined in this code and are defined in the International Fire Code, International Mechanical Code, International Plumbing Code, International Existing Building Code, International Residential Code, International Property Maintenance Code, NFPA 70, or International Energy Conservation Code, such terms shall have the meanings ascribed to them as in those codes.

**SECTION 202  
DEFINITIONS**

Retain all Definitions listed in Section 202 of the International Building Code, 2015 edition and add the following definitions to the section.

**Adult Day Care Home.** A family home, occupied as a permanent residence by the adult day care home provider, in which care is given to no more than 8 adults for any part of the 24 hour day.

**Affected Parties.** The owner, occupant, lessee, mortgagee, agent and all other persons having an interest in the structure or its premises as shown by the records of the Recorder of Deeds as of the date said structure is declared to be a public nuisance by the building official.

**Board of Appeals.** The Building Commission created in Article IV, Section 4.330 of the St. Louis County Charter.

**Building Code Official.** The Code Official as defined herein.

**Building Code Review Committee.** The Committee established by, and acting in accordance with the Building Code, SLCRO 1974, Title XI, Chapter 1115, as amended.

**Building Commission.** The Building Commission created in Article IV, Section 4.330 of the St. Louis County Charter.

**Building Official.** The Code Official as defined herein.

**Child Day Care Home.** A family home, occupied as a permanent residence by the child day care home provider, in which care is given to no more than 10 children, including children related to the day care provider for any part of the 24 hour period.

**Code Official.** The Director of the St. Louis County Department of Transportation and Public Works or the Director's duly authorized representative.

**Dangerous.** Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, partially collapsed, has moved off its foundation or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads.
3. The building or structure or any portion thereof is likely to collapse partially or completely because:
  - 3.1. Of dilapidation, deterioration or decay;
  - 3.2. Of construction in violation of the this code;
  - 3.3. The soil supporting the foundation is unstable, moved or removed;
  - 3.4. The foundation is inadequate, decayed or deteriorated; or
  - 3.5. It is damaged due to fire, earthquake, wind or flood; or any other similar cause.
4. The exterior walls or other vertical structural member 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.
5. Any building or structure with substantial structural damage.

**Disaster.** A disaster shall include but not necessarily be limited to flood, windstorm, tornado, severe storm, earthquake, bomb blast, explosion or similar natural or man-made type event. The building official shall make the determination whether an event shall be declared a disaster.

**Electrical Code Review Committee.** The Committee established by, and acting in accordance with the Electrical Code, SLCRO 1974, Title XI, Chapter 1102, as amended.

**Flood Hazard Area.** An area that has been determined to be prone to flooding in accordance with section 1612.

**Lowest Floor.** The floor of the lowest enclosed area, including a basement. An unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage, in an area other than a basement area, is not considered a building's lowest floor provided that such enclosure is not built so as to render the structure in violation of section 1612.

**Mechanical Code Review Committee.** The Committee established by, and acting in accordance with the Mechanical Code, SLCRO 1974, Title XI, Chapter 1108, as amended.

**Plumbing Code Review Committee.** The Committee established by, and acting in accordance with the Plumbing Code, SLCRO 1974, Title XI, Chapter 1103, as amended.

**Zoning Ordinance.** St. Louis County Zoning Ordinance, Title X, Chapter 1003 SLCRO 1974 as amended.

**1115.103 Amendments to the International Building Code, 2015 Edition – Chapter 3 Use and Occupancy Classification.** --The following provisions amend Chapter 3 Use and Occupancy

Classification in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**305.2 Group E, day care facilities.** This group includes buildings and structures or portions thereof occupied by more than five children older than 2½ years of age who receive educational, supervision or personal care services for fewer than 24 hours per day.

Exception: Child day care homes as provided for in Section 310.5.1.

**308.3.4 Five or fewer persons receiving custodial care.** A facility with five or fewer persons receiving custodial care shall be classified as Group R-3 or shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3.

**308.4.2 Five or fewer persons receiving medical care.** A facility with five or fewer persons receiving medical care shall be classified as Group R-3 or shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3.

**308.6 Institutional Group I-4, day care facilities.** Institutional I-4 occupancy shall include buildings and structures occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Adult day care

Child day care

**Exception:** Adult day care homes and child day care homes as provided for in Section 310.5.1.

**310.2 Definitions.** The following terms are defined in Chapter 2:

Adult Day Care Home.

Boarding House.

Child Day Care Home.

Congregate Living Facilities.

Dormitory.

Group Home.

Guest Room.

Lodging House.

Personal Care Service.

Transient.

**310.5 Residential Group R-3.** Residential Group R-3 occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

Adult day care homes

Buildings that do not contain more than two dwelling units

Boarding houses (nontransient) with 16 or fewer occupants

Boarding houses (transient) with 10 or fewer occupants

Care facilities that provide accommodations for five or fewer persons receiving care

Child day care homes

Congregate living facilities (nontransient) with 16 or fewer occupants

Congregate living facilities (transient) with 10 or fewer occupants

Lodging houses with five or fewer guest rooms

**310.5.1 Care facilities within a dwelling.** 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 provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3. Adult day care homes and child day care homes shall per permitted to be constructed in accordance with the International Residential Code.

**1115.107 Amendments to the International Building Code, 2015 Edition – Chapter 7 Fire and Smoke Protection Features.** --The following provisions amend Chapter 7 Fire and Smoke Protection Features in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**716.7 Existing non-rated corridor walls in occupancy classification B.** New non-rated openings in corridors in existing buildings may be protected with a water curtain in lieu of an approved protective device where the following features are provided:

1. The corridor walls and ceiling of the tenant space are constructed to limit the transfer of smoke into the corridor.
2. Corridor doors shall provide an effective barrier to limit the transfer of smoke.
3. Sprinkler heads shall be placed within 18 inches (457 mm) of the corridor wall at a spacing of not more than 6 feet (1829 mm) on-center on the tenant side of the wall.

**1115.109 Amendments to the International Building Code, 2015 Edition – Chapter 9 Fire Protection Systems.** --The following provisions amend Chapter 9 Fire Protection Systems in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**903.3.1.2 NFPA 13 or NFPA 13R sprinkler systems.** Automatic sprinkler systems in Group R occupancies up to and including four stories in height in buildings not exceeding 60 feet (18288 mm) in height above grade plane shall be permitted to be installed throughout in accordance with NFPA 13 or NFPA 13R.

The number of stories of Group R occupancies constructed in accordance with Sections 510.2 and 510.4 shall be measured from the horizontal assembly creating separate buildings.

**903.3.5.3 Water flow safety factor.** A safety factor shall be applied to all flow tests for fire sprinkler systems. A parallel curve shall be drawn to the actual flow test curve that has been reduced by 10 percent of the static pressure. A sprinkler system design shall not exceed the 10 percent curve.

**905.3 Required installations.** Standpipe systems shall be installed where required by Sections 905.3.1 through 905.3.8. Standpipe systems are allowed to be combined with automatic sprinkler systems.

**Exception:** Standpipe systems are not required in Group R-3 occupancies.

**1115.110 Amendments to the International Building Code, 2015 Edition – Chapter 10 Means of Egress.** --The following provisions amend Chapter 10 Means of Egress in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.



**1015.2 Where required.** Guards shall be located along open-sided walking surfaces, including mezzanines, equipment platforms, aisles, stairs, ramps, landings and walking surfaces adjacent to retaining walls that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Guards shall be adequate in strength and attachment in accordance with Section 1607.8.

**Exception:** Guards are not required for the following locations:

1. On the loading side of loading docks or piers.
2. On the audience side of stages and raised platforms, including stairs leading up to the stage and raised platforms.
3. On raised stage and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations.
4. At vertical openings in the performance area of stages and platforms.
5. At elevated walking surfaces appurtenant to stages and platforms for access to and utilization of special lighting or equipment.
6. Along vehicle service pits not accessible to the public.
7. In assembly seating areas at cross aisles in accordance with Section 1029.16.2.
8. Retaining walls four feet (1219 mm) or less in height.
9. Retaining walls in excess of four feet (1219 mm) in height where any walk, path, parking lot or driveway is located two feet (610 mm) or more away from the front face of the wall.

**1115.111 Amendments to the International Building Code, 2015 Edition – Chapter 11 Accessibility.**

--The following provisions amend Chapter 11 Accessibility in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1101.2 Design.** Buildings and facilities shall be designed and constructed to be accessible in accordance with this code, ICC A117.1 and as amended by Sections 1102.2.1, 1102.2.2 and 1102.2.3.

**1101.2.1, ICC A117.1, Section 502.2 Vehicle Space Size.** Car and van parking spaces shall be 96 inches (2440 mm) minimum in width.

**1101.2.2, ICC A117.1, Section 502.4.2 Width.** Access aisles serving car parking spaces shall be 60 inches (1525 mm) minimum in width. Access aisles serving van parking spaces shall be 96 inches (2440 mm) minimum in width.

**1101.2.3, ICC A117.1, Section 502.7 Identification.** Accessible parking spaces shall be identified by signs. The signs shall include the International Symbol of Accessibility complying with Section 703.6.3.1. Signs identifying van parking spaces shall contain the designation "Lift Van Accessible Only." Such signs shall be 60 inches (1525 mm) minimum above the floor of the parking space, measured to the bottom of the sign.

**1106.5 Van spaces.** For every four or fraction of four accessible parking spaces, at least one shall be a van accessible parking space.

**Exception:** In Group R-2 and R-3 occupancies, van accessible spaces located within private garages shall be permitted to have vehicular routes, entrances, parking spaces and access aisles with a minimum vertical clearance of 7 feet (2134 mm).

**115.112 Amendments to the International Building Code, 2015 Edition – Chapter 12 Interior Environment.** --The following provisions amend Chapter 12 Interior Environment in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1203.1 General.** Buildings shall be provided with ventilation as required by the International Mechanical Code. Where natural ventilation is permitted by the International Mechanical Code, the natural ventilation shall be in accordance with Section 1203.5 of this code.

**115.113 Amendments to the International Building Code, 2015 Edition – Chapter 13 Energy Efficiency.** --The following provisions amend Chapter 13 Energy Efficiency in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1301.1.1 Criteria.** Buildings shall be designed and constructed in accordance with the International Energy Conservation Code.

**Exception:** Buildings of Residential Groups R-2, R-3 and R-4 shall be permitted to be designed and constructed in accordance with Section N1101, General and Section N1102, Building Thermal Envelope of the International Residential Code.

**115.115 Amendments to the International Building Code, 2015 Edition – Chapter 15 Roof Assemblies and Rooftop Structures.** --The following provisions amend Chapter 15 Roof Assemblies and Rooftop Structures in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1511.1 General.** Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15.

**Exceptions:**

1. Roof replacement or roof recover of existing low-slope roof coverings shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section 1507 for roofs that provide positive roof drainage.
2. Recovering or replacing an existing roof covering shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section 1503.4 for roofs that provide for positive roof drainage. For the purposes of this exception, existing secondary drainage or scupper systems required in accordance with this code shall not be removed unless they are replaced by secondary drains or scuppers designed and installed in accordance with Section 1503.4.

**1511.2 Structural and construction loads.** Structural roof components shall be capable of supporting the roof-covering system and the material and equipment loads that will be encountered during installation of the system.

Structural calculations are required when the proposed roof covering system results in a greater than 5 percent increase in the design load on any structural element in accordance with Sections 403.3, 403.3.1, 707.2 or 1401.4.1 of the International Existing Building Code. The structural calculations shall comply with Chapter 16 except as noted in the International Existing Building Code. The calculations shall include verification that ponding instability will not occur.

**1115.116 Amendments to the International Building Code, 2015 Edition – Chapter 16 Structural Design.** --The following provisions amend Chapter 16 Structural Design in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1612.1 General.** Within flood hazard areas as established in Section 1612.3, all new construction of buildings, structures and portions of buildings and structures, including substantial improvement and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazards and flood loads in accordance with this code, the Zoning Ordinance and the Floodplain Management Regulations Ordinance. For buildings that are located in more than one flood hazard area, the provisions associated with the most restrictive flood hazard area shall apply.

**1612.1.1 Alterations and repairs.** Alterations and repairs to buildings located in any hazard zone shall require code compliance with Sections 104.6.1, 105.1.1, 105.1.1.1, 110.2.1, 110.3.14.1, 111, 1612.3 and the International Existing Building Code except that in the case of damages or cost of reconstruction or restoration in excess of 50 percent of the fair market value of the building, such structure shall comply in all respects with the requirements of this section.

**1612.3 Establishment of flood hazard areas.** Flood hazard areas shall be established by the Floodplain Management Regulations Ordinance.

**1612.5 Flood hazard documentation.** The following documentation shall be prepared and sealed by a registered design professional and submitted to the building official:

1. For construction in flood hazard areas other than coastal high hazard areas or coastal A zones:
  - 1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 110.3.3.1 and for the final inspection in Section 110.3.14.1.
  - 1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.6.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.6.2.2 of ASCE 24.
  - 1.3. For dry floodproofed nonresidential buildings, construction documents shall include a statement that the dry floodproofing is designed in accordance with ASCE 24.
2. For construction in coastal High hazard areas and coastal A zones:
  - 2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 110.3.3.1 and for the final inspection in Section 110.3.14.1.
  - 2.2. Construction documents shall include a statement that the building is designed in accordance with ASCE 24, including that the pile or column foundation and building or structure to be attached thereto is designed to be anchored to resist flotation, collapse and lateral movement

due to the effects of wind and flood loads acting simultaneously on all building components, and other load requirements of Chapter 16.

- 2.3. For breakaway walls designed to have a resistance of more than 20 psf (0.96 kN/m<sup>2</sup>) determined using allowable stress design, construction documents shall include a statement that the breakaway wall is designed in accordance with ASCE 24.

**1613.3.1 Acceleration parameters.** The earthquake spectral response acceleration at short periods ( $S_s$ ) shall be 0.48g. The earthquake spectral response acceleration at 1-second periods ( $S_1$ ) shall be 0.18g.

**1115.118 Amendments to the International Building Code, 2015 Edition – Chapter 18 Soils and Foundations.** --The following provisions amend Chapter 18 Soils and Foundations in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1807.2.4 Guards.** Guards shall be provided in accordance with Section 1015.2.

**1809.5 Frost protection.** Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. Extending a minimum of 30 inches (762 mm) below the finish grade;
2. Constructing in accordance with ASCE-32; or
3. Erecting on solid rock.

**Exception:** Free-standing buildings meeting all of the following conditions shall not be required to be protected:

1. Assigned to Risk Category I;
2. Area of 600 square feet (56 m<sup>2</sup>) or less for light-frame construction or 400 square feet (37 m<sup>2</sup>) or less for other than light-frame construction; and
3. Eave height of 10 feet (3048 mm) or less.

Shallow foundations shall not bear on frozen soil unless such frozen condition is of a permanent character.

**1115.125 Amendments to the International Building Code, 2015 Edition – Chapter 25 Gypsum Board, Gypsum Panel Products and Plaster.** --The following provisions amend Chapter 25 Gypsum Board, Gypsum Panel Products and Plaster in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**2503.1 Inspection.** Lath and gypsum board shall be inspected in accordance with Section 110.3.7.

**1115.129 Amendments to the International Building Code, 2015 Edition – Chapter 29 Plumbing Systems.** --The following provisions amend Chapter 29 Plumbing Systems in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby

deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**2901.1 Scope.** The provisions of this chapter and the International Plumbing Code shall govern the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing equipment and systems. Toilet and bathing rooms shall be constructed in accordance with Section 1210. Plumbing systems and equipment shall be constructed, installed and maintained in accordance with the International Plumbing Code. Private sewage disposal systems shall conform to the International Plumbing Code.

**2902.1 Minimum number of fixtures.** Plumbing fixtures shall be provided in accordance with the International Plumbing Code.

Table 2902.1 Minimum Number Of Required Plumbing Fixtures. - Delete

**2902.1.1 Fixture calculations.** Fixture calculations shall be provided in accordance with the International Plumbing Code.

**2902.2 Separate facilities.** Where plumbing fixtures are required, separate facilities shall be provided for each sex.

**Exceptions:**

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 10 or fewer.
3. Separate facilities shall not be required in business or mercantile occupancies in which the maximum occupant load is less than 50.

**2902.3.2 Location of toilet facilities in occupancies other than malls and shopping centers.** In occupancies other than covered and open mall buildings and shopping centers, the required public and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).

**Exception:** The location and maximum distances of travel to required employee facilities in factory and industrial occupancies are permitted to exceed that required by this section, provided that the location and maximum distance of travel are approved.

**2902.3.3 Location of toilet facilities in malls and shopping centers.** In covered and open mail buildings and shopping centers, the required public and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 300 feet (91m). In mall buildings and shopping centers, the required facilities shall be based on total square footage (m<sup>2</sup>) within a covered mall building or shopping center or within the perimeter line of an open mall building, and facilities shall be installed in each individual store or in a central toilet area located in accordance with this section. The maximum distance of travel to central toilet facilities in mall buildings and shopping centers shall be measured from the main entrance of any store or tenant space. In mall buildings or shopping centers, where employees' toilet facilities are not provided in the individual store, the maximum distance of travel shall be measured from the employees' work area of the store or tenant space.

**2902.3.6 Prohibited toilet room location.** Public toilet rooms shall not open directly into a room used for the preparation of food for service to the public.

**2902.5 Drinking fountain location.** Drinking fountains shall be provided in accordance with the International Plumbing Code.

**2905.6 Small occupancies.** Drinking fountains shall not be required for an occupant load of 30 or fewer.

**1115.131 Amendments to the International Building Code, 2015 Edition – Chapter 31 Special Construction.** --The following provisions amend Chapter 31 Special Construction in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**3102.1 General.** The provisions of this section shall apply to air-supported, air-inflated, membrane-covered cable and membrane-covered frame structures, collectively known as membrane structures, erected for a period of 90 days or longer. Membrane structures covering water storage facilities, water clarifiers, water treatment plants, sewage treatment plants, greenhouses and similar facilities not used for human occupancy, are required to meet only the requirements of Sections 3102.3.1 and 3102.7. Membrane structures erected on a building, balcony, deck or other structure for any period of time shall comply with this section.

**3103.1 General.** The provisions of this section shall apply to all types of temporary structures that are to remain at a location for a limited period of time. Temporary structures such as membrane structures, trailers, food stands, portable buildings, greenhouses and unoccupied display structures may be erected and remain in place for the duration of a specific event or season. The duration of the event or season shall not exceed a six-month period except as otherwise provided in this section. Membrane structures erected for a period of 90 days or longer shall comply with Section 3102. All other structures erected for a period of more than six months shall comply with all applicable sections of this code for permanent buildings and structures. In addition to the requirements of this section, special amusement buildings and structures shall also comply with Section 411.

**Exceptions:**

1. The following types of buildings and structures may be erected for a period of up to one year:
  - 1.1. Unoccupied display structures.
  - 1.2. Subdivision sales offices.
  - 1.3. Unoccupied trailers or portable buildings used only to house equipment for monitoring air quality, soil and/or water contamination clean-up operations, or other similar uses related to the betterment of public safety, health, and welfare.
2. Temporary structures occupied as classrooms may be erected for a maximum of 10 months.

**3103.1.1 Permitted uses.** Temporary structure permits shall only be issued for the following types of structures and occupancies:

1. Membrane structures erected for a period of less than 90 days.
2. Unoccupied display structures.
3. Outdoor sales facilities.
4. Structures to be occupied on a seasonal basis only, such as fruit stands, greenhouses, snow-cone stands, special amusement buildings, etc.

5. Temporary structures to be used while awaiting completion of construction of a permanent building on the same site such as temporary offices, clinics, or classrooms.
6. Subdivision sales offices.
7. Structures to be used as temporary shelter or operations center in an emergency due to a disaster.
8. Entertainment or assembly uses.
9. Unoccupied trailers or portable buildings used only to house equipment.

**3103.2 Permit required.** No temporary structure shall be erected, operated or maintained for any purpose without obtaining a temporary structure permit.

**Exceptions:**

1. Tents used exclusively for recreational camping purposes.
2. Tents or air supported structures covering an area not exceeding 900 square feet (83.6 m<sup>2</sup>), including all connecting areas or spaces with a common means of egress or entrance, that are erected for a period of less than 90 days and with an occupant load of less than 50.

**3103.2.1 Permit fees.** Permit fees, as prescribed in Chapter 1100, SLCRO 1974 as amended shall be based on the estimated value of the proposed installation plus the value of any prefabricated construction. Such permit fee shall be charged for permits issued for one year. Permits issued for less than one year shall be prorated for the duration of the permit. The applicable minimum fee shall be assessed.

When permits are extended under Section 3103.2.2 the total fee for the permit extension shall include the permit extension fee plus a minimum of one additional inspection fee.

**3103.2.2 Inspection fees.** In addition to the permit fees prescribed in Section 3103.2.1, the required number of extra monthly inspections necessary shall be determined and the fee paid at the time of permit issuance.

**3103.2.3 Extension of permits.** The Board of Appeals may grant permit extensions for temporary structures used for unoccupied sales display purposes and for air-supported structures.

The building official may grant permit extensions of up to one-year periods for the types of structures and occupancies allowed under Exception 1.2 and 1.3 of Section 3103.1.

The building official may grant permit extensions for six month periods on temporary structures that are used while awaiting completion of construction of a permanent building on the same site (such as temporary offices, clinics, or classrooms) provided that the temporary structure is removed within 30 days after the occupancy permit for the permanent building is granted. Fees for a permit extension shall be as prescribed in Chapter 1100, SLCRO 1974 as amended.

**3103.2.4 Multiple permits prohibited.** Not more than one temporary structure permit shall be issued for the same structure at the same location, within a twelve-month period.

**3103.2.5 Termination of approval.** The building official is hereby authorized to terminate approval for cause and to order the demolition or removal of any such temporary structure at the building official's discretion, or as directed by a decision of the Board of Appeals.

**3103.3 Other approvals.** The building official shall require the applicant to obtain the approval of the local fire protection district or fire department prior to the issuance of any temporary structure permit.

**3103.4 Bond.** The building official may, in the exercise of discretion, require a permit applicant to post a perpetual performance bond, prior to issuance of the permit, to guarantee removal of the structure upon expiration of the permit or as directed by the building official and/or the Board of Appeals. The amount of the bond shall be set by the building official.

**3103.5 Construction documents.** A permit application and construction documents shall be submitted for each installation of a temporary structure. The construction documents shall include a site plan indicating the location of the temporary structure and information delineating the means of egress and the occupant load.

**3103.6 Design features.** 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 insure the public health, safety and general welfare.

**3103.7 Location.** Temporary structures shall be located in accordance with the requirements of Table 602 based on the fire-resistance rating of the exterior walls for the proposed type of construction.

**3103.7.1 Setback from the street.** Temporary structures shall be located a minimum of 15 feet (4572 mm) from the street right-of-way.

**3103.8 Flame-resistant treatment.** Before a permit is granted, the owner or agent shall file with the building official a certificate executed by an approved testing laboratory, certifying that the tents, canopies and membrane structures and their appurtenances, sidewalls, drops and tarpaulins, bunting, shall be composed of flame-resistant material or shall be treated with a flame retardant in an approved manner and meet the requirements for flame resistance as determined in accordance with NFPA 701, and that such flame resistance is effective for the period specified by the permit.

**3103.9 Label.** Membrane structures, tents or canopies shall have a permanently affixed label bearing the identification of size and fabric or material type.

**3103.10 Certification.** An affidavit or affirmation shall be submitted to the building official and a copy retained on the premises on which the tent or air-supported structure is located. The affidavit shall attest to the following information relative to the flame resistance of the fabric:

1. Names and address of the owners of the tent, canopy or air-supported structure.
2. Date the fabric was last treated with flame-resistant solution.
3. Trade name or kind of chemical used in treatment.
4. Name of person or firm treating the material.
5. Name of testing agency and test standard by which the fabric was tested.

**3103.11 Anchorage.** Temporary structures shall be anchored to the ground to resist the wind loads prescribed by Section 1609. At the discretion of the building official, the anchorage system shall be designed by a registered design professional.

**3103.12 Means of egress.** Temporary structures shall conform to the means of egress requirements of Chapter 10 and shall have a maximum exit access travel distance of 100 feet (30480 mm).



**3103.13 Report required.** The building official shall make a monthly report to the Building Commission on the number and types of permits for temporary structures issued by the Department of Transportation and Public Works. The report shall be presented at each regularly scheduled meeting of the Building Commission.

**3103.14 Monthly inspections.** Temporary structures that serve food shall be inspected monthly by the Departments of Health and Transportation and Public Works to verify that the scope and the menu of the food service facility remains consistent with the permitted activity.

**3107.1 General.** Signs shall be designed, constructed and maintained in accordance with Appendix H - SIGNS.

**3109.4.1.9 Pool structure as barrier.** Where an aboveground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then the ladder or steps shall be surrounded by a barrier which meets the requirements of Sections 3109.4.1.1 through 3109.4.1.8.

## **SECTION 3112 FENCES AND DRIVEWAY BARRIERS**

**3112.1 Fences.** Fences shall be subject to the following requirements:

1. Fencing on a corner lot cannot be located within the site distance triangle.
2. A building permit shall be required to erect a new fence or replace an existing fence in accordance with Sections 105 and 109.
3. Electrically charged fences are prohibited.
4. The use of barbed wire, razor ribbon, and similar type fencing materials are prohibited on all new fence installations.

### **Exceptions:**

1. Barbed wire may be installed on top of fencing for industrial use sites provided that the lowest strand is at least 7 feet (2134 mm) above the ground.
2. Barbed wire fences and fences topped with barbed wire may be permitted for fencing of agricultural use sites for the purpose of containing livestock including cropland areas/fields used for grazing/feeding of livestock.
3. Barbed wire, razor ribbon, and like material may be installed on top of fences on institutional use sites for prisons, jails, and similar correctional facilities where security measures are needed, provided the barbed wire, razor ribbon, or like material is no closer to the ground than 7 feet (2134 mm).

**3112.2 Driveway barriers.** A barrier measuring less than 3 inch (76 mm) in vertical depth that extends fully or partially across a driveway or parking lot is considered a hazardous condition. All barriers must be compliant with Department of Transportation and Public Works requirements.

### **Exceptions:**

1. A barrier measuring less than 3 inches (76 mm) in vertical depth extending fully or partially across a driveway or parking lot is not considered a hazardous condition if permanent 1 inch (25 mm) horizontal by 12 inch (305 mm) vertical reflector strips are installed under the barrier

at a maximum of 36 inches (914 mm) horizontally center to center for the entire length of the barrier.

2. A driveway or parking lot with such a barrier that is posted with a "No Trespassing" sign in the middle of the entrance(s) of the driveway or parking lot. The sign must be located outside of the road or street right-of-way.

## **SECTION 3113 ANTENNAS**

**3113.1 Permits not required.** A building permit is not required for roof installation of antennal structures not more than 12 feet (3658 mm) in height for private reception. Such a structure shall not be erected so as to injure the roof covering, and when removed from the roof, the roof covering shall be repaired to maintain weather and water tightness. The installation of any antennal structure mounted on the roof of a building shall not be erected nearer to the lot line than the total height of the antennal structure above the roof, nor shall such structure be erected near electric power lines or encroach upon any street or other public space.

**3113.2 Permits required.** Approval shall be secured for all roof-mounted antennal structures more than 12 feet (3658 mm) in height above the roof. The application shall be accompanied by detailed drawings of the structure and methods of anchorage. All connections to the roof structure shall be properly flashed to maintain water tightness.

**3113.3 Dish antennas.** An antenna consisting of a radiation element which transmits or receives radiation signals generated as electrical, light or sound energy, and supported by a structure with or without a reflective component to the radiating dish, usually in a circular shape with a parabolic curve design constructed of a solid or open mesh surface, shall be known as a dish antenna.

**3113.3.1 Permits.** The approval of the building official shall be secured for all dish antenna structures more than 2 feet (610 mm) in diameter erected on the roof of or attached to any building or structure. A permit is not required for dish antennas not more than 2 feet (610 mm) in diameter erected and maintained on the roof of any building.

**3113.3.2 Structural provisions.** Dish antennas larger than 2 feet (610 mm) in diameter shall be subject to the structural provisions of Sections 1608 and 1609. The snow load provisions of Section 1608 shall not apply where the antenna has a heater to melt falling snow.

**115.135 Amendments to the International Building Code, 2015 Edition – Chapter 35 Referenced Standards.** --The following provisions amend Chapter 35 Referenced Standards in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI.** Add the following St. Louis County Codes, Ordinances and Standards:

<b>GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI</b>		St. Louis County Department of Transportation and Public Works 41 S. Central Ave. St. Louis, MO 63105
Standard reference number	Title	Referenced in code section number
Electrical Code – Title XI, Chapter 1102 SLCRO 1974, as amended	Electrical Code	102.2.1, 107.3.3.1, 202

<b>GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI</b>		St. Louis County Department of Transportation and Public Works 41 S. Central Ave. St. Louis, MO 63105
Standard reference number	Title	Referenced in code section number
Existing Building Code - Title XI, Chapter 1117 SLCRO 1974 as amended	Existing Building Code	101.2, 101.4, 101.5, 102.6, 105.1.6, 105.3.1.2, 116.5, 201.3, 1511.2, 1612.1.1
Floodplain Management Regulations – Title X, Chapter 1008 SLCRO 1974 as amended	Floodplain Management Regulations	101.4, 105.3.1.2, 105.3.1.2.1, 110.3.14.1, 1612.1, 1612.3
Mechanical Code – Title XI, Chapter 1108 SLCRO 1974, as amended	Mechanical Code	102.2.1, 105.2, 107.3.3.1, 202
Plumbing Code – Title XI, Chapter 1103 SLCRO 1974, as amended	Plumbing Code	102.2.1, 107.3.3.1, 119.1.1.1, 202
Zoning Ordinance - Title X, Chapter 1003 SLCRO 1974 as amended	Zoning Ordinance	102.2.2, 101.4, 105.3.1.2, 105.3.1.2.1, 110.3.10, 110.3.13, 111.1.1.2, 111.1.1.3, 202, 1612.1, H101.1.1

**ICC – International Code Council. Amend Referenced Standards. (Standards not amended by this code and shown in the code as published are adopted without amendments.):**

<b>ICC</b>	International Code Council, Inc. 500 New Jersey Ave., NW 6 <sup>th</sup> Floor Washington, DC 20001	
Standard reference number	Title	Referenced in code section number
IMC-15	International Mechanical Code®	101.4, 102.2.1, 105.2, 107.3.3.1, 201.3, 202, 307.1.1, Table 307.1(1), 406.6.2, 406.8.2, 406.8.4, 409.3, 412.6.6, 414.1.2, 414.3, 415.8.1.4, 415.8.2, 415.8.2.7, 415.8.3, 415.8.4, 415.10.11, 415.10.11.1, 416.2.2, 416.3, 417.1, 419.8, 421.5, 603.1, 603.1.1, 603.1.2, 712.1.6, 712.2.2, 717.5.3, 717.5.4, 717.6.1, 717.6.2, 717.6.3, 718.5, 720.1, 720.7, 903.2.11.4, 904.2.1, 904.11, 907.3.1, 908.6, 909.1, 909.10.2, 909.13.1, 1006.2.2.3, 1011.6, 10.20.5.1, 1203.1, 1203.2.1, 1203.5.2, 1203.5.2.1, 1203.6, 1209.3, 2801.1
IPC-15	International Plumbing Code®	101.4, 102.2.1, 105.2, 107.2.8, 107.3.3.1, 119.1.1.1, 201.3, 202, 415.9.3, 603.1.2, 718.5, 903.3.5, 904.12.1.3, 912.6, 1206.3.3, 1503.4, 1503.4.1, 1805.4.3, 2901.1, 2902.1, 2902.1.1, 3305.1, A101.2
IPMC-15	International Property Maintenance Code®	101.4, 102.6, 103.3, 111.1.1.2, 111.1.1.3, 201.3
IRC-15	International Residential Code®	101.2, 101.4, 101.5, 105.1.6, 105.3.1.2, 110.3.5, 110.3.9, 111.1.1, 116.5, 201.3, 305.2.3, 308.3.4, 308.4.2, 308.6.4, 310.1, 310.5.1, 310.5.2, 1301.1.1, 2308.1

**NFPA – National Fire Protection Association. Amend Referenced Standards. (Standards not amended by this code and shown in the code as published are adopted without amendments.):**

<b>NFPA</b>	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02169-7471	
Standard reference number	Title	Referenced in code section number
70-14	National Electric Code	101.4, 102.2.1, 105.2, 107.3.3.1, 201.3, 202, 415.11.1.8, 904.3.1, 907.6.1, 909.12.2, 909.16.3, 1205.4.1, 2701.1, 2702.1.2, G501.4, G1001.6, H106.1, H106.2, K101, K111.1
701-10	Standard Method of Fire Tests for Flame-Propagation of Textiles and Films	410.3.6, 424.2, 801.4, 806.1, 806.3, 806.4, 3102.3, 3102.3.1, 3102.6.1.1, 3103.8, 3105.4, D102.2.8, H106.1.1

**1115.136 Amendments to the International Building Code, 2015 Edition – Appendix H Signs.** --The following provisions amend Appendix H Signs in the International Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**H101.1.1 Zoning law.** Where more restrictive, the limitations of the zoning ordinance shall take precedence over the regulations of this code.

**H101.2 Permits and construction documents.** Permits for signs shall be required as specified in Sections H101.2.1 and H101.2.2 except as provided for in Section H101.3. Construction documents shall be prepared and filed in accordance with Section H105.

**H101.2.1 New signs.** A new sign shall not hereafter be erected, constructed, altered or maintained except as provided for herein, and until a permit has been issued by the building official.

**H101.2.2 Alterations.** A sign shall not be enlarged or relocated unless such sign conforms to the provisions of this section for new signs, or until a proper permit has been secured. The changing of movable parts of an approved sign that is designed for such changes, or the repainting or reposting of display matter, shall not be deemed an alteration, provided that the conditions of the original approval and the requirements of this section are not violated.

**H101.3 Permit exemptions.** A permit shall not be required for signs exempt from permits in the Zoning Ordinance.

**H105.3 Wind load.** Signs shall be designed and constructed to withstand wind pressure as provided for in Chapter 16. Structural calculations are not required for ground signs or pole signs, as defined in Section H102, that are both less than 100 square feet (9.29 m<sup>2</sup>) in area and less than 10 feet (3048 mm) in height.

**H105.4 Seismic load.** Signs designed to withstand wind pressures shall be considered capable of withstanding earthquake loads, except as provided for in Chapter 16. Structural calculations are not required for ground signs or pole signs, as defined in Section H102, that are both less than 100 square feet (9.29 m<sup>2</sup>) in area and less than 10 feet (3048 mm) in height.

**SECTION 2.** Title XI SLCRO 1974, as amended "Public Works and Building Regulations" is hereby amended by repealing and re-enacting Chapter 1116 "Residential Code" which shall read as follows:

**TITLE XI  
PUBLIC WORKS AND BUILDING REGULATIONS**

**Chapter 1116  
RESIDENTIAL CODE**

**1116.010 Short Title.** This Chapter shall be known and may be cited as the "Residential Code" of St. Louis County.

**1116.020 Residential Code for One- and Two Family Dwellings Adopted.** A certain document, three copies of which are on file in the office of the Director of the St. Louis County Department of Transportation and Public Works and the office of the Administrative Director, being marked and designated as the International Residential Code for One- and Two-Family Dwellings, 2015 edition, including "APPENDIX K – SOUND TRANSMISSION," as published by the International Code Council, is hereby adopted as the Residential Code of St. Louis County, for regulating and governing the construction, alteration, movement, enlargement, replacement, repair, equipment, location, removal and demolition of detached one and two-family dwellings and multiple single family dwellings (townhouses) not more than three stories in height with separate means of egress as here-in provided; providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said International Residential Code on file in the office of the Director of the Department of Transportation and Public Works and the office of the Administrative Director are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in this ordinance.

**1116.030 General Administrative Definitions.** Throughout the International Residential Code for One- and Two-Family Dwellings, 2015 edition, whenever the term "jurisdiction" appears it shall be deemed to mean "St. Louis County". Likewise, whenever the term "Department of Building Safety" appears it shall be deemed to mean "St. Louis County Department of Transportation and Public Works" whenever the terms "Code Official" or "building official" appear it shall mean the Director of St. Louis County Department of Transportation and Public Works or the Director's duly authorized representative and when the terms "code," "this code," or "Residential Code" appear it shall be deemed to mean the International Residential Code for One- and Two-Family Dwellings, 2015 edition as adopted herein with the additions, deletions and changes as prescribed in this ordinance.

**1116.040 References to other St. Louis County adopted codes.** Throughout this ordinance and the International Residential Code, 2015 edition, wherever a reference appears to the "International Building Code" it shall mean the "Building Code" as adopted by Chapter 1115 SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Existing Building Code" it shall mean the "Existing Building Code" as adopted by Chapter 1117 SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Mechanical Code" it shall mean the "Mechanical Code" as adopted by Chapter 1108 SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Fuel Gas Code" it shall mean the "Mechanical Code" as adopted by Chapter 1108 SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to "NFPA 70" it shall mean the "Electrical Code" as adopted by Chapter 1102 SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Plumbing Code" it shall mean the "Plumbing Code" as adopted by Chapter 1103 SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Private Sewage Disposal Code" it shall mean the "Plumbing Code" as adopted by Chapter 1103 SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to

the "International Property Maintenance Code" it shall mean the "Property Maintenance Code" as adopted by Chapter 1110 SLCRO 1974 as amended with the additions, deletions and changes prescribed therein.

**1116.050 Contracting with Municipalities and Fire Protection Districts for Code Enforcement Services.**

1. The building official, with the approval of the County Executive, is hereby authorized to contract with municipalities and fire protection districts within St. Louis County, to provide appropriate enforcement of this code and further to collect fees for applicable permits and inspections issued or made pursuant to such contracts. Contracts shall be approved by the building official and the County Executive, and shall be approved as to legal form by the County Counselor. No contract shall be entered into until the municipality or fire protection district desiring to contract with St. Louis County for the enforcement of this code shall first have duly adopted appropriate legislation authorizing said contract (a certified copy to be attached to and made a part of the contract) and duly adopted a code identical in substance to this code.
2. The building official is authorized to contract with fire protection districts in St. Louis County to provide code enforcement services with respect to building construction and application of commercial and multi-family fire codes adopted by the fire protection districts, including administration, application processing, plan review, permit issuance, and inspections and for County to either charge the fire protection districts fees as set out in Chapter 1100 SLCRO, as amended, to cover the costs of providing such code enforcement services. When the contract is for only certain of the services described in this section, the building official is authorized to pro-rate the fees set out in Chapter 1100 to cover the costs of performing the service or services. The contract may further provide for the fire protection district, at its option, to refer for prosecution in St. Louis County Municipal Court, violations of such fire protection district's codes as are enforced within the fire protection district by the County; for the County to retain the proceeds of fines and costs assessed in such prosecutions; and for such other terms and conditions as are approved by the County Counselor.
3. The building official is authorized to contract with municipalities in St. Louis County to provide temporary code enforcement services with respect to building construction and application of the building codes adopted by the County or municipality, including administration, application processing, plan review, permit issuance, and inspections and for County to either charge the municipality fees or collect fees for applicable permits and inspections issued or made pursuant to such contracts as set out in Chapter 1100 SLCRO, as amended, to cover the costs of providing such temporary code enforcement services. When the contract is for only certain of the services described in this section, the building official is authorized to pro-rate the fees set out in Chapter 1100 to cover the costs of performing the service or services. The term of the temporary contract shall not exceed twelve (12) months except that the contract may be extended by the building official when: a) the services are related to a specific project or projects that are still in progress, or b) the municipality commits in writing to transitioning to a long term contract with the County as set out in Section 1116.050(1).

**1116.051 Municipal Zoning Approval for Buildings and Structures by Contracting Municipalities.**

All plans for the construction or use of buildings and structures regulated by this code shall be reviewed and approved by the contracting municipality for compliance with the zoning or other local regulatory ordinances or provisions prior to issuance of a permit by the County.

**1116.052 Exterior Fire Protection Features Approval by Contracting Fire Protection Districts.** All plans for the construction of buildings and structures within a contracting fire protection district shall be reviewed and approved for compliance with exterior fire protection features prior to issuance of a building permit by the County.

**1116.060 Code Review Committee Assignment.** The Building Code Review Committee, as established in the Building Code, shall be responsible for considering updates and changes to this code. The Building Code Review Committee shall coordinate with the Mechanical Code Review Committee, the Electrical Code Review Committee and the Plumbing Code Review Committee as these committees are defined in making its recommendation to the Building Commission.

**1116.101 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 1 Scope and Administration.** The following provisions amend Chapter 1 Scope and Administration in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**R101.1 Title.** These regulations shall be known as the Residential Code for One- and Two-Family Dwellings of St. Louis County, hereinafter referred to as “this code.”

**R101.2 Scope.** The provisions of the International Residential Code for One- and Two-Family Dwellings 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 not more than three stories above grade in height.

**Exceptions:**

1. Live/work units located in townhouses and complying with the requirements of Section 419 of the International Building Code shall be permitted to be constructed in accordance with the International Residential Code for One- and Two-Family Dwellings. Fire suppression required by Section 419.5 of the International Building Code where constructed under the International Residential Code for One- and Two-family Dwellings shall conform to Section 903.3.1.3 of the International Building Code.
2. Owner-occupied lodging houses with five or fewer guestrooms shall be permitted to be constructed in accordance with the International Residential Code for One- and Two-Family Dwellings where equipped with a fire sprinkler system in accordance with Section 903.3.1.3 of the International Building Code.

**R101.4 Applicability of St. Louis County, Missouri Codes and Ordinances.** Throughout this code, whenever the terms NFPA 70, International Plumbing Code, International Mechanical Code, International Property Maintenance Code, International Building Code, International Residential Code, International Existing Building Code, Zoning Ordinance or Floodplain Management Regulations Ordinance appears it shall be deemed to mean the codes adopted by St. Louis County as listed in Chapter 43 Referenced Standards, of this code and as identified in Title XI, Chapters 1102, 1103, 1108, 1110, 1115, 1116, 1117, and Title X, Chapters 1003 and 1008 SLCRO 1974 as amended, respectively.

**R101.5** Reserved for future use.

**R101.6** Reserved for future use.

**R101.7** Reserved for future use.

**R101.8 Correction of violations of other codes.** Repairs or alterations mandated by any property, housing, or fire safety maintenance code or mandated by any licensing rule or ordinance adopted pursuant to law shall conform only to the requirements of that code, rule, or ordinance and shall not be required to conform to this code unless the code requiring such repair or alteration so provides.

**R102.2.1 Licensing.** Applicable licensing provisions of the Mechanical Code, the Electrical Code and the Plumbing Code shall apply to work regulated under this code.

**R102.2.2 Compliance with county and municipal zoning and other applicable codes and ordinances.** Subject to the provisions of this code, neither the granting of a permit, nor the approval of construction documents, nor inspections made by the building official, or the building official's authorized representative, during the erection, movement or demolition of a building or structure, or any alteration or addition thereto, shall in any way relieve the owner or tenant of such building, structure or property from complying with the requirements of this code, the Zoning Ordinance, or the zoning ordinance or other applicable laws of any municipality in St. Louis County.

**R102.4 Referenced codes and standards.** The codes and standards referenced in this code and listed in Chapter 44 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.

**Exception:** Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and manufacturer's instructions shall apply.

**R102.4.3 Standards and guidelines for structural evaluation.** The building official shall allow structural evaluation, condition assessment, and rehabilitation of buildings, structures, or individual structural members based on this code's appendix chapters, referenced standards, guidelines, or other approved standards and procedures.

**R102.7 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 Building Code, the International Property Maintenance Code or 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.

## **SECTION R103 DEPARTMENT OF BUILDING SAFETY**

**R103.1 Creation of enforcement agency.** SECTION R103 DEPARTMENT OF BUILDING SAFETY (Sections R103.1 through R103.3) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 103 DEPARTMENT OF BUILDING SAFETY in the International Building Code.

## **SECTION R104 DUTIES AND POWERS OF BUILDING OFFICIAL**

**R104.1 General.** SECTION R104 DUTIES AND POWERS OF BUILDING OFFICIAL (Sections R104.1 through R104.11.1) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL in the International Building Code.

## **SECTION R105 PERMITS**

**R105.1 Required.** SECTION R105 PERMITS (Sections R105.1 through R105.9) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 105 PERMITS in the International Building Code.

**SECTION R106** Reserved for future use.



## **SECTION R107 SUBMITTAL DOCUMENTS**

**R107.1 General.** SECTION R106 CONSTRUCTION DOCUMENTS (Sections R106.1 through R106.5) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 107 SUBMITTAL DOCUMENTS in the International Building Code.

## **SECTION R108 TEMPORARY STRUCTURES AND USES**

**R108.1 General.** SECTION R107 TEMPORARY STRUCTURES AND USES (Sections R107.1 through R107.4) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 108 TEMPORARY STRUCTURES AND USES in the International Building Code.

## **SECTION R109 FEES**

**R109.1 Payment of fees.** SECTION R108 FEES (Sections R108.1 through R108.6) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 109 FEES in the International Building Code.

## **SECTION R110 INSPECTIONS**

**R110.1 General.** SECTION R109 INSPECTIONS (Sections R109.1 through R109.4) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 110 INSPECTIONS in the International Building Code.

## **SECTION R111 CERTIFICATE OF OCCUPANCY**

**R111.1 Use and occupancy.** SECTION R110 CERTIFICATE OF OCCUPANCY (Sections R110.1 through R110.5) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 111 CERTIFICATE OF OCCUPANCY in the International Building Code.

## **SECTION R112 SERVICE UTILITIES**

**R112.1 Connection of service utilities.** SECTION R111 SERVICE UTILITIES (Sections R111.1 through R111.3) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 112 SERVICE UTILITIES in the International Building Code.

## **SECTION R113 BOARD OF APPEALS**

**R113.1 General.** SECTION R112 BOARD OF APPEALS (Sections R112.1 through R112.4) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 113 BOARD OF APPEALS in the International Building Code.

## **SECTION R114 VIOLATIONS**

**R114.1 Unlawful acts.** SECTION R113 VIOLATIONS (Sections R113.1 through R113.4) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 114 VIOLATIONS in the International Building Code.

## **SECTION R115 STOP WORK ORDER**

**R115.1 Authority.** SECTION R114 STOP WORK ORDER (Sections R114.1 through R114.2) in the International Residential Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 115 STOP WORK ORDER in the International Building Code.

## **SECTION R116 UNSAFE STRUCTURES AND EQUIPMENT**

**R116.1 Conditions.** SECTION 116 UNSAFE STRUCTURES AND EQUIPMENT (Sections 116.1 through 116.5) in the International Building Code, 2015 edition is adopted as part of this code.

## **SECTION R117 EMERGENCY MEASURES**

**R117.1 Imminent danger.** SECTION 117 EMERGENCY MEASURES (Sections 117.1 through 117.6) of the Building Code is adopted as part of this code.

## **SECTION R118 UNFIT BUILDINGS AND STRUCTURES**

**R118.1 Inspections.** SECTION 118 UNFIT BUILDINGS AND STRUCTURES (Sections 118.1 through 118.8.3) of the Building Code is adopted as part of this code.

## **SECTION R119 DEMOLITION OF STRUCTURES**

**R119.1 Demolition of structures.** SECTION 119 DEMOLITION OF STRUCTURES (Sections 119.1 through 119.3) of the Building Code is adopted as part of this code.

**1116.102 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 2 Definitions.** The following provisions amend Chapter 2 Definitions in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**R201.3 Terms defined in other codes.** Where terms are not defined in this code and are defined in the International Building Code, International Property Maintenance Code, International Mechanical Code, NFPA 70, International Plumbing Code, International Energy Conservation Code or the International Fire Code, such terms shall have the meanings ascribed to them as in those codes.

## **SECTION R202 DEFINITIONS**

Such definitions set out in the International Residential Code, 2015 edition, are made part of this code. In addition, the following words or terms shall have the definitions ascribed to them herein.

**Affected Parties.** The owner, occupant, lessee, mortgagee, agent and all other persons having an interest in the structure or its premises as shown by the records of the Recorder of Deeds as of the date said structure is declared to be a public nuisance by the building official.

**Board of Appeals.** The Building Commission created in Article IV, Section 4.330 of the St. Louis County Charter.

**Building Code Official.** The Code Official as defined herein.

**Building Code Review Committee.** The Committee established by, and acting in accordance with the

**Building Code,** SLCRO 1974, Title XI, Chapter 1115, as amended.

**Building Commission.** The Building Commission created in Article IV, Section 4.330 of the St. Louis County Charter.

**Building Official.** The Code Official as defined herein.

**Code Official.** The Director of the Department of Transportation and Public Works or the Director's duly authorized representative.

**Dangerous.** Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, partially collapsed, has moved off its foundation or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads.
3. The building or structure or any portion thereof is likely to collapse partially or completely because:
  - 3.1. Of dilapidation, deterioration or decay;
  - 3.2. Of construction in violation of the this code;
  - 3.3. The soil supporting the foundation is unstable, moved or removed;
  - 3.4. The foundation is inadequate, decayed or deteriorated; or
  - 3.5. It is damaged due to fire, earthquake, wind or flood; or any other similar cause.
4. The exterior walls or other vertical structural member 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.
5. Any building or structure with substantial structural damage.

**Disaster.** A disaster shall include but not necessarily be limited to flood, windstorm, tornado, severe storm, earthquake, bomb blast, explosion or similar natural or man-made type event. The building official shall make the determination whether an event shall be declared a disaster.

**Electrical Code Review Committee.** The Committee established by, and acting in accordance with the

**Electrical Code.** SLCRO 1974, Title XI, Chapter 1102, as amended.

**Flood Hazard Area.** An area that has been determined to be prone to flooding in accordance with Section 1612 of the International Building Code or Section R322 of the International Residential Code.

**Mechanical Code Review Committee.** The Committee established by, and acting in accordance with the Mechanical Code, SLCRO 1974, Title XI, Chapter 1108, as amended.

**Plumbing.** For the purposes of this code, plumbing refers to those installations, repairs, maintenance and alterations regulated by the International Plumbing Code.

**Plumbing Code Review Committee.** The Committee established by, and acting in accordance with the

**Plumbing Code,** SLCRO 1974, Title XI, Chapter 1103, as amended.

**Zoning Ordinance.** St. Louis County Zoning Ordinance, Title X, Chapter 1003 SLCRO 1974 as amended.

**1116.103 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 3 Building Planning.** The following provisions amend Chapter 3 Building Planning in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

**TABLE R301.2(1)**  
Climatic and Geographic Design Criteria

GROUND SNOW LOAD (lbs / ft <sup>2</sup> )	WIND DESIGN				SEISMIC DESIGN CATEGORY <sup>f</sup>	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP <sup>a</sup>	ICE BARRIER UNDER-LAYMENT REQUIRED <sup>h</sup>	FLOOD HAZARDS <sup>g</sup>	AIR FREEZING INDEX <sup>i</sup>	MEAN ANNUAL TEMP <sup>j</sup>
	Speed <sup>d</sup> (mph)	Topographic effects <sup>k</sup>	Special Wind Region <sup>l</sup>	Wind-borne debris zone <sup>m</sup>		Weathering <sup>a</sup>	Frost line depth <sup>b</sup>	Termite <sup>c</sup>					
20	V <sub>ult</sub> = 115 V <sub>asd</sub> = 89	NO	NO	NO	C	Severe	30 inches (762 mm)	Slight to Moderate	2° F	NO	May 24, 1985	1,000 days	55.2° F

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index, "negligible," "moderate" or "severe" for concrete as determined from Figure R301.2(3). The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
- The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map, Figure R301.2(4). Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- The outdoor design dry-bulb temperature is established in the International Mechanical Code. Additional design temperature criteria can be found in Section M1401.3.

- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. Flood hazard areas shall be established by the Floodplain Management Regulations ordinance.
- h. In accordance with Sections R905.1.2, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
- i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index - USA Method (Base 32°)."
- j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° F)."
- k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- l. In accordance with Figure R301.2(4)A, where there is local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with "YES" and identify any specific requirements. Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- m. In accordance with Section R301.2.1.2.1, the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

**R301.2.4 Flood plain construction.** Buildings and structures constructed in whole or part in flood hazard areas (including A or V Zones) as established in Table R301.2(1), and substantial improvement and restoration of substantial damage of buildings and structures in flood hazard areas, shall be designed and constructed in accordance with Section R322, the Floodplain Management Regulations Ordinance and the Zoning Ordinance. Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area. Buildings and structures located in whole or part in identified floodways shall be designed and constructed in accordance with ASCE 24.

**R302.1 Exterior walls.** Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1(1); or dwellings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13D shall comply with Table R302.1(2).

**Exceptions:**

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the fire separation distance.
2. Walls of dwellings and accessory structures located on the same lot.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.
4. Detached garages accessory to a dwelling located within 2 feet (610 mm) of a lot line are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.
6. Cantilevered manufactured fireplaces.
7. Roof eave overhangs.

8. Uncovered decks.

**Table R302.1(1)**  
**Exterior Walls**

Exterior Wall Element		Minimum Fire-Resistance Rating	Minimum Fire Separation Distance
Walls	Fire-resistance rated	1 hour – tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	< 3 Feet
	Not fire-resistance rated	0 hours	≥ 3 Feet
Projections	Not allowed	N/A	< 2 Feet
	Fire-resistance rated	1 hour on the underside <sup>a, b</sup>	≥ 2 Feet to < 3 Feet
	Not fire-resistance rated	0 hours	≥ 3 Feet
Openings in walls	Not allowed	N/A	< 3 Feet
	25% maximum of wall area	0 hours	3 Feet
	Unlimited	0 hours	3 Feet
Penetrations	All	Comply with Section R302.4	< 3 Feet
		None required	3 Feet

For SI: 1 foot = 304.8 mm

N/A = Not Applicable.

- a. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
- b. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

**TABLE R302.1(2)**  
**EXTERIOR WALLS—DWELLINGS WITH FIRE SPRINKLERS**

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet <sup>a</sup>
Projections	Not allowed	N/A	< 2 feet
	Fire-resistance rated	1 hour on the underside <sup>b, c</sup>	2 feet <sup>a</sup>
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	< 3 feet
	Unlimited	0 hours	3 feet <sup>a</sup>
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet <sup>a</sup>

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable

- a. For residential subdivisions where all dwellings are equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13D, the fire separation distance for nonrated exterior walls and rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining lot provides an open setback yard that is 6 feet (1829 mm) or more in width on the opposite side of the property line.
- b. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
- c. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed.

**R302.2 Townhouses.** Common walls separating townhouses shall be assigned a fire-resistance rating in accordance with Section R302.2, Item 1 or 2. The common wall shared by two townhouses shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with NFPA 70. Penetrations of the membrane shall be in accordance with Section R302.4

1. Where a fire sprinkler system in accordance with NFPA 13D is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263.
2. Where a fire sprinkler system in accordance with NFPA 13D is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263, or the common wall may be two independent 1-hour fire-resistance-rated wall assemblies.

**R302.5.1 Opening protection.** Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors.

**R302.5.2 Duct penetration.** Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 28 gage (0.41 mm) sheet steel or other approved material and shall not have openings into the garage.

**R302.13 Fire protection of floors.** Floor assemblies that are not required elsewhere in this code to be fire-resistance rated, shall be provided with 1/2-inch (12.7 mm) gypsum wallboard membrane, 5/8-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted. Fire blocking, draftstopping, fire taping, and/or additional framing is not required.

**Exceptions:**

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with NFPA 13D or other approved equivalent sprinkler system.
2. Floor assemblies located directly over a crawl space not intended for storage or fuel-fired appliances.
3. Portions of floor assemblies shall be permitted to be unprotected where complying with the following:
  - 3.1 The aggregate area of the unprotected floor assembly does not exceed 100 square feet (9.3 m<sup>2</sup>) per HVAC zone.
  - 3.2 Areas of the floor assembly covered by HVAC metal plenum, trunk lines, and steel structural beams shall be considered protected. Gypsum wallboard membrane shall be within 2 inches (50.8 mm) of all previously listed items.
4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

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

**Exceptions:**

1. The glazed areas shall not be required where artificial light and a local ventilation system are provided.
2. The minimum local exhaust rates shall be determined in accordance with Section M1507.
3. Bathroom exhaust may discharge to an attic gable vent or ventilated soffit if attached or secured within 6" (152 mm) of same, without obstruction.

**R303.5.2 Exhaust openings.** Exhaust air shall not be directed below 6 feet 8 inches (2032 mm) onto a public walkway.

**R303.8 Exterior stairway illumination.** Exterior stairways shall be provided with an artificial light source. Exterior stairways providing access to a basement from the outdoor grade level shall be provided with an artificial light source located at the bottom landing of the stairway.

**R306.5 Rough-ins.** Within unfinished areas, rough-ins for drain waste vent only or for water supply only are permitted.

**R306.6 Hose bibb.** Every dwelling shall provide one outside frost-proof hose bibb. Hose bibbs shall be protected from backflow in accordance with the International Plumbing Code.

**R306.7 Floor drain.** A floor drain shall be installed within 15 feet (4572 mm) of and in the same room as the heating/cooling system(s) or hot water heater(s). The floor drain installations shall comply with the International Plumbing Code.

**R307.1 Space required.** Fixtures shall be spaced in accordance with Figure R307.1, and in accordance with the requirements of the International Plumbing Code.

**R309.3 Flood hazard areas.** For buildings located in flood hazard areas as established by Table R301.2(1), garage floors shall be constructed in accordance with this section, the Floodplain Management Regulations Ordinance and the Zoning Ordinance:

1. Elevated to or above the design flood elevation as determined in Section R322; or
2. Located below the design flood elevation provided that the floors are at or above grade on not less than one side, are used solely for parking, building access or storage, meet the requirements of Section R322 and are otherwise constructed in accordance with this code.

**R309.5 Fire sprinklers.** Private garages shall be protected by fire sprinklers where the garage wall has been designed based on Table 302.1(2), Footnote a, and the homeowner has opted to purchase a fire sprinkler system for their residence, as per Missouri Revised Statutes. Sprinklers in garages shall be connected to an automatic sprinkler system that complies with NFPA 13D. Garage sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a density of 0.05 gpm/ft<sup>2</sup>. Garage doors shall not be considered obstructions with respect to sprinkler placement.

**R310.7 Bathrooms in unfinished basements.** Bathrooms or bathroom rough-ins shall not be permitted within unfinished basements on new construction unless an emergency escape and rescue opening is provided to allow for future conversion to habitable space.



**R311.3 Floors and landings at exterior doors.** There shall be a landing or floor on each side of each exterior door. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel. The slope at exterior landings shall exceed  $\frac{1}{4}$  unit vertical in 12 units horizontal (2 percent).

**Exceptions:**

1. Exterior balconies less than 60 square feet (5.6 m<sup>2</sup>) and only accessible from a door are permitted to have a landing less than 36 inches (914 mm) measured in the direction of travel.
2. Openings protected by a guard shall not be required to have an exterior landing.

**R311.3.2 Floor elevations for other exterior doors.** Doors other than the required egress door shall be provided with landings or floors not more than  $7\frac{3}{4}$  inches (196 mm) below the top of the threshold.

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

**R311.7.5 Stair treads and risers.** Stair treads and risers shall meet the requirements of this section. For the purposes of this section, dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.

**Exceptions:**

1. Existing stairways.
2. Any stairway replacing an existing stairway within a space where, because of existing construction, the pitch or slope cannot be reduced.

**R312.1.1 Where required.** Guards shall be located along open-sided walking surfaces, including stairs, ramps, landings and walking surfaces adjacent to retaining walls that are located more than 30 inches (762 mm) measured vertically at the edge of the walking surface to the floor or grade below. Insect screening shall not be considered as a guard.

**Exception:** Guards are not required for the following locations:

1. Retaining walls four feet (1219 mm) or less in height.
2. Retaining walls in excess of four feet (1219 mm) in height where any walk, path, parking lot or driveway is located two feet (610 mm) or more away from the front face of the wall.

**R312.2 Window fall protection.** – Delete

**R312.2.1 Window sills.** - Delete

**R312.2.2.2 Window opening control devices.** - Delete

**R313.1 Townhouse automatic fire sprinkler systems.** A builder of townhouses shall offer to any purchaser on or before the time of entering into the purchase contract the option, at the purchaser's cost, to install or equip fire sprinklers in the townhouse. No purchaser of such a townhouse shall be denied the right to choose or decline to install a fire sprinkler system in such townhouse unit being purchased.

**Exception:** An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.

**R313.1.1 Design and installation.** Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with NFPA 13D.

**R313.2 One- and two-family dwellings automatic fire systems.** A builder of one- and two-family dwellings shall offer to any purchaser on or before the time of entering into the purchase contract the option, at the purchaser's cost, to install or equip fire sprinklers in the dwelling. No purchaser of such a one- or two-family dwelling shall be denied the right to choose or decline to install a fire sprinkler system in such dwelling being purchased.

**R313.2.1 Design and installation.** Automatic residential fire sprinkler systems shall be designed and installed in accordance with NFPA 13D.

**NOTE:** Sections R313.1 and R313.2 will be reviewed by St. Louis County upon the expiration of the December 31, 2024 deadline contained in Section 67.281 R.S.Mo.

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

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

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

#### **R322.2.1 Elevation requirements.**

1. Buildings and structures in flood hazard areas including areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or the design flood elevation.
2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height of not less than the highest adjacent grade as the depth number specified in feet (mm) on the FIRM plus 1 foot (305 mm), or not less than 3 feet (914 mm) if a depth number is not specified.
3. Basement floors that are partially or completely below grade shall be elevated to or above base flood elevation plus 1 foot (305 mm), or the design flood elevation whichever is higher.

**Exception:** Enclosed areas below the design flood elevation whose floors are at or above grade on all sides, shall meet the requirements of Section R323.2.2.

**1116.104 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 4 Foundations.** The following provisions amend Chapter 4 Foundations in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**R404.1.3.2 Reinforcement for foundation walls.** Concrete foundation walls shall be laterally supported at the top and bottom. Horizontal reinforcement shall be provided in accordance with Table R404.1.2(1). Vertical reinforcement shall be provided in accordance with Table R404.1.2(2), R404.1.2(3), R404.1.2(4), R404.1.2(5), R404.1.2(6), R404.1.2(7) or R404.1.2(8). Vertical reinforcement for flat basement walls retaining 4 feet (1219 mm) or more of unbalanced backfill is permitted to be determined in accordance with Table R404.1.2(9). For basement walls supporting above-grade concrete walls, vertical reinforcement shall be the greater of that required by Tables R404.1.2(2) through R404.1.2(8) or by Section R608.6 for the above-grade wall. In buildings assigned to Seismic Design Category D<sub>0</sub>, D<sub>1</sub> or D<sub>2</sub>, concrete foundation walls shall also comply with Section R404.1.4.2.

**Exception:** Where unstable soil or ground water conditions do not exist, concrete foundation walls may be constructed in accordance with Table R404.1.2(10).

**Table R404.1.2(10)  
Concrete Foundation Walls**

Maximum Wall Height	Maximum Depth of Unbalanced Backfill	Minimum Nominal Wall Thickness
7'-0"	6'-0" or less 7'-0"	8" 10" <sup>a</sup>
8'-0"	6'-0" or less 7'-0" 8'-0"	8" <sup>a</sup> 8" <sup>a</sup> 8" <sup>a</sup>
9'-0"	6'-0" or less 7'-0" 8'-0" 9'-0"	10" <sup>b</sup> 10" <sup>b</sup> 10" <sup>b</sup> 10" <sup>b</sup>

- Concrete foundation walls shall be constructed a minimum of nominal 8 inches thick where the wall height from the top of the footing to the top of the wall does not exceed 8 feet. A minimum of two #4 reinforcing bars shall be placed horizontally in the top and bottom of the foundation wall. A minimum of two #5 reinforcing bars shall be provided around all window and door openings in concrete foundation and basement walls; bars shall extend a minimum of 24 inches beyond the corners of the openings.
- Concrete foundation walls shall be constructed a minimum of nominal 10 inches thick. A minimum of two #5 reinforcing bars shall be placed horizontally in the top, middle, and bottom of the foundation wall. A minimum of two #5 reinforcing bars shall be provided around all window and door openings in concrete foundation and basement walls; bars shall extend a minimum of 24 inches beyond the corners of the openings.

The concrete minimum nominal wall thickness shall be 8 inches for foundation walls in soil classes SC, MH, ML-MC and inorganic CL when the maximum wall height is 8 feet.

The concrete minimum wall thickness shall be 10 inches for foundation walls in soil classes SC, MH, ML-CL and inorganic CL when the maximum wall height is 9 feet.

The concrete minimum wall thickness shall be 12 inches for foundation walls in soil classes SC, MH, ML-CL and inorganic CL when the maximum wall height is 10 feet.

**R405.1 Concrete or masonry foundations.** Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved

drainage system. Gravel or crushed stone drains shall extend not less than 1 foot (305 mm) beyond the outside edge of the footing and 6 inches (152 mm) above the top of the footing and be covered with an approved filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper. Except where otherwise recommended by the drain manufacturer, perforated drains shall be surrounded with an approved filter membrane or the filter membrane shall cover the washed gravel or crushed rock covering the drain. Drainage tiles or perforated pipe shall be placed on a minimum of 2 inches (51 mm) of washed gravel or crushed rock not less than one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches (152 mm) of the same material.

**Exceptions:**

1. A drainage system is not required where the foundation is installed on well-drained ground or sand-gravel mixture soils according to the Unified Soil Classification System, Group I Soils, as detailed in Table R405.1.
2. Drains provided as detailed in Section R405.1.2 are approved as an alternate method to meet the requirements of this section.

**R405.1.1 Precast concrete foundation.** Precast concrete walls that retain earth and enclose habitable or useable space located below-grade that rest on crushed stone footings shall have a perforated drainage pipe installed below the base of the wall on either the interior or exterior side of the wall, at least one foot (305 mm) beyond the edge of the wall. If the exterior drainage pipe is used, an approved filter membrane material shall cover the pipe. The drainage system shall discharge into an approved sewer system or to daylight.

**R405.1.2 Soil evaluations.** An evaluation of the soil for the presence or absence of ground water is required. The evaluation report shall be based on either a subsurface soil investigation or satisfactory data from adjacent areas together with an inspection of the excavation prior to pouring concrete.

**R405.1.2.1 Groundwater present.** Provide drain tile, perforated pipe, or other approved foundation drainage system, such as a water channel system, around the perimeter of the outside of the foundation and inside the foundation. Drain discharge shall be by gravity to daylight or be connected to a basement floor sump.

**R405.1.2.2 No ground water present.** Provide drain tile, perforated pipe, or other approved foundation drainage system, such as a water channel system, around the perimeter of the outside of the foundation or inside of the foundation. Drain discharge shall be by gravity to daylight or be connected to a basement floor sump.

**R405.1.2.3 Filter membranes.** An approved filter membrane shall be placed over the top of the joints/pipe perforations. The tile/pipe shall be placed on 2 inches (51 mm) minimum gravel or crushed stone and have 6 inches (152 mm) minimum cover.

**R405.1.2.4 Drainage system.** The drainage system shall discharge by gravity to daylight or be connected to an approved sump. The sump shall be a minimum of 15 inches (381 mm) in diameter and a minimum of 18 inches (457 mm) deep and be provided with a fitted cover. A sump pump shall be provided if the basement is finished or partially finished with pump discharge by an approved method.

**1116.105 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 5 Floors.** The following provisions amend Chapter 5 Floors in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**R502.11.1 Design.** Wood trusses shall be designed in accordance with approved engineering practice. The design and manufacture of metal plate connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared and sealed by a Missouri Registered Professional Engineer.

**R502.11.4 Truss design drawings.** Truss design drawings, prepared in compliance with Section R502.11.1, shall be submitted to the building official and approved prior to the issuance of the building permit. Truss design drawings shall include, at a minimum, the information specified as follows:

1. Slope or depth, span, and spacing.
2. Location of all joints.
3. Required bearing widths.
4. Design loads as applicable:
  - 4.1. Top chord live load.
  - 4.2. Top chord dead load.
  - 4.3. Bottom chord live load.
  - 4.4. Bottom chord dead load.
  - 4.5. Concentrated loads and their points of application.
  - 4.6. Controlling wind and earthquake loads.
5. Adjustments to lumber and joint connector design values for conditions of use.
6. Each reaction force and direction.
7. Joint connector type and description, such as size, thickness or gauge, and the dimensioned location of each joint connector except where symmetrically located relative to the joint interface.
8. Lumber size, species and grade for each member.
9. Connection requirements for:
  - 9.1. Truss-to-girder-truss.
  - 9.2. Truss ply-to-ply.
  - 9.3. Field splices.
10. Calculated deflection ratio and/or maximum description for live and total load.
11. Maximum axial compression forces in the truss members to enable the building designer to design the size, connections and anchorage of the permanent continuous lateral bracing. Forces shall be shown on the truss drawing or on supplemental documents.
12. Required permanent truss member bracing location.

**R507.2.4 Deck lateral load connection. – Delete**

**1116.106 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 6 Wall Construction.** The following provisions amend Chapter 6 Wall Construction in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, subsection or clause number in the code is hereby enacted and added thereto.

**R602.7.5 Supports for headers.** Headers shall be supported on each end with one or more jack studs or with approved framing anchors in accordance with Table R602.7(1) or R602.7.(2). The full-height stud adjacent to each end of the header shall be end nailed to each end of the header with four-16d nails (3.5 inches x 0.135 inches). The minimum number of full-height studs at each end of a header shall be in accordance with Table R602.7.5.

**Table R602.7.5**  
**Minimum Number of Full Height Studs at Each End of Headers in Exterior Walls<sup>a</sup>**

Maximum Header Span (feet)	Ultimate Design Wind Speed and Exposure Category	
	<140mph, Exposure B or <130mph, Exposure C	≤115mph, Exposure B <sup>b</sup>
4	1	1
6	2	1
8	2	1
10	3	2
12	3	2
14	3	2
16	4	2
18	4	2

- a. For header spans between those given above, use the minimum number of full-height studs associated with the larger header span.
- b. The tabulated minimum number of full-height studs is applicable where jack studs are provided to support the header at each end in accordance with Table R602.7.(1). Where a framing anchor is used to support the header in lieu of a jack stud in accordance with footnote "d" of Table R602.7.(1), the minimum number of full-height studs at each end of a header shall be in accordance with requirements for wind speed <140mph, Exposure B.

**R602.10 Wall bracing.** Buildings shall be braced in accordance with this section or, when applicable, Sections R602.12 or R602.13. Where a building, or portion thereof, does not comply with one or more of the bracing requirements in this section, those portions shall be designed and constructed in accordance with Section R301.1.

**R602.13 Basic bracing method.** One- and two-family dwellings located in wind exposure A or B may be braced in accordance with this section as an alternate to the requirements of Section R602.10. The construction documents shall detail the locations and widths of all braced wall panels in accordance with this section.

**R602.13.1 Wood structural sheathing.** The building exterior walls shall be sheathed with 7/16 inch (11.1 mm) or thicker plywood or OSB wood structural panels. The wood structural panels shall be applied to all exterior walls, gable ends, and band boards. All vertical joints between panels shall be blocked. Horizontal joints in braced wall panels shall be blocked.

**R602.13.2 Braced wall panel locations.** Exterior braced wall lines shall be determined in accordance with Section R602.10.1, exclusive of Section R602.10.1.3. Braced wall panels shall be located in every exterior braced wall line in accordance with the following criteria:

1. The outside edge of the first braced wall panel meeting the width established in Table R602.13.3 shall be a maximum of 12.5 feet (3810 mm) or less from each end of the braced wall line. The outside stud of the first braced wall panels closest to the end of the braced wall line shall be secured with a hold-down device securing the end stud to the foundation with a minimum uplift design value of 800 pounds.

**Exception:** The 800 pound hold-down device is not required when the braced wall panel is placed at the end of the braced wall line and there is a 24 inch (610 mm) wide full height sheathed wall placed 90 degrees to the end of the braced wall line and panel.

2. The centerline spacing of braced wall panels in a braced wall line may not exceed 25 feet (7620 mm).
3. Braced wall panels shall be supported by continuous foundations or per Section R602.10.9.

**R602.13.3 Braced wall panel widths.** Braced wall panel locations shall be shown on the floor plans or the elevation views. Braced wall panels must meet the widths established in Table R602.13.3 without openings or vertical or horizontal offsets.

**TABLE 602.13.3  
BASIC BRACING PANEL WIDTHS**

		WIDTH OF SOLID PANEL <sup>a, b</sup>			
		8' wall height	9' wall height	10' wall height	12' wall height
Plywood/OSB Panel	3:1	32"	36"	40"	48"
Basic Portal Wall <sup>c</sup>	6:1	16" <sup>d</sup>	18" <sup>d</sup>	20" <sup>d</sup>	24" <sup>d</sup>

- a. Linear interpolation is permitted
- b. Wall height is the vertical distance from the bottom of the sole/sill plate to the top of the double top plate. An additional 2 inch (50.8 mm) variation in height is allowed for pre-cut stud framing.
- c. The Basic Portal Wall, if applicable, shall be constructed in accordance with the applicable detail in Figure R602.13.3. The designer shall provide this detail on the construction documents.
- d. The Basic Portal Wall width assumes the beam is placed under the top plate of the wall. A smaller width may be calculated for a lower top of beam height using the 6:1 height to width ratio.

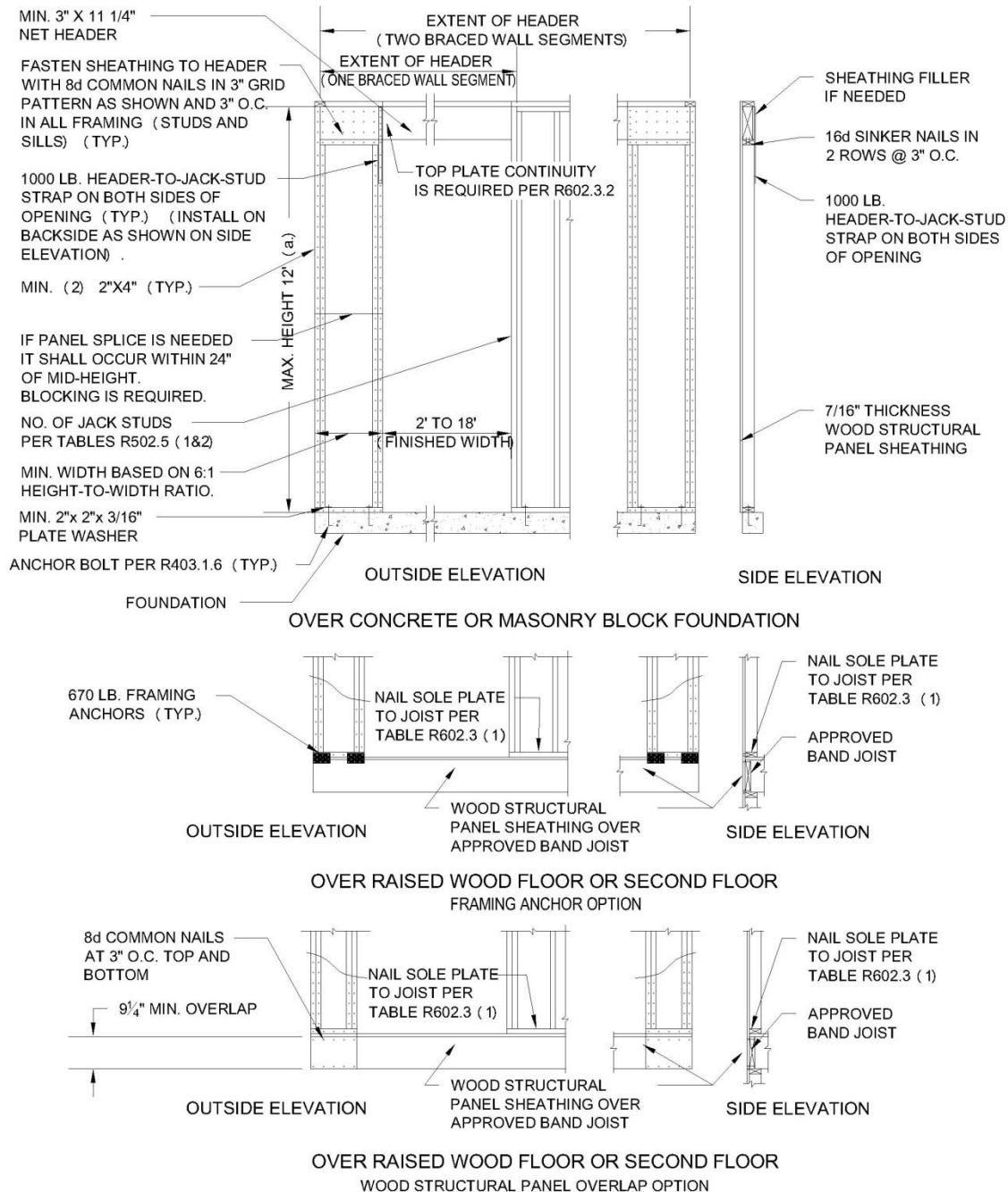
**R602.13.4 Corner framing.** The exterior wall corners shall be constructed in accordance with the applicable detail in Figure R602.13.4.

**Exception:** Braced wall panels located in accordance with Section R602.13.2.

**R602.13.5 Braced wall line spacing.** When the perpendicular distance between the exterior braced wall lines exceeds 50 feet (15240 mm), the registered design professional shall include the following certification on the drawings:

The interior and exterior wall configuration braces the structure in accordance with or equivalent to the lateral bracing provisions of Section R602.10 of the International Residential Code, 2015 edition or Section 2305 of the International Building Code, 2015 edition.

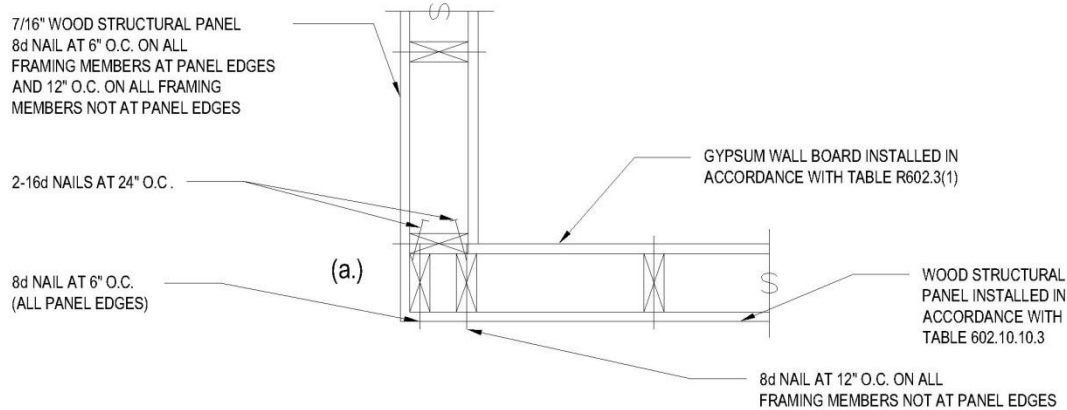
**R602.13.6 Maximum wall height.** Wall height may not exceed 12 feet (3658 mm) (12 feet 2 inches (3708 mm) actual). Walls greater than 12 feet (3658 mm) in height shall be designed and detailed by the registered design professional to resist wind loads in both the longitudinal and transverse directions.



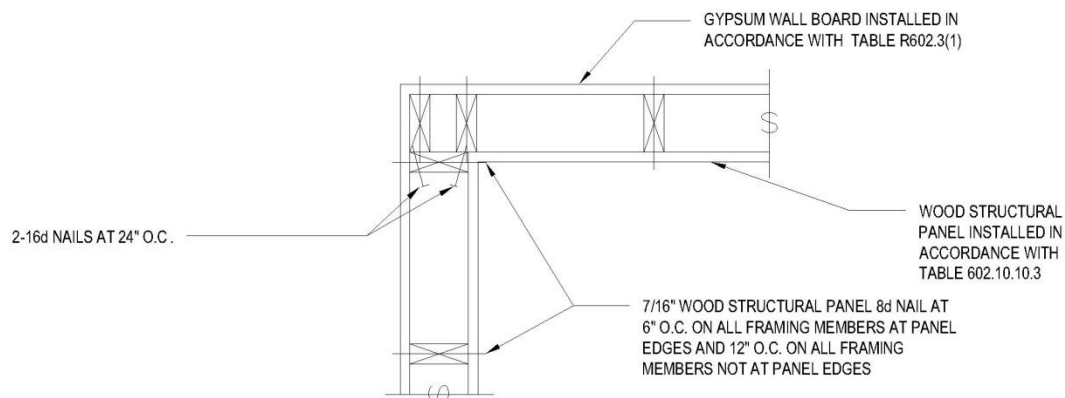
**FIGURE R602.13.3  
 BASIC PORTAL WALL**

- a. CRIPPLE WALL FRAMING CONSISTING OF STUD FRAMING, SINGLE BOTTOM PLATE, AND DOUBLE TOP PLATE MAY BE ADDED TO THE TOP OF THE NARROW PORTAL WALL AS LONG AS THE COMBINED HEIGHT OF THE TWO WALLS IS LESS THAN OR EQUAL TO 12 FEET AND THE TWO WALLS ARE STRAPPED TOGETHER ON THE INTERIOR SIDE WITH A 16 GAUGE METAL 1 1/2 INCH WIDE BY 21 INCH LONG STRAP. A MINIMUM 10 INCHES OF THE STRAP SHALL BE CONNECTED TO EACH WALL OR GABLE TRUSS WITH 9 - 16D NAILS FOR A TOTAL OF 18-16D NAILS IN THE ENTIRE STRAP. STRAPS SHALL BE LOCATED AT EACH END OF THE CONNECTED WALLS OR WALL AND GABLE TRUSS WHERE SPACE ALLOWS FOR THE 10 INCH LENGTH OF STRAP. THE SPACING BETWEEN THE STRAPS MAY NOT EXCEED 4 FEET ON CENTER. THE STRAPS SHALL NOT BE BENT HORIZONTALLY TO ACCOMMODATE WOOD FRAMING. IF APPLICABLE, NAILERS SHALL BE ADDED TO ONE OF THE WALLS OR GABLE END USING A MINIMUM OF 9-16D NAILS TO CREATE THE VERTICAL PLANE NEEDED TO MOUNT THE STRAP.

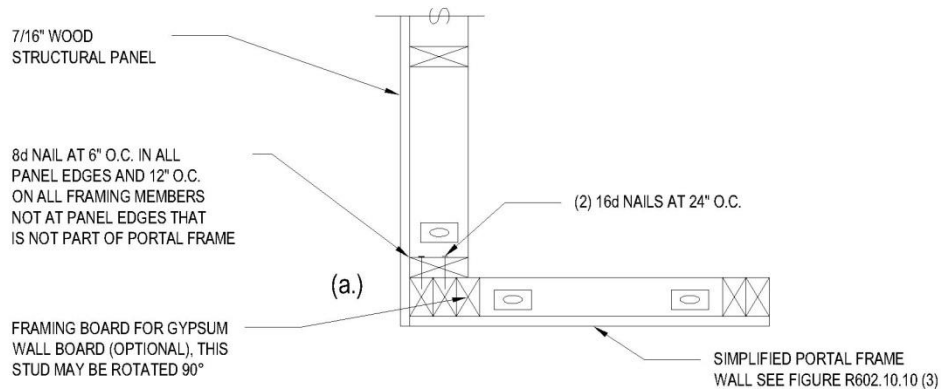




**OUTSIDE CORNER DETAIL**



**INSIDE CORNER DETAIL**



**CORNER DETAIL**

USED IN CONJUNCTION WITH SIMPLIFIED PORTAL WALL

**FIGURE R602.13.4  
BASIC BRACING EXTERIOR CORNER FRAMING**

- a. END STUD INDICATED ON THE ABOVE DETAILS MAY BE SHIFTED 7/16" TO ALLOW STUD FACE TO BE ALIGNED WITH SHEATHING, OR AN OPTIONAL NON-STRUCTURAL FILLER PANEL MAY BE USED.

**1116.108 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 8 Roof-Ceiling Construction.** The following provisions amend Chapter 8 Roof-Ceiling Construction in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**R802.10.1 Truss design drawings.** Truss design drawings, prepared in compliance with Section R802.10.1, shall be provided to the building official and approved prior to the issuance of the building permit. Truss design drawings shall include, at a minimum, the information specified below.

1. Slope or depth, span, and spacing.
2. Location of all joints.
3. Required bearing widths.
4. Design loads as applicable.
  - 4.1. Top chord live load (as determined from Section R301.6).
  - 4.2. Top chord dead load.
  - 4.3. Bottom chord live load.
  - 4.4. Bottom chord dead load.
  - 4.5. Concentrated loads and their points of application.
  - 4.6. Controlling wind and earthquake loads.
5. Adjustments to lumber and joint connector design values for conditions of use.
6. Each reaction force and direction.
7. Joint connector type and description such as, size, thickness or gage and the dimensioned location of each joint connector except where symmetrically located relative to the joint interface.
8. Lumber size, species and grade for each member.
9. Connection requirements for:
  - 9.1. Truss to girder-truss.
  - 9.2. Truss ply to ply.
  - 9.3. Field splices.
10. Calculated deflection ratio and/or maximum description for live and total load.
11. Maximum axial compression forces in the truss members to enable the building designer to design the size, connections and anchorage of the permanent continuous lateral bracing. Forces shall be shown on the truss drawing or on supplemental documents.
12. Required permanent truss member bracing location.

**R802.10.2 Design.** Wood trusses shall be designed in accordance with approved engineering practice. The design and manufacture of metal-plate-connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared and sealed by a Missouri Registered Professional Engineer.

**1116.109 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 9 Roof Assemblies.** The following provisions amend Chapter 9 Roof Assemblies in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**R905.2.8.2 Valleys.** Valley linings shall be installed in accordance with the manufacturer's installation instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least 24 inches (610 mm) wide and of any of the corrosion-resistant metals in Table R905.2.8.2.
2. For open valleys, valley lining of two plies of mineral surfaced roll roofing, complying with ASTM D 3909 or ASTM D 6380 Class M, shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.
3. For closed valleys (valley covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380, or two plies of smooth roll roofing complying with ASTM D 226 Type I, ASTM D 4869 Type I or ASTM D 6757 and at least 36 inches wide (914 mm) or valley lining as described in Item 1 or 2 above shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material.

**R908.7 Roof Ventilation.** Roof replacement requires roof ventilation to comply with Section R806. Roof replacement requires exhaust ducts terminating in enclosed attic or rafter spaces to be discharged directly to the exterior.

**Exception:** Bathroom exhaust ducts terminated at an attic gable vent or ventilated soffit.

**1116.110 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 10 Chimneys and Fireplaces.** The following provisions amend Chapter 10 Chimneys and Fireplaces in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**R1005.7 Factory-built chimney offsets.** Where a factory-built chimney assembly incorporates offsets, no part of the chimney shall be at an angle of more than 30 degrees (0.52 rad) from vertical at any point in the assembly and the chimney assembly shall not include more than four elbows.

**Exception:** When chimneys are installed per manufacturer's installation instructions.

**R1006.1.1 Factory-built fireplaces.** Exterior combustion air ducts for factory-built fireplaces shall be a listed component of the fireplace or equivalent and shall be installed in accordance with the fireplace manufacturer's instructions.

**1116.111 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 11 Energy Efficiency.** The following provisions amend Chapter 11 Energy Efficiency in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or

amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**N1101.4 (R102.1.1) Above code programs.** The building official or other authority having jurisdiction shall be permitted to deem a national, state or local energy-efficiency program to exceed the energy efficiency required by this code. Buildings approved in writing by such an energy-efficiency program shall be considered in compliance with this code.

**N1101.14 (R401.3) Certificate (Mandatory).** – Delete

**TABLE N1102.1.2 (R402.1.2)**  
**INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT<sup>a</sup>**

CLIMATE ZONE	FENESTRATION U-FACTOR <sup>b</sup>	SKYLIGHT <sup>b</sup> U-FACTOR	GLAZED FENESTRATION SHGC <sup>b, e</sup>	CEILING R-VALUE	WOODFRAME WALL R-VALUE	MASS WALL R-VALUE <sup>i</sup>	FLOOR R-VALUE	BASEMENT <sup>c</sup> WALL R-VALUE	SLAB <sup>d</sup> R-VALUE AND DEPTH	CRAWL SPACE <sup>e</sup> WALL R-VALUE
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13 + 5 <sup>h</sup>	8/13	19	5/13 <sup>f</sup>	0	5/13
4 except Marine	0.34	0.55	NR	38	15	8/13	19	13 <sup>j</sup>	10, 2 ft	5 <sup>k</sup>
5 and Marine 4	0.32	0.55	NR	49	20 or 13 + 5 <sup>h</sup>	13/17	30 <sup>g</sup>	15/19	10, 2 ft	15/19
6	0.32	0.55	NR	49	20 + 5 or 13 + 10 <sup>h</sup>	15/20	30 <sup>g</sup>	15/19	10, 4 ft	15/19
7 and 8	0.32	0.55	NR	49	20 + 5 or 13 + 10 <sup>h</sup>	19/21	38 <sup>g</sup>	15/19	10, 4 ft	15/19

- R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
- The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.  
*Exception:* Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.
- "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
- R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet (610 mm), whichever is less, in zones 1 through 3 for heated slabs.
- There are no SHGC requirements in the Marine Zone.
- Basement wall insulation is not required in warm-humid locations as defined by Figure N1101.10 and Table N1101.10.
- Or insulation sufficient to fill the framing cavity, R-19 minimum.
- The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation.
- The second R-value applies when more than half the insulation is on the interior of the mass wall.
- Unfinished basements may have a total of 20% of the total basement wall area exposed above the outside finished grade/ground level as un-insulated concrete foundation walls. The foundation wall area above the outside grade/ground level that may be un-insulated is determined by the formula 0.20 times the basement wall height of all walls (including insulated exterior frame walls for walkout basements and walls common to both basement and attached garages) times the perimeter of these basement walls. Exposed foundation wall area above the outside finished grade/ground level exceeding 20% of the total basement wall area shall be insulated with R-5 insulation. When required in unfinished areas, the basement foundation wall insulation shall extend down to the

basement floor slab or to a minimum of 24 inches (610 mm) below the outside finished grade when the grade is above the floor slab elevation.

- k. Naturally vented crawl space wall R-value may be 0.

**N1102.2.4 Access hatches and doors.** Access doors from conditioned spaces to unconditioned spaces such as attics and crawl spaces shall be insulated to a level equivalent to the insulation on the surrounding surfaces. Access shall be provided to all equipment that prevents damaging or compressing the insulation. A wood framed or equivalent baffle or retainer is required to be provided when loose-fill insulation is installed, the purpose of which is to prevent the loose-fill insulation from spilling into the living space when the attic access is opened and to provide a permanent means of maintaining the installed R-value of the loose-fill insulation.

**Exception:** Vertical doors that provide access from conditioned to unconditioned spaces shall be provided to meet the fenestration requirements of Table R1102.1.2 based on the applicable climate zone specified in Chapter 3.

**N1102.2.13 (R402.2.13) Sunroom insulation.** Sunrooms enclosing conditioned spaces shall meet the insulation requirements of this code.

**Exception:** For sunrooms with thermal isolation, and enclosing conditioned spaces, the following exceptions to the insulation requirements of this code shall apply:

1. The minimum ceiling insulation R-values shall be R-15 in Zones 1 through 4 and R-24 in Zones 5 through 8.
2. The minimum wall R-value shall be R-13 in all climate zones. Walls separating a sunroom with a thermal isolation from conditioned space shall meet the building thermal envelope requirements of this code.

**Table N1102.4.1.1 (402.4.1.1)**  
**Air Barrier and Insulation Installation**

Component	Air Barrier Criteria	Insulation Installation Criteria
General Requirements	<p>A continuous air barrier shall be installed in the building envelope.</p> <p>The exterior thermal envelope contains a continuous air barrier.</p> <p>Breaks or joints in the air barrier shall be sealed.</p>	<p>Air-permeable insulation shall not be used as a sealing material.</p>
Ceiling/attic	<p>The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed.</p> <p>Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.</p>	<p>The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.</p>
Walls	<p>The junction of the foundation and sill plate shall be sealed.</p> <p>The junction of the top plate and the top of the exterior walls shall be sealed.</p> <p>Knee walls shall be sealed.</p>	<p>Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum.</p> <p>Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.</p>
Windows, skylights and doors	<p>The space between window/door jambs and framing, and skylights and framing shall be sealed.</p>	
Rim joists	<p>Rim joists shall include the air barrier.</p>	<p>Rim joists shall be insulated.</p>

Component	Air Barrier Criteria	Insulation Installation Criteria
Floors (including above garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing; and extends from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with Class I vapor retarder with overlapping joists taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawl space walls.
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.	
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.	

In addition, inspection of log walls shall be in accordance with the provisions of ICC 400.

**N1102.4.1.2 (R402.4.1.2) Testing.** Any building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding four air changes per hour in Climate Zone 4. Testing shall be conducted in accordance with ASTM E 779 or ASTM E1827 and reported at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.

6. Supply and return registers, if installed at the time of the test, shall be fully open.

**N1102.4.2 (R402.4.2) Fireplaces. - Delete**

**N1103.2 (R403.2) Hot water boiler outdoor temperature setback.** Hot water boilers that supply heat to the building through one- or two-pipe heating systems shall have an outdoor setback control that lowers the boiler water temperature based on the outdoor temperature.

**Exception:** 80% - 84% efficient water boilers or boilers used as a backup source of heat.

**N1103.3.2 (R403.3.2) Sealing (Mandatory).** Ducts, air handlers, filter boxes and building cavities used as ducts shall be sealed. Joints and seams shall comply with either the International Mechanical Code or Section M1601.4.1 of this code, as applicable.

**Exceptions:**

1. Air-impermeable spray foam products shall be permitted to be applied without additional joint seals.
2. For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams, and locking-type joints and seams of other than the snap-lock and button-lock types.

**N1103.3.5 (R403.3.5) Building cavities (Mandatory).** Building framing cavities shall not be used for supply air.

**N1103.4.1 (R403.4.1) Protection of piping insulation. - Delete**

**N1103.5.3 (R405.5.3) Hot water pipe insulation (Prescriptive).** Insulation for hot water pipe with a minimum thermal resistance (R-value) of R-3 shall be applied to the following:

1. Piping larger than ¾ inch (19 mm) in nominal diameter.
2. Piping serving more than one dwelling unit.
3. Piping located outside the conditioned space.
4. Piping from the water heater to a distribution manifold.
5. Piping located under a floor slab.
6. Buried in piping.

Supply and return piping in recirculation systems other than demand recirculation systems.

**N1103.6.1 (R403.6.1) Whole-house mechanical ventilation system fan efficacy. - Delete**

**Table N1103.6.1 (R403.6.1) Mechanical Ventilation System Fan Efficacy. - Delete**

**N1104 (R404) Electrical Power and Lighting Systems (Mandatory). - Delete**

**N1104.1.1 (R404.1.1) Lighting equipment (Mandatory). – Delete**

**1116.113 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 13 General Mechanical System Requirements.** The following provisions amend Chapter 13 General Mechanical System Requirements in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**M1301.2 Identification.** - Delete

**M1301.4 Plastic pipe, fittings and components.** - Delete

**M1301.5 Third-party testing and certification.** - Delete

**M1305.1.4.1. Ground clearance.** Equipment and appliances supported from the ground shall be level and firmly supported on a concrete slab or other approved material extending not less than 2 inches (50.8 mm) above the adjoining ground. Such support shall be in accordance with the manufacturer's installation instructions. Appliances suspended from the floor shall have a clearance of not less than 6 inches (152 mm) from the ground.

**M1305.1.4.3. Electrical requirements.** A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the appliance location in accordance with Chapter 39. Exposed lamps shall be protected from damage by location or lamp guards. Exception: Lamp guards are not required in basements.

**M1307.2 Anchorage of appliances.** Appliances designed to be fixed in position shall be fastened or anchored in an approved manner. In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub> water heaters and thermal storage units shall be anchored or strapped to resist horizontal displacement caused by earthquake motion in accordance with one of the following:

1. Anchorage and strapping shall be designed to resist a horizontal force equal to one-third of the operating weight of the water heater storage tank, acting in any horizontal direction. Strapping shall be at the points within the upper one-third and lower one-third of the appliance's vertical dimensions. At the lower point, the strapping shall maintain a minimum distance of 4 inches (102 mm) above the ground.
2. The anchorage strapping shall be in accordance with the appliance manufacturer's recommendations.

**1116.114 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 14 Heating And Cooling Equipment And Appliances.** The following provisions amend Chapter 14 Heating And Cooling Equipment And Appliances in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**M1401.3 Sizing.** Heating and cooling equipment and appliances shall be sized in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. The design temperatures for St. Louis County shall be in accordance with Table M1401.3.



**TABLE M1401.3  
DESIGN TEMPERATURES**

	Outdoor	Indoor
Winter	DB 2°F	DB 72° F
Summer	DB 95°F WB 76°F	DB 75° F

**M1411.3.1 Auxiliary and secondary drain systems.** In addition to the requirements of Section M1411.3, a secondary drain or auxiliary drain pan shall be required for each cooling evaporator coil where damage to any building components will occur as a result of overflow from the equipment drain pan or stoppage in the condensate drain piping. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than 1/8 unit vertical in 12 units horizontal (1-percent slope). Drain piping shall not be less than 3/4-inch (19mm) nominal pipe size. One of the following methods shall be used:

1. An auxiliary drain pan with a separate drain shall be installed under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1.5 inches (38 mm), shall not be less than 3 inches (76mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steel pans shall have a minimum thickness of not less than 0.0179-inch (0.455 mm) (No. 26 Gage). Nonmetallic pans shall have a minimum thickness of not less than 0.0625 inch (1.6mm).
2. A separate overflow drain line shall be connected to the drain pan installed with the equipment. This overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.
3. An auxiliary drain pan without a separate drain line shall be installed under the coils on which condensation will occur. This pan shall be equipped with a water level detection device conforming to UL 508 that will shut off the equipment served prior to overflow of the pan. The pan shall be equipped with a fitting to allow for drainage. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.
4. A water level detection device conforming to UL 508 shall be installed that will shut off the equipment served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line or the equipment supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan.

**1116.115 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 15 Exhaust Systems.** The following provisions amend Chapter 15 Exhaust Systems in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**M1501.1 Outdoor discharge.** The air removed by every mechanical exhaust system shall be discharged to the outdoors in accordance with Section M1506.2. Air shall not be exhausted into the attic, soffit, ridge vent or crawl space.

**Exceptions:**

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

2. Bathroom exhaust may discharge to an attic gable vent or ventilated soffit if attached or secured within 6" (152 mm) of same, without obstruction.

**M1502.4.1 Material and size.** Exhaust ducts shall have a smooth interior finish and be constructed of metal having a minimum thickness of 0.0157 inches (0.3950 mm) (No. 30). The duct shall be 4 inches (102 mm) nominal in diameter.

**M1502.4.2 Duct installation.** Exhaust ducts shall be supported at intervals not to exceed 12 feet (3658 mm) and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1.

**M1502.4.5.1 Specified length.** The maximum length of the exhaust duct shall be 35 feet (10688 mm) from the connection to the transition duct from the dryer to the outlet terminal. Where fittings are used, the maximum length of the exhaust duct shall be reduced in accordance with Table M1502.4.5.1. The maximum length of the exhaust duct does not include the transition duct.

**Exception:** The total developed length of dryer exhaust ducts may be up to a maximum of 55 feet (16764 mm) when access panels for cleanouts and signage are provided. The access panels for cleanouts shall be provided for every 15 feet (4572 mm) of length, within 12 inches (305 mm) of the second elbow and at every elbow thereafter. Permanent signage shall be provided to identify each access panel for cleanout location. Permanent signage shall also be provided at the dryer exhaust connection to inform occupants of the periodic inspection and cleaning requirements.

**M1503.1 General.** All kitchens shall be equipped with means of mechanical exhaust directly over, or adjacent to, a range or a cook top. The mechanical exhaust system may be of the recirculating type or may exhaust directly to the outside. Recirculating systems shall be equipped with the appropriate filtration for grease removal and odor control and must be capable of operating in a moist environment. Either type of system shall be a listed exhaust system. With either type, the mechanical exhaust system shall be allowed to run on an intermittent basis. Exhaust systems shall be installed in accordance with Sections M1503, M1505, and M1507.3. Range hoods shall discharge to the outdoors through a single-wall duct. The duct serving the hood shall have a smooth interior surface, shall be air tight and shall be equipped with a backdraft damper and shall be independent of all other exhaust systems. Ducts serving range hoods shall not terminate in an attic or crawl space or areas inside the building.

**Exception:** Where installed in accordance with the manufacturer's installation instructions and where mechanical or natural ventilation is otherwise provided, listed and labeled ductless range hoods shall not be required to discharge to the outdoors.

**M1503.4 Makeup air required.** Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.19 m<sup>3</sup>/s) shall be provided with makeup air approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

**M1506.3 Exhaust openings.** Air exhaust openings shall terminate not less than 3 feet (914 mm) from property lines; 3 feet (914 mm) from operable openings into the building and 10 feet (3048 mm) from mechanical air intakes except where the opening is located 3 feet (914 mm) above the air intake. Openings shall comply with Sections R303.5.2 and R303.6.

**M1507.2 Recirculation of air.** Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another dwelling unit and shall be exhausted in accordance with Section M1501.1.

**1116.116 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 16 Duct Systems.** The following provisions amend Chapter 16 Duct Systems in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section

that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**M1601.1 Duct design.** Duct systems serving heating, cooling, and ventilation equipment shall be installed in accordance with the provisions of this section and ACCA Manual D, SMACNA-10, SMACNA-15, the appliance manufacturer's installation instructions or other approved methods.

**M1601.1.1 Above-ground duct systems.** Above-ground duct systems shall conform to the following:

1. Equipment connected to duct systems shall be designed to limit discharge air temperature to not greater than 250°F (121°C).
2. Fibrous glass duct construction shall conform to the SMACNA Fibrous Glass Duct Construction Standards or NAIMA Fibrous Glass Duct Construction Standards.
3. Field-fabricated and shop-fabricated metal and flexible duct constructions shall conform to the SMACNA HVAC Duct Construction Standards – Metal and Flexible except as allowed by Table M1601.1.1. Galvanized steel shall conform to ASTM A 653.
4. The use of gypsum products to construct return air ducts or plenums is permitted, provided that the air temperature does not exceed 125°F (52°C) and exposed surfaces are not subject to condensation.
5. Duct systems shall be constructed of materials having a flame spread index of not greater than 200.
6. Stud wall cavities and the spaces between solid floor joists to be used as non-ducted air plenums shall comply with the following conditions:
  - 6.1. These cavities or spaces shall not be used as a plenum for air supply.
  - 6.2. These cavities or spaces shall not be a part of required fire-resistance-rated assembly.
  - 6.3. Stud wall cavities shall not convey air from more than one floor level.
  - 6.4. Stud wall cavities and joist-space plenums shall be isolated from adjacent concealed spaces by tight-fitting fireblocking in accordance with Section R602.8.
  - 6.5. Stud wall cavities in the outside walls of building envelope assemblies shall not be utilized as air plenums.

**Table M1601.1.1**  
**DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESS FOR SINGLE DWELLING UNITS<sup>a</sup>**

ROUND DUCT DIAMETER (inches)	STATIC PRESSURE			
	½ inch water gage		1 inch water gage	
	Thickness (inches)		Thickness (inches)	
	Galvanized	Aluminum	Galvanized	Aluminum
≤12	0.013	0.018	0.013	0.018
12 to 14	0.013	0.018	0.016	0.023
15 to 17	0.016	0.023	0.019	0.027
18	0.016	0.023	0.024	0.034
19 to 20	0.019	0.027	0.024	0.034
RECTANGULAR DUCT DIMENSION	STATIC PRESSURE			
	½ inch water gage		1 inch water gage	

ROUND DUCT DIAMETER (inches)  (Longest dimension in inches)	STATIC PRESSURE			
	½ inch water gage		1 inch water gage	
	Thickness (inches)		Thickness (inches)	
	Galvanized	Aluminum	Galvanized	Aluminum
	Thickness (inches)		Thickness (inches)	
	Galvanized	Aluminum	Galvanized	Aluminum
≤ 8	0.013	0.018	0.013	0.018
9 to 10	0.013	0.018	0.016	0.023
11 to 12	0.016	0.023	0.019	0.027
13 to 16	0.016	0.027	0.019	0.027
17 to 18	0.019	0.027	0.024	0.034
19 to 20	0.019	0.034	0.024	0.034

For SI: 1 inch = 25.4 mm, 1 inch water gage = 249 Pa.

- a. Ductwork that exceeds 20 inches by dimension or exceeds a pressure of 1 inch water gage (250 Pa) shall be constructed in accordance with SMACNA HVAC Duct Construction Standards Metal and Flexible.

**M1602.2 Return air openings.** Return air openings for heating, ventilation and air conditioning systems shall comply with all of the following:

1. Openings shall not be located less than 10 feet (3048 mm) measured in any direction from an open combustion chamber or draft hood of another appliance located in the same room or space.
2. Return and transfer openings shall be sized in accordance with the appliance or equipment manufacturers' installation instructions, Manual D or the design of the registered design professional.
3. Return air shall not be taken from a closet, bathroom, toilet room, kitchen, garage, mechanical room, boiler room, furnace room or unconditioned attic.

**Exceptions:**

1. Taking return air from a kitchen is not prohibited where such return air openings serve the kitchen only, and are located not less than 10 feet (3048 mm) from the cooking appliances.
2. Dedicated forced-air systems serving only the garage shall not be prohibited from obtaining return air from the garage.
3. Taking return air from an unconditioned crawl space shall not be accomplished through a direct connection to the return side of a forced-air furnace. Transfer openings in the crawl space enclosure shall not be prohibited.
4. Return air from one dwelling unit shall not be discharged into another dwelling unit.
5. Where a closet is provided with a supply register, taking return air from the closet shall not be prohibited.

**1116.121 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 21 Hydronic Piping.** The following provisions amend Chapter 21 Hydronic Piping in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**M2101.10 Tests.** Hydronic piping systems shall be tested hydrostatically with at a pressure of one and one-half times the maximum system design pressure, but not less than 100 pounds per square inch (689 kPa). The duration of each test shall not be less than 15 minutes and not more than 20 minutes, in which time there shall not be observed leaks.

**Exception:** The 100 pounds per square inch (689 kPa) threshold is not required when the duration of the test is extended to not less than 24 hours.

**M2103.4 Testing.** Pipe or tubing to be embedded shall be tested by applying a hydrostatic pressure of not less than 100 psi (690 kPa). The pressure shall be maintained for 30 minutes, during which, the joints shall be visually inspected for leaks.

**Exception:** A test pressure of one and one-half times the maximum system pressure may be used when the duration of the test is extended to not less than 24 hours.

**M2105 Ground-Source Heat-Pump System Loop Piping.** - Delete the entire section as written in the 2015 International Residential Code and replace as follows.

## **Section M2105**

### **Ground-Source Heat-Pump System Loop Piping**

**M2105.1 General.** Ground-source heat-pumps system looping piping shall comply with Section 1210 of the Mechanical Code, SLCRO 1974, Title XI, Chapter 1108, as amended.

**1116.124 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition – CHAPTER 24 Fuel Gas.** The following provisions amend Chapter 24 Fuel Gas in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**G2408.4 Clearances from grade.** Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending not less than 2 inches (50.8 mm) above adjoining grade or shall be suspended not less than 6 inches (152 mm) above adjoining grade. Such supports shall be installed in accordance with the manufacturer's installation instructions.

**G2412.9 (401.9) Identification.** Delete

**G2412.10 (401.10) Third-party testing and certification.** Delete

**G2427.8 (503.8) Venting system termination location.** The location of the venting system terminations shall comply with the following (see Appendix C):

1. A mechanical draft venting system shall terminate not less than 3 feet (914 mm) above any forced-air inlet located within 10 feet (3048 mm).

#### **Exceptions:**

1. This provision shall not apply to the combustion air intake of a direct-vent appliance.
2. This provision shall not apply to the separation of the integral outdoor air inlet and flue gas discharge of listed outdoor appliances.
2. A mechanical draft venting system, excluding direct vent appliances, shall terminate not less than 4 feet (1219 mm) below, 4 feet (1219 mm) horizontally from, or 1 foot (305 mm) above any door,

operable window or gravity air inlet into any building. The bottom of the vent terminal shall be located not less than 12 inches (305mm) above the finished ground level.

3. The vent terminal of a direct-vent appliance with an input of 10,000 Btu per hour (3kW) or less shall be located not less than 6 inches (152 mm) from any air opening into a building. Such an appliance with an input over 10,000 Btu per hour (3 kW) but not over 50,000 Btu per hour (14.7 kW) shall be installed with a 9-inch (230 mm) vent termination clearance, and an appliance with an input over 50,000 Btu per hour (14.7 kW) shall have not less than a 12-inch (305 mm) vent termination clearance. The bottom of the vent terminal and the air intake shall be located not less than 12 inches (305 mm) above grade finished ground level.
4. Through-the-wall vents for Category II and IV appliances and noncategorized condensing appliances shall not terminate over public walkways or over an area where condensate or vapor could create a nuisance or hazard or could be detrimental to the operation of regulators, relief valves or other equipment. Where local experience indicates that condensate is a problem with Category I and III appliances, this provision shall also apply. Drains for condensate shall be installed in accordance with the appliance and vent manufacturer's installation instructions.
5. Vent systems for Category IV appliances that terminate through an outside wall of a building and discharge flue gases perpendicular to the adjacent wall shall be located not less than 10 feet (3048 mm) horizontally from an operable opening in an adjacent building. This requirement shall not apply to vent terminals that are 3 feet (911 mm) or more above or 25 feet (7620 mm) or more below openings.

**G2439.7.4.1 (614.8.4) Specified length.** The maximum length of the exhaust duct shall be 35 feet (10688 mm) from the connection to the transition duct from the dryer to the outlet terminal. Where fittings are used, the maximum length of the exhaust duct shall be reduced in accordance with Table G2439.7.4.1. The maximum length of the exhaust duct does not include the transition duct.

**Exception:** The total developed length of dryer exhaust ducts may be up to a maximum of 55 feet (16764 mm) when access panels for cleanouts and signage are provided. The access panels for cleanouts shall be provided for every 15 feet (4572 mm) of length, within 12 inches (305 mm) of the second elbow and at every elbow thereafter. Permanent signage shall be provided to identify each access panel for cleanout location. Permanent signage shall also be provided at the dryer exhaust connection to inform occupants of the periodic inspection and cleaning requirements.

**G2442.4 (618.4) Prohibited sources.** Outdoor or return air for forced-air heating and cooling systems shall not be taken from the following locations:

1. Closer than 10 feet (3048 mm) from an appliance vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outside air inlet.
2. Where there is the presence of objectionable odors, fumes or flammable vapors; or where located less than 10 feet (3048 mm) above the surface of any abutting public way or driveway; or where located at grade level by a sidewalk, street, alley or driveway.
3. A hazardous or insanitary location or a refrigeration machinery room as identified in the International Mechanical Code.
4. A room or space, the volume of which is less than 25 percent of the entire volume served by such system. Where connected by a permanent opening having an area sized in accordance with Section G2442.2, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of such rooms or spaces.

**Exception:** The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to such room or space.

5. A room or space containing an appliance where such a room or space serves as the sole source of return air.

**Exception:** This shall not apply where:

1. The appliance is a direct-vent appliance or an appliance not requiring a vent in accordance with Section G2425.8.
2. The room or space complies with the following requirements:
  - 2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6L/W) of combined input rating of all fuel-burning appliances therein.
  - 2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
  - 2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner appliance in the same room or space.
3. Rooms or spaces containing solid fuel-burning appliances, provided that return-air inlets are located not less than 10 feet (3048 mm) from the firebox of such appliances.
6. A closet, bathroom, toilet room, kitchen, garage, boiler room, furnace room or unconditioned attic.

**Exceptions:**

1. Where return air intakes are located not less than 10 feet (3048 mm) from cooking appliances and serve only the kitchen area, taking return air from a kitchen area shall not be prohibited.
2. Dedicated forced air systems serving only a garage shall not be prohibited from obtaining return air from the garage.
3. Where a closet is provided with a supply register, taking return air from the closet shall not be prohibited.
7. A crawl space by means of direct connection to the return side of a forced-air system. Transfer openings in the crawl space enclosure shall not be prohibited.

**1116.125 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 25 Plumbing Administration.** The following provisions amend Chapter 25 Plumbing Administration in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P2501.1 Scope.** The International Plumbing Code regulates plumbing administration.

All other sections of Chapter 25 - Plumbing Administration in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.126 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 26 General Plumbing Requirements.** The following provisions amend Chapter 26 General Plumbing Requirements in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P2601.1 Scope.** The International Plumbing Code regulates general plumbing requirements.

All other sections of Chapter 26 – General Plumbing Requirements in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.127 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 27 Plumbing Fixtures.** The following provisions amend Chapter 27 Plumbing Fixtures in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P2701.1 Scope.** The International Plumbing Code regulates plumbing fixtures.

All other sections of Chapter 27 – Plumbing Fixtures in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted and not adopted as part of this code.

**1116.128 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 28 Water Heaters.** The following provisions amend Chapter 28 Water Heaters in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P2801.1 Scope.** The International Plumbing Code regulates water heaters.

All other sections of Chapter 28 – Water Heaters in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not made a part of this code.

**1116.129 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 29 Water Supply and Distribution.** The following provisions amend Chapter 29 Water Supply and Distribution in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P2901.1 Scope.** The International Plumbing Code regulates water supply and distribution.

All other sections of Chapter 29 – Water Supply and Distribution in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not made a part of this code.



**1116.130 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 30 Sanitary Drainage.** The following provisions amend Chapter 30 Sanitary Drainage in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P3001.1 Scope.** The International Plumbing Code regulates sanitary drainage.

All other sections of Chapter 30 – Sanitary Drainage in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.131 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 31 Vents.** The following provisions amend Chapter 31 Vents in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P3101.1 Scope.** The International Plumbing Code regulates plumbing vents.

All other sections of Chapter 31 – Vents in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.132 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 32 Traps.** The following provisions amend Chapter 32 Traps in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P3201.1 Scope.** The International Plumbing Code regulates plumbing traps.

All other sections of Chapter 32 – Traps in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.133 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 33 Storm Drainage.** The following provisions amend Chapter 33 Storm Drainage in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**P3301.1 Scope.** The International Plumbing Code regulates storm drainage.

All other sections of Chapter 33 – Storm Drainage in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.134 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 34 General Requirements (Electrical).** The following provisions amend Chapter 34 General Requirements (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E3401.1 Scope.** NFPA 70 regulates general requirements for electrical work.

All other sections of Chapter 34 – General Requirements (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.135 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 35 Electrical Definitions.** The following provisions amend Chapter 35 Electrical Definitions in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E3501.1 Scope.** NFPA 70 regulates definitions applicable to electrical systems and inspection requirements.

All other sections of Chapter 35 – Electrical Definitions in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.136 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 36 Services (Electrical).** The following provisions amend Chapter 36 Services (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E3601.1 Scope.** NFPA 70 regulates electrical services.

All other sections of Chapter 36 – Services (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.137 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 37 Branch Circuit and Feeder Requirements (Electrical).** The following provisions amend Chapter 37 Branch Circuit and Feeder Requirements (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E3701.1 Scope.** NFPA 70 regulates electrical branch circuit and feeder requirements.

All other sections of Chapter 37 – Branch Circuit and Feeder Requirements (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.138 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 38 Wiring Methods (Electrical).** The following provisions amend Chapter 38 Wiring Methods (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E3801.1 Scope.** NFPA 70 regulates electrical wiring methods.

All other sections of Chapter 38 – Wiring Methods (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.139 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 39 Power and Lighting Distribution (Electrical).** The following provisions amend Chapter 39 Power and Lighting Distribution (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E3901.1 Scope.** NFPA 70 electrical regulates power and lighting distribution.

All other sections of Chapter 39 – Power and Lighting Distribution (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.140 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 40 Devices and Luminaires (Electrical).** The following provisions amend Chapter 40 Devices and Luminaires (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E4001.1 Scope.** NFPA 70 regulates electrical devices and luminaries.

All other sections of Chapter 40 – Devices and Luminaries (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.141 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 41 Appliance Installation (Electrical).** The following provisions amend Chapter 41 Appliance Installation (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E4101.1 Scope.** NFPA 70 regulates electrical appliance installation.

All other sections of Chapter 41 – Appliance Installation (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.142 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 42 Swimming Pools (Electrical).** The following provisions amend Chapter 42 Swimming Pools (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E4201.1 Scope.** NFPA 70 regulates electrical requirements for swimming pools.

All other sections of Chapter 42 – Swimming Pools (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition are deleted in their entirety and not adopted as part of this code.

**1116.143 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 43 Class 2 Remote-Control, Signaling and Power-Limited Circuits (Electrical).** The following provisions amend Chapter 43 Class 2 Remote-Control, Signaling and Power-Limited Circuits Pools (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**E4301.1 Scope.** NFPA 70 regulates electrical class 2 remote-control, signaling and power-limited circuits.

All other sections of Chapter 43 – Class 2 Remote-Control, Signaling and Power-Limited Circuits (Electrical) in the International Residential Code for One- and Two-Family Dwellings, 2009 edition are deleted in their entirety and not adopted as part of this code.

**1116.144 Amendments to the International Residential Code for One- and Two-Family Dwellings, 2015 edition - CHAPTER 44 Referenced Standards.** The following provisions amend Chapter 44 Referenced Standards in the International Residential Code for One- and Two-Family Dwellings, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

Amend CHAPTER 44 - Referenced Standards - Sections not shown herein as being modified are adopted without amendments.

**ACCA** – Air Conditioning Contractors of America. Delete Referenced Standards as shown below. (Standards not deleted by this amendment and shown in the code as published are adopted without amendments)

<b>ACCA</b>	Air Conditioning Contractors of America 2800 Shirlington Road, Suite 300 Arlington, VA 22206	
Standard reference number	Title	Referenced in code section number
Manual J – 2011	Residential Load Calculation – Eighth Edition	M1401.3
Manual S – 13	Residential Equipment Selection	M1401.3

**ANSI** - American National Standards Institute. Delete Referenced Standards as shown below. (Standards not deleted by this amendment and shown in the code as published are adopted without amendments)

<b>ANSI</b>	American National Standards Institute 25 West 43rd Street, Fourth Floor New York, NY 10036	
Standard reference number	Title	Referenced in code section number
[A118.10-99]	[Specification for Load Bearing, Bonded, Waterproof Membranes for Thin-set Ceramic Tile and Dimension Stone Installation]	[P2709.2, P2709.2.4]
[Z21.22-99 (R2003)]	[Relief Valves for Hot Water Supply Systems-with Addenda Z21.22a-2000 (R2003) and 21.22b-2001 (R2003)]	[P2804.2, P2804.7]

**ASHRAE** - American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. Amend Referenced Standards:

<b>ASHRAE</b>	American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle, NE Atlanta, GA 30329	
Standard reference number	Title	Referenced in code section number
ASHRAE – 2013	ASHRAE Handbook of Fundamentals	N1102.1.5, Table N1105.5.2(1)
ASHRAE 193 – 2010	Method of Test for Determining Air Tightness of HVAC Equipment	N1103.3.2.1
34 – 2013	Designation and Safety Classification of Refrigerants	M1411.1

**ASME** - American Society of Mechanical Engineers. Delete all Referenced Standards except the following:

<b>ASME</b>	American Society of Mechanical Engineers Three Park Avenue New York, NY 10016-5990	
Standard reference number	Title	Referenced in code section number
ASME/A17.1/CSA B44-2013	Safety Code for Elevators and Escalators	R321.1
A18.1-2008	Safety Standard for Platforms and Stairway Chair Lifts	R321.2
B1.20.1- 1983 (R2006)	Pipe Threads, General Purpose (Inch)	G2414.9
B16.33-2012	Manually Operated Metallic Gas Valves for Use in Gas Piping Systems up to 125 psig (Sizes 1/2 through 2)	Table G2420.1.1
B16.44-2002 (Reaffirmed 2007)	Manually Operated Metallic Gas Valves For Use in Above-ground Piping Systems up to 5 psi	Table G2420.1.1
B36.10M-2004	Welded and Seamless Wrought-steel Pipe	G2414.4.2
BPVC-2010/2011 addenda	ASME Boiler and Pressure Vessel Code (2007 edition)	M2001.1.1, G2452.1
CSD-1-2011	Controls and Safety Devices for Automatically Fired Boilers	M2001.1.1, G2452.1

**ASSE** American Society of Sanitary Engineering  
901 Canterbury, Suite A  
Westlake, OH 44145

Delete all Referenced Standards.

**ASTM** - ASTM International. Amend Referenced Standards (Standards not amended by this code amendment and shown in the code as published are adopted without amendments)

<b>ASTM</b>	ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428	
Standard reference number	Title	Referenced in code section number
A53/A53M – 12	Specification for Pipe, Steel, Black and Hot-dipped, Zinc-coated Welded and Seamless	R407.3, Table M2101.1, G2414.4.2, [Table 2906.4, Table P2906.5, Table P3002.1(1)]
[A 74 – 13A]	[Specification for Cast Iron Soil Pipe and Fittings]	[Table P3002.1(1), Table 3002.1(2), Table P3002.2, Table P3002.3, P3005.2.6, Table P3302.1]
[A126 – (2009)]	[Gray Iron Castings for Valves, Flanges and Pipe Fittings]	[Table P2903.9.4]
[A 312/A 312M – 13A]	[Specification for Seamless, Welded and Heavily Cold Worked Austenitic Stainless Steel Pipes]	[Table P2906.4, Table P2906.5, Table P2905.6, P2905.12.2]
[A 778 – 01 (2009e1)]	[Specification for Welded Unannealed Austenitic Stainless Steel Tubular Products]	[Table P2905.4, Table P2905.5, Table P2905.6]
[A 888 – 13a]	[Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Application]	[Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table 3002.3, Table P3302.1]
[B 32 – 08]	[Specification for Solder Metal]	[P3003.6.3]
B 42 – 10	Specification for Seamless Copper Pipe, Standard Sizes	Table M2101.1 [, Table P2906.4, Table P2906.5, Table P3002.1(1)]
B 43 – 09	Specification for Seamless Red Brass Pipe, Standard Sizes	Table M2101.1 [, Table P2906.4, Table P2906.5, Table P3002.1(1)]
B 75 – 11	Specification for Seamless Copper Tube	Table M2101.1 [, Table P2905.4, Table P2906.5, Table P3002.1(1), Table P3002.1(2), Table P3002.2]
B 88 – 09	Specification for Seamless Copper Water Tube	Table M2101.1, G2414.5.2 [, Table P2906.4, Table P2905.6, Table P3002.1(1), Table P3002.1(2), Table P3002.2]
B 251 – 10	Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube	Table M2101.1 [, Table P2906.4, Table P2906.5, Table P3002.1(1), Table P3002.1(2), Table P3002.2]
B 302 – 12	Specification for Threadless Copper Pipe, Standard Sizes	Table M2101.1 [, Table P2906.4, P2906.5, Table P3002.1(1)]
B 306 – 09	Specification for Copper Drainage Tube (DWV)	Table M2101.1 [, Table P3002.1(1), Table P3002.1(2)]
B 370 – 12	Specification for Copper Sheet and Strip for Building Construction	Table R905.2.8.2, Table R905.10.3(1) [, Table P2701.1]
[B 447 – 12a]	[Specification for Welded Copper Tube]	[Table P2906.4, Table P2906.5]
B 813 – 10	Specification for Liquid and Paste Fluxes for Soldering Applications of Copper and Copper Alloy Tube	Table M2101.1, M2103.3 [, P2906.14, P3003.6.3]
[B 828 – 02 (2010)]	[Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings]	M2103.3[, P2906.14, P3003.6.3]
[C 4 – 2009]	[Specification for Clay Drain Tile and Perforated Clay Drain Tile]	[Table P3302.1]
[C 14 – 11]	[Specification for Non-reinforced Concrete Sewer, Storm Drain, and Culvert Pipe]	[Table P3002.2]
[C 76 – 13A]	Specification for Reinforced Concrete Culvert, Storm Drain and Sewer Pipe	[Table P3002.2]
[C 425 – 04 (2009)]	[Specification for Compression Joints for Vitrified Clay Pipe and Fittings]	[Table P3002.2, P3003.10, P3003.13]
[C 443 – 12]	[Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets]	[P3003.5, P3003.13]

<b>ASTM</b>	ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428	
Standard reference number	Title	Referenced in code section number
[C564 – 12]	[Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings]	[P3003.4.2, P3003.4.3, P3003.13]
[C 700 – 13]	[Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated]	[Table P3002.2, Table P3002.3, Table P3302.1]
[C 1173 – 10e1]	[Specification for Flexible Transition Couplings for Underground Piping Systems]	[P3003.3.1, P3003.5, P3003.6.1, P3003.10.1, P3003.12.2, P3003.13]
[C 1277 – 12]	[Specification for Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings]	[P3003.4.3]
[C 1440 – 08]	[Specification for Thermoplastic Elastomeric (TPE) Gasket Materials for Drain, Waste and Vent (DWV), Sewer, Sanitary and Storm Plumbing Systems]	[P3003.13]
[C 1460 – 08]	[Specification for Shielded Transition Couplings for Use with Dissimilar DWV Pipe and Fittings Above Ground]	[P3003.18]
[C 1461 – 08]	[Specification for Mechanical Couplings Using Thermoplastic Elastomeric (TPE) Gaskets for Joining Drain, Waste and Vent (DWV) Sewer, Sanitary and Storm Plumbing Systems for Above and Below Ground Use]	[P3003.13]
[C 1540 – 11]	[Specification for Heavy Duty Shielded Couplings Joining Hubless Cast-iron Soil Pipe and Fittings]	[P3003.4.3]
D 226/D 226M – 09	Specification for Asphalt-saturated (Organic Felt) Used in Roofing and Waterproofing	R703.2, R905.1.1, Table R905.1.1(1), R905.2.8.2, R905.8.4, Table 905.9.2
[D 1527 – 99 (2005)]	[Specification for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe, Schedules 40 and 80]	[Table P2906.4]
[D 1785 – 12]	[Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120]	[Table P2906.4, Table AG101.1]
[D 1869 - 95 (2010)]	[Specification for Rubber Rings for Asbestos-cement Pipe]	[P2906.17, P3003.13]
[D 2104 – 03]	[Specification for Polyethylene (PE) Plastic Pipe, Schedule 40]	[Table P2905.4]
[D 2235 – 04 (2011)]	[Specification for Solvent Cement for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe and Fittings]	[P2906.9.1.1, P3003.3.2]
[D 2239 – 12A]	[Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Controlled Inside Diameter]	[Table P2906.4, Table AG101.1]
[D 2241 – 09]	[Specification for Poly (Vinyl Chloride) (PVC) Pressure-rated Pipe (SDR-Series)]	[Table P2905.4, Table AG101.1]
[D 2282 – 99 (2005)]	[Specification for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe (SDR-PR)]	[Table P2905.4]
[D 2464 – 06]	[Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80]	[Table P2906.6]
[D 2466 – 06]	[Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40]	[Table P2906.6]
[D 2467 – 06]	[Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80]	[Table P2906.6]
[D 2468 – 96a]	[Specification for Acrylonitrile-butadiene-styrene (ABS) Plastic Pipe Fittings, Schedule 40]	[Table P2906.6]
[D 2564 – 12]	[Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems]	[P2906.9.1.4, P3003.8.2, P3003.9.2]
[D 2609 – 02 (2008)]	[Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe]	[Table P2906.6]
D 2657 – 07	Standard Practice for Heat Fusion-joining of Polyolefin Pipe Fittings	M2105.11.1, P290.3.1, P3003.12.1]
[D 2661 – 11]	[Specification for Acrylonitrile-butadiene-styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings]	[Table P3002.1(1), Table P3002.21(2), Table P3002.2, Table P3002.3, P3003.3.2, P3003.3.2]

<b>ASTM</b>	ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428	
Standard reference number	Title	Referenced in code section number
[D 2665 – 12]	[Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings]	[Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, Table AG101.1]
[D 2672 – 96a (2000)]	[Specification for Joints for IPS PVC Pipe Using Solvent Cement]	[Table P2906.4]
D2683 – 2010e1	Specification for Socket-type Polyethylene Fittings for Outside Diameter-controlled Polyethylene Pipe and Tubing	Table M2105.5, M2105.11.1[, P3010.5]
[D 2729 – 11]	[Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings]	[P3009.11, Table P3302.1, Table AG101.1]
[D 2737 – 2012A]	[Specification for Polyethylene (PE) Plastic Tubing]	[Table P2906.4, Table AG101.1]
[D 2751-05]	[Specification for Acrylonitrile-butadiene-styrene (ABS) Sewer Pipe and Fittings]	[Table P3002.2, Table P3002.3]
D 2846/D 2846M – 09BEI	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-water Distribution Systems	Table M2101.1, [Table P2906.4, Table P2906.5, Table P2906.6, P2906..9.1.2, P2906.9.1.3, Table AG101.1]
[D 2855 – 96 (2010)]	[Standard Practice for Making Solvent-cemented Joints with Poly (vinyl Chloride) (PVC) Pipe and Fittings]	[P3003.9.2]
[D 2949 – 10]	[Specification for 3.25-in. Outside Diameter Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste and Vent Pipe and Fittings]	[Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, Table AG101.1]
[D 3034 – 08]	[Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings]	[Table P3002.2, Table P3002.3, Table P3202.1, Table AG101.1]
[D 3212 – 07]	[Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals]	[P3003.3.1, P3003.9.1, P3003.12.2]
[D 3311 – 11]	[Specification for Drain, Waste and Vent (DWV) Plastic Fittings Patters]	[P3002.3]
[D 4068 – 09]	[Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water Containment Membrane]	[P2709.2, P2709.2.2]
[D 4551 – 12]	[Specification for Poly (Vinyl) Chloride (PVC) Plastic Flexible Concealed Water-containment Membrane]	[P2709.2, P2709.2.1]
D 4869/D 4869M – 05 (2011)e01	Specification for Asphalt-saturated (Organic Felt) Underlayment Used in Steep Slope Roofing	R905.1.1, Table R905.1.1(1), R905.2.8.2, R905.16.3, R905.16.4.2
D 6757-07	Standard Specification for Inorganic Underlayment Felt Containing Inorganic Fibers Used in Steep-Slope Roofing	R905.2.8.2
[F 405 – 05]	[Specification for Corrugated Polyethylene (PE) Tubing and Fittings]	[Table P3009.11, Table P3302.1, Table AG101.1]
[F 409 – 12]	[Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings]	[Table P2701.1, P2702.2, P2702.3]
[F 437 – 09]	[Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80]	[Table P2906.6]
[F 438 – 09]	[Specification for Socket-type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40]	[Table P2906.6]
[F 439 – 12]	[Specification for Socket-type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80]	[Table P2906.6]
[F 441/F 441M – 13]	[Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 8]	[Table P2906.4, Table P2906.5, Table AG101.1]
[F 442/F 442M – 13]	[Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)]	[Table P2906.4, Table P2906.5, Table AG101.1]
[F 477 – 10]	[Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe]	[P2906.17, P3003.13]



<b>ASTM</b>	ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428	
Standard reference number	Title	Referenced in code section number
[F 493 – 10]	[Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings]	[P2906.9.1.2, P2906.9.1.3]
[F 628 – 08 ]	[Specification for Acrylonitrile-butadiene-styrene (ABS) Schedule 40 Plastic Drain, Waste and Vent Pipe with a Cellular Core]	[Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3002.3, P3003.3.2, Table AG101.1]
[F 656 – 10]	[Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings]	[P2906.9.1.4, P3003.9.2]
[F714 – 13]	[Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter]	[Table P3002.2, P3010.4]
F 876 – 13	Specification for Cross-linked Polyethylene (PEX) Tubing	Table M2101.1 [, Table P2906.4, Table P2906.5, Table AG101.1]
F 877 - 11A	Specification for Cross-linked Polyethylene (PEX) Plastic Hot- and Cold-water Distribution Systems	Table M2101.1 [, Table P2906.4, Table P2906.5, Table P2906.6]
[F 891 – 10]	[Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core]	[Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3302.1, Table AG101.1]
F 1281 – 11	Specification for Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Pressure Pipe	Table M2101.1 [, Table P2906.4, Table P2906.5, Table P2906.6, P2506.11.1, Table AG101.1]
F 1282 – 10	Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe	Table M2101.1 [, Table P2906.4, Table P2906.5, Table P2906.6, P2906.11.1, Table AG101.1]
[F 1412 – 09]	[Specification for Polyolefin Pipe and Fittings for Corrosive Waste Drainage]	[Table P3002.1(2), Table P3002.2, Table P3002.3, P3003.11.1]
[F 1488 – 09e1]	[Specification for Coextruded Composite Pipe]	[Table P3002.1(1), Table P3002.1(2), Table P3002.2, Table P3009.11]
F 1807 – 13	Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT) Tubing	Table M2101.1 [, Table P2906.6]
[F 1866 – 07]	[Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings]	[Table P3002.3]
F 1960 – 12	Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing	Table M2101.1 [, Table P2906.6]
F 1970 – 12	Standard Specification for Special Engineered Fittings, Appurtenances or Valves for Use in Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Systems	M2105.5[, Table 2903.9.4]
[F 1974 – 09]	[Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Composite Pressure Pipe]	[P2506.11.1, Table P2906.6]
[F 1986 – 01 (2011)]	[Multilayer Pipe Type 2, Compression Joints for Hot and Cold Drinking Water Systems]	[Table P2906.4, Table P2906.5, Table P2906.6]
[F 2080 – 12]	[Specification for Cold-expansion Fittings with Metal Compression-sleeves for Cross-linked Polyethylene (PEX) Pipe]	[P2906.6]
F 2098 – 08	Standard Specification for Stainless Steel Clamps for Securing SDR9 Cross-linked Polyethylene PEX Tubing to Metal Insert and Plastic Insert Fittings	Table M2101.1 [, Table P2906.6]
[F 2159 – 11]	[Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Polyethylene of Raised Temperature (PE-RT Tubing)]	[P2906.6]

<b>ASTM</b>	ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428	
Standard reference number	Title	Referenced in code section number
[F 2262 – 09]	[Standard Specification for Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Tubing OD Controlled SDR9]	[Table P2906.4, Table P2906.5]
F 2389 – 10	Standard for Pressure-rated Polypropylene (PP) Piping Systems	Table M2105.12.1 [, Table P2906.4, Table 2906.5, Table P2906.6, P2906.10.1, Table AG101.1]
[F 2434 – 09]	[Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Tubing]	[Table P2906.6]
F 2735 – 09	Standard Specification for Plastic Insert Fittings for SDR9 Cross-linked Polyethylene (PEX) and Polyethylene of Raised Temperature (PE-RT) Tubing	Table M2101.1[, Table P2906.6]
F 2769 – 10	Polyethylene or Raised Temperature (PE-RT) Plastic Hot and Cold-Water Tubing and Distribution Systems	Table M2101.1[, Table P2906.4, Table P2906.5, Table P2906.6, Table AG101.1]
[F 2855 – 12]	[Standard Specification for Chlorinated Poly (Vinyl Chloride)/Aluminum/Chlorinated Poly (Vinyl Chloride) (CPVC AL CPVC) Composite Pressure Tubing]	[Table P2906.4, Table P2906.5, Table AG101.1]

**AWS – American Welding Society Amend Referenced Standards:**

<b>AWS</b>	American Welding Society 8669 NW 36 Street, #130 Doral, FL 33166	
Standard reference number	Title	Referenced in code section number
[A5.8M/A5.8 – 2011 ANSI/AWS]	[Specifications for Filler Metals for Brazing and Braze Welding]	[P3003.6.1]
A5.31M/A5.31 – 2012	Specification for Fluxes for Brazing and Braze Welding Edition: 2 <sup>nd</sup>	M2103.3, M2202.2[, P2906.14]

**AWWA – American Water Works Association. Delete all Referenced Standards except the following:**

<b>AWWA</b>	American Water Works Association 6666 West Quincey Avenue Denver, CO 80235	
Standard reference number	Title	Referenced in code section number
C903 – 05	Polyethylene–aluminum–polyethylene & Crosslinked Polyethylene Composite Pressure Pipe, ½ in. (12 mm) through 2 in. (50 mm), for Water Service	Table M2101

**CISPI** Cast Iron Soil Pipe Institute  
5959 Shallowford Road, Suite 419  
Chattanooga, TN 37421

Delete all Referenced Standards.

**CSA – CSA Group.** Delete all Referenced Standards except the following:

<b>CSA</b>	CSA Group 8501 East Pleasant Valley Road Cleveland, OH 44131–5516	
Standard reference number	Title	Referenced in code section number
AAMA/WDMA/CSA 101/I.S.2/A440 – 11	North American Fenestration Standard/Specification for Windows, Doors and Unit Skylights	R308.6.9, R609.3, N1102.4.3
ANSI/CSA America FCI – 2012	Stationary Fuel Cell Power Systems	M1903.1
ASME A17.1/CSA B44 – 2013	Safety Code for Elevators and Escalators	R321.1
CSA 8 – 93	Requirements for Gas Fired Log Lighters for Wood Burning Fireplaces – with revisions through January 1999	G2433.1
B137.9 – 13	Polyethylene/Aluminum/Polyethylene (PE–AL–PE ) Composite Pressure Pipe Systems	Table M2101.1
B137.10 – 13	Cross–linked Polyethylene/Aluminum/Cross–linked Polyethylene (PE–AL–PE) Composite Pressure Pipe System	Table M2101.1
CAN/CSA – 2002	Design and Installation of Earth Energy Systems – First Edition; Update 2: October 2009; Consolidated Reprint 10/2009	Table M2105.4, Table M2105.5
O325 – 07	Construction Sheathing	R503.2.1, R602.1.8, R604.1, R803.2.1
O437 – Series – 93	Standards on OSB and Waferboard (Reaffirmed 2006)	R503.2.1, R602.1.8, R604.1, R803.2.1
UL/CSA/ANCE 60335–2–40 – 2012	Standard for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Motor–compressors\	M1403.1, M1412.1, M1413.1

**GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI.** Add the following St. Louis County Codes, Ordinances and Standards:

<b>GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI</b>		St. Louis County Department of Transportation and Public Works 41 S. Central Ave. St. Louis, MO 63105
Standard reference number	Title	Referenced in code section number
Building Code – Title XI, Chapter 1115 SLCRO 1974, as amended	Building Code	R117, R118, R119, R202
Electrical Code – Title XI, Chapter 1102 SLCRO 1974, as amended	Electrical Code	R102.2.1, R202
Floodplain Management Regulations – Title X, Chapter 1008 SLCRO 1974 as amended	Floodplain Management Regulations	R101.4, Table R301.2(1), R301.2.4, R309.3, R322.1
Mechanical Code – Title XI, Chapter 1108 SLCRO 1974, as amended	Mechanical Code	R102.2.1, R202
Plumbing Code – Title XI, Chapter 1103 SLCRO 1974, as amended	Plumbing Code	R102.2.1, R202
	Private Sewage Disposal Code See Plumbing Code	

<b>GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI</b>		St. Louis County Department of Transportation and Public Works 41 S. Central Ave. St. Louis, MO 63105
Standard reference number	Title	Referenced in code section number
Zoning Ordinance – Title X, Chapter 1003 SLCRO 1974 as amended	Zoning Ordinance	R101.4, R102.2.2, R202, R301.2.4, R309.3, R322.1

**IAPMO IAPMO**

4755 E. Philadelphia Street  
Ontario, CA 91761

Delete all Referenced Standards.

**ICC** - International Code Council. Amend Referenced Standards. (Standards not amended by this code amendment and shown in the code as published are adopted without amendments)

<b>ICC</b>	International Code Council, Inc. 500 New Jersey Avenue, NW 6 <sup>th</sup> Floor Washington, DC 20001	
Standard reference number	Title	Referenced in code section number
IBC – 15	International Building Code	R101.2, R101.4, R102.7, R103.1, R104.1, R105.1, R107.1, R108.1, R109.1, R110.1, R111.1, R112.1, R113.1, R114.1, R115.1, R116.1, R201.3, R202, R301.1, R301.1.3, R301.2.2.1.1, R301.2.2.1.2, R301.2.2.4, R301.3, R308.5, R320.1, R320.1.1, R403.1.8, R602.13.5, Table R602.10.3(3), Table R606.12.2.1, R609.2, R802.1.5.4, R905.10.3, N1107.4, G2402.3
IMC – 15	International Mechanical Code	R101.4, R201.3, R202, Table R301.2(1), N1103.3.2, G2402.3
IPC – 15	International Plumbing Code	R101.4, R201.3, R202, R306.6, R306.7, R307.1, R322.1.7, R903.4.1, G2402.3, P2501.1, P2601.1, P2701.1, P2801.1, P2901.1, P3001.1, P3101.1, P3201.1, P3301.1
IPMC – 15	International Property Maintenance Code	R101.4, R102.7, R201.3
[IPSDC – 15]	[International Private Sewage Disposal Code]	[R322.1.7]

**MSS** – Manufacturers Standardization Society of the Valve and Fittings Industry. Delete all Referenced Standards except the following:

<b>MSS</b>	Manufacturers Standardization Society of the Valve and Fittings Industry 127 Park Street, Northeast Vienna, VA 22180	
Standard reference number	Title	Referenced in code section number
SP-58 – 09	Pipe Hangers and Supports – Materials, Design, Manufacture, Selection, Application and Installation	G2418.2

**NFPA** - National Fire Protection Association. Delete Referenced Standards as shown below. (Standards not deleted by this amendment and shown in the code as published are adopted without amendments)

<b>NFPA</b>	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02269	
Standard reference number	Title	Referenced in code section number
13D – 13	Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes	R302.1, Table R302.1(2), R302.2, R302.13, R309.5, R313.1.1, R313.2.1, R325.5
70 – 14	National Electrical Code	R101.4, R201.3, R302.2, R324.3, E3401.1, E3501.1, E3601.1, E3701.1, E3801.1, E3901.1, E4001.1, E4101.1, E4201.1, E4301.1

**NSF** – NSF International. Delete all Referenced Standards except the following:

<b>NSF</b>	NSF International 789 N Dixboro Ann Arbor, MI 48105	
Standard reference number	Title	Referenced in code section number
14 – 2011	Plastics Piping System Components and Related Materials	M1301.4
358–1 – 2011	Polyethylene Pipe and Fittings for Water-based Ground Source “Geothermal” Heat Pump Systems	M2105.4, M2105.5
358–2 – 2012	Polypropylene Pipe and Fittings for Water-based Ground Source “Geothermal” Heat Pump Systems	M2105.5

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**SECTION 3.** Title XI SLCRO 1974, as amended "Public Works and Building Regulations" is hereby amended by repealing and re-enacting Chapter 1117 "Existing Building Code," which shall read as follows:

**TITLE XI  
PUBLIC WORKS AND BUILDING REGULATIONS**

**CHAPTER 1117  
EXISTING BUILDING CODE**

**1117.010 Short Title.** This chapter shall be known and may be cited as the "Existing Building Code".

**1117.020 Existing Building Code Adopted.** --That a certain document, three copies of which are on file in the office of the Director of the St. Louis County Department of Transportation and Public Works and in the office of the Administrative Director, being marked and designated as the International Existing Building Code, 2015 edition, including "APPENDIX A – GUIDELINES FOR SEISMIC RETROFIT OF EXISTING BUILDINGS (GSREB)" as published by the International Code Council, be and is hereby adopted as the Existing Building Code of St. Louis County, in the State of Missouri, for regulating and governing the repair, alteration, change of occupancy, addition, and relocation of existing buildings, including historic buildings, as herein provided; providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said International Existing Building Code on file in the office of the Director of the Department of Transportation and Public Works and in the office of the Administrative Director are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in this ordinance.

**1117.030 General Administrative Definitions.** --Throughout the International Existing Building Code, 2015 edition, whenever the terms "jurisdiction" or "local jurisdiction" appear it shall be deemed to mean "St. Louis County," likewise whenever the term "department of building safety" appears it shall be deemed to mean "St. Louis County Department of Transportation and Public Works," wherever the terms "Code Official" or "building official" appear it shall mean the Director of the Department of Transportation and Public Works or the Director's duly authorized representative and whenever the terms "code," "this code," or "Existing Building Code" appear it shall be deemed to mean the International Existing Building Code, 2015 edition, as adopted herein with the additions, deletions and changes as prescribed in this ordinance.

**1117.040 References to Other St. Louis County Adopted Codes.** Throughout this ordinance and the International Existing Building Code, 2015 edition, wherever a reference appears to the "International Building Code" it shall mean the "Building Code" as adopted by Chapter 1115, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Residential Code" it shall mean the "Residential Code" as adopted by Chapter 1116, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Mechanical Code" it shall mean the "Mechanical Code" as adopted by Chapter 1108, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Fuel Gas Code" it shall mean the "Mechanical Code" as adopted by Chapter 1108, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to "NFPA 70" it shall mean the "Electrical Code" as adopted by Chapter 1102, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Plumbing Code" it shall mean the "Plumbing Code" as adopted by Chapter 1103, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Private Sewage Disposal Code" it shall mean the "Plumbing Code" as adopted by Chapter 1103, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Property Maintenance Code" it shall mean the "Property Maintenance Code" as adopted by Chapter 1110, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein.

#### **1117.050 Contracting with Municipalities and Fire Protection Districts for Code Enforcement Services.**

1. The building official, with the approval of the County Executive, is hereby authorized to contract with municipalities and fire protection districts within St. Louis County, to provide appropriate enforcement of this code and further to collect fees for applicable permits and inspections issued or made pursuant to such contracts. Contracts shall be approved by the building official and the County Executive, and shall be approved as to legal form by the County Counselor. No contract shall be entered into until the municipality or fire protection district desiring to contract with St. Louis County for the enforcement of this code shall first have duly adopted appropriate legislation authorizing said contract (a certified copy to be attached to and made a part of the contract) and duly adopted a code identical in substance to this code.
2. The building official is authorized to contract with fire protection districts in St. Louis County to provide code enforcement services with respect to building construction and application of commercial and multi-family fire codes adopted by the fire protection districts, including administration, application processing, plan review, permit issuance, and inspections and for County to either charge the fire protection districts fees or collect fees for applicable permits and inspections issued or made pursuant to such contracts as set out in Chapter 1100 SLCRO, as amended, to cover the costs of providing such code enforcement services. When the contract is for only certain of the services described in this section, the building official is authorized to pro-rate the fees set out in Chapter 1100 to cover the costs of performing the service or services. The contract may further provide for the fire protection district, at its option, to refer for prosecution in St. Louis County Municipal Court, violations of such fire protection district's codes as are enforced within the fire protection district by the County; for the County to retain the proceeds of fines and costs assessed in such prosecutions; and for such other terms and conditions as are approved by the County Counselor.
3. The building official is authorized to contract with municipalities in St. Louis County to provide temporary code enforcement services with respect to building construction and application of the building codes adopted by the County or municipality, including administration, application processing, plan review, permit issuance, and inspections and for County to either charge the municipality fees or collect fees for applicable permits and inspections issued or made pursuant to such contracts as set out in Chapter 1100 SLCRO, as amended, to cover the costs of providing such temporary code enforcement services. When the contract is for only certain of the services described in this section, the building official is authorized to pro-rate the fees set out in Chapter 1100 to cover the costs of performing the service or services. The term of the temporary contract shall not exceed twelve (12) months except that the contract may be extended by the building official when: a) the services are related to a specific project or projects that are still in progress, or b) the municipality commits in writing to transitioning to a long term contract with the County as set out in Section 1117.050(1).

#### **1117.051 Municipal Zoning Approval for Buildings and Structures by Contracting Municipalities. --**

All plans for the construction or use of buildings and structures regulated by this code shall be reviewed and approved by the contracting municipality for compliance with the zoning or other local regulatory ordinances or provisions prior to issuance of a permit by the County.

**1117.052 Exterior Fire Protection Features Approval by Contracting Fire Protection Districts. --**All plans for the construction of buildings and structures within a contracting fire protection district shall be reviewed and approved for compliance with exterior fire protection features prior to issuance of a building permit by the County.

**1117.060 Code Review Committee Assignments. --**The Building Code Review Committee, as established in the Building Code, shall be responsible for considering updates and changes to this code.



The Building Code Review Committee shall coordinate with the Mechanical Code Review Committee, the Electrical Code Review Committee and the Plumbing Code Review Committee as these committees are defined in making its recommendation to the Building Commission.

**1117.101 Amendments to the International Existing Building Code, 2015 Edition - Chapter 1 Scope and Administration.** --The following provisions amend Chapter 1 Scope and Administration in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**101.1 Title.** These regulations shall be known as the Existing Building Code, hereinafter referred to as "this code".

**101.2 Scope.** The provisions of the International Existing Building Code shall apply to the repair, alteration, change of occupancy, addition, and relocation of existing buildings. A building or portion of a building that has not been previously occupied or used for its intended purpose shall comply with the provisions of the International Building Code for new construction. Repairs, alterations, change of occupancy, existing buildings to which additions are made, historic buildings, and relocated buildings complying with the provisions of the International Building Code, International Mechanical Code, International Plumbing Code and NFPA 70 as applicable shall be considered in compliance with the provisions of this code. The registered design professional shall declare on the construction documents the codes used in the design.

**Exception:** Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress, and their accessory structures not more than three stories above grade plane in height, shall comply with the International Residential Code.

**101.6 Appendices.** The building official is authorized to require rehabilitation and retrofit of buildings, structures, or individual structural members in accordance with the appendices of this code as adopted by St. Louis County. When any of such appendices is specifically referenced in the text of this code, it shall be a part of this code.

**102.2.1 Licensing.** Applicable licensing provisions of the Mechanical Code, the Electrical Code and the Plumbing Code shall apply to work regulated under this code.

**102.2.2 Compliance with County and Municipal Zoning and other applicable codes and ordinances.** Subject to the provisions of this code, neither the granting of a permit, nor the approval of construction documents, nor inspections made by the building official, or the building official's authorized representative, during the erection, movement or demolition of a building or structure, or any alteration or addition thereto, shall in any way relieve the owner or tenant of such building, structure or property from complying with the requirements of this code, the Zoning Ordinance, or the Zoning ordinance or other applicable laws of any municipality in St. Louis County.

**102.4.3 Applicability of St. Louis County, Missouri codes and ordinances.** Throughout this code, whenever the terms NFPA 70, International Plumbing Code, International Mechanical Code, International Property Maintenance Code, International Building Code, International Residential Code, International Existing Building Code, Zoning Ordinance or Floodplain Management Regulations Ordinance appears it shall be deemed to mean the codes adopted by St. Louis County as listed in Chapter 14 Referenced Standards, of this code and as identified in Title XI, Chapters 1102, 1103, 1108, 1110, 1115, 1116, 1117, and Title X, Chapters 1003 and 1008 SLCRO 1974, as amended, respectively.

**102.4.4 Standards and guidelines for structural evaluation.** The building official shall allow structural evaluation, condition assessment, and rehabilitation of buildings, structures, or individual structural

members based on this code's appendix chapters, referenced standards, guidelines, or other approved standards and procedures.

**102.5.1 Additions, alterations or repairs.** Additions, alterations or repairs to any structure shall conform to that required for a new structure without requiring the existing structure to comply with all of the requirements of this code, unless otherwise stated. Additions, alterations or repairs shall not cause an existing structure to become unsafe or adversely affect the performance of the building.

## **SECTION 103 DEPARTMENT OF BUILDING SAFETY**

**103.1 Creation of enforcement agency.** SECTION 103 DEPARTMENT OF BUILDING SAFETY (Sections 103.1 through 103.3) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 103 DEPARTMENT OF BUILDING SAFETY in the International Building Code.

## **SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL**

**104.1 General.** SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL (Sections 104.1 through 104.11.1) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL in the International Building Code.

## **SECTION 105 PERMITS**

**105.1 Required.** SECTION 105 PERMITS (Sections 105.1 through 105.7) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 105 PERMITS in the International Building Code.

## **SECTION 106 Reserved for future use.**

## **SECTION 107 CONSTRUCTION DOCUMENTS**

**107.1 General.** SECTION 106 CONSTRUCTION DOCUMENTS (Sections 106.1 through 106.6) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 107 CONSTRUCTION DOCUMENTS in the International Building Code.

## **SECTION 108 TEMPORARY STRUCTURES AND USES**

**108.1 General.** SECTION 107 TEMPORARY STRUCTURES AND USES (Sections 107.1 through 107.4) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 108 TEMPORARY STRUCTURES AND USES in the International Building Code.

## **SECTION 109 FEES**

**109.1 Payment of Fees.** SECTION 108 FEES (Sections 108.1 through 108.6) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 109 FEES in the International Building Code.

## **SECTION 110 INSPECTIONS**

**110.1 General.** SECTION 109 INSPECTIONS (Sections 109.1 through 109.6) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 110 INSPECTIONS in the International Building Code.

## **SECTION 111 CERTIFICATE OF OCCUPANCY**

**111.1 Use and occupancy.** SECTION 110 CERTIFICATE OF OCCUPANCY (Sections 110.1 through 110.4) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 111 CERTIFICATE OF OCCUPANCY in the International Building Code.

## **SECTION 112 SERVICE UTILITIES**

**112.1 Connection of service utilities.** SECTION 111 SERVICE UTILITIES (Sections 111.1 through 111.3) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 112 SERVICE UTILITIES in the International Building Code.

## **SECTION 113 BOARD OF APPEALS**

**113.1 General.** SECTION 112 BOARD OF APPEALS (Sections 112.1 through 112.3) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 113 BOARD OF APPEALS in the International Building Code.

## **SECTION 114 VIOLATIONS**

**114.1 Unlawful acts.** SECTION 113 VIOLATIONS (Sections 113.1 through 113.4) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 114 VIOLATIONS in the International Building Code.

## **SECTION 115 STOP WORK ORDER**

**115.1 Authority.** SECTION 114 STOP WORK ORDER (Sections 114.1 through 114.3) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 115 STOP WORK ORDER in the International Building Code.

## **SECTION 116 UNSAFE STRUCTURES AND EQUIPMENT**

**116.1 Conditions.** SECTION 115 UNSAFE BUILDINGS AND EQUIPMENT (Sections 115.1 through 115.5) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 116 UNSAFE STRUCTURES AND EQUIPMENT in the International Building Code.

## **SECTION 117 EMERGENCY MEASURES**

**117.1 Imminent danger.** SECTION 116 EMERGENCY MEASURES (Sections 116.1 through 116.6) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 117 EMERGENCY MEASURES in the Building Code.

## **SECTION 118 UNFIT BUILDINGS AND STRUCTURES**

**118.1 General.** SECTION 117 DEMOLITION (Sections 117.1 through 117.4) in the International Existing Building Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 118 UNFIT BUILDINGS AND STRUCTURES in the Building Code.

## **SECTION 119 DEMOLITION OF STRUCTURES**

**119.1 Demolition of structures.** SECTION 119 DEMOLITION OF STRUCTURES (Sections 119.1 through 119.3) of the Building Code is adopted as part of this code.

**117.102 Amendments to the International Existing Building Code, 2015 Edition - Chapter 2 Definitions.** --The following provisions amend Chapter 2 Definitions in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**201.3 Terms defined in other codes.** Where terms are not defined in this code and are defined in the International Building Code, International Residential Code, International Property Maintenance Code, International Mechanical Code, NFPA 70 International Plumbing Code, the International Energy Conservation Code or the International Fire Code, such terms shall have the meanings ascribed to them as in those codes.

## **SECTION 202 GENERAL DEFINITIONS**

The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein. Where a word or term is not defined in this code, it shall have such definition as may be prescribed for it in The International Building Code, 2015 edition.

**Board of Appeals.** The St. Louis County Building Commission created in Article IV, Section 4.330 of the St. Louis County Charter.

**Building Code Official.** The Code Official as defined herein.

**Building Code Review Committee.** The Committee established by, and acting in accordance with the Building Code, SLCRO 1974, Title XI, Chapter 1115, as amended.

**Building Commission.** The St. Louis County Building Commission established in Article IV, Section 4.330 of the St. Louis County Charter.

**Building Official.** The Code Official as defined herein.

**Code Official.** The Director of the Department of Transportation and Public Works or the Director's duly authorized representative.

**Dangerous.** Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, partially collapsed, has moved off its foundation or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads.
3. The building or structure or any portion thereof is likely to collapse partially or completely because:
  - 3.1. Of dilapidation, deterioration or decay;
  - 3.2. Of construction in violation of this code;
  - 3.3. The soil supporting the foundation is unstable, moved or removed;
  - 3.4. The foundation is inadequate, decayed or deteriorated; or
  - 3.5. It is damaged due to fire, earthquake, wind or flood; or any other similar cause.
4. The exterior walls or other vertical structural member 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.
5. Any building or structure with substantial structural damage.

**Disaster.** A disaster shall include but not necessarily be limited to flood, windstorm, tornado, severe storm, earthquake, bomb blast, explosion or similar natural or man-made type event. The building official shall make the determination whether an event shall be declared a disaster.

**Electrical Code Review Committee.** The Committee established by, and acting in accordance with the Electrical Code, SLCRO 1974, Title XI, Chapter 1102, as amended.

**Flood Hazard Area.** An area that has been determined to be prone to flooding in accordance with Section 1612 of the International Building Code or Section R322 of International Residential Code as applicable.

**Mechanical Code Review Committee.** The Committee established by, and acting in accordance with the Mechanical Code, SLCRO 1974, Title XI, Chapter 1108, as amended.

**Plumbing Code Review Committee.** The Committee established by, and acting in accordance with the Plumbing Code, SLCRO 1974, Title XI, Chapter 1103, as amended.

**Repair.** The reconstruction or renewal of any part of an existing building for the purpose of its maintenance or to correct damage. Repair work 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 fire suppression 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.

**Zoning Ordinance.** St. Louis County Zoning Ordinance Title X, Chapter 1003 SLCRO 1974 as amended.

### **1117.106 Amendments to the International Existing Building Code, 2015 Edition - Chapter 6**

**Repairs.** --The following provisions amend Chapter 6 Repairs in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**608.2 Mechanical draft systems for manually fired appliances and fireplaces.** A mechanical draft system shall be permitted to be used with manually fired appliances and fireplaces where such a system complies with all of the following requirements:

1. The mechanical draft device shall be listed and installed in accordance with the manufacturer's installation instructions.
2. A device shall be installed that produces visible and audible warning upon failure of the mechanical draft device or loss of electrical power at any time that the mechanical draft device is turned on. This device shall be equipped with a battery backup if it receives power from the building wiring.
3. A smoke detector shall be installed in the room with the appliance or fireplace. This device shall be equipped with a battery backup if it receives power from the building wiring.
4. Mechanical draft systems shall be installed in accordance with the International Mechanical Code.

### **1117.107 Amendments to the International Existing Building Code, 2015 Edition - Chapter 7**

**Alterations – Level 1.** --The following provisions amend Chapter 7 Alterations – Level 1 in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**701.1.1 Elevators and escalators.** Existing elevators and escalators not otherwise being altered shall conform to ASME A17.3.

**702.6 Materials and methods.** All new work shall comply with materials and methods requirements in the NFPA 70, International Building Code, International Residential Code, International Energy Conservation Code, International Mechanical Code, and International Plumbing Code, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

## **SECTION 709 MECHANICAL**

**709.1 Mechanical requirements.** If mechanical equipment is being replaced with a like piece of equipment of the same capacity, load calculations are not required to be submitted with the permit application. If the equipment to be replaced has a reduced capacity or a greater capacity, load calculations must be submitted with the permit application.

**709.2 Mechanical equipment isolation.** The requirements of the International Mechanical Code shall apply to equipment within the scope of Alterations Level 1, including the installation of shutoff valves, stop valves, relief valves, safety valves, unions and/or other devices as required for the specific equipment being installed.

**709.3 Mechanical scope.** In cases where the work area is less than 50 percent of the aggregate area of the building, Level 3 alterations shall apply to only the mechanical systems whenever the mechanical work exceeds 50 percent of the effected HVAC system's distributed capacity.

**1117.108 Amendments to the International Existing Building Code, 2015 Edition - Chapter 8 Alterations – Level 2.** --The following provisions amend Chapter 8 Alterations – Level 2 in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**805.2 General.** The means of egress shall comply with the requirements of this section.

**Exception:** Means of egress conforming to the requirements of the building code under which the building was constructed shall be considered compliant means of egress if, in the opinion of the building official, they do not constitute a distinct hazard to life.

**805.5.5 Existing non-rated corridor walls in occupancy classification B.** New non-rated openings in corridors in existing buildings may be protected with a water curtain in lieu of an approved protective device where the following features are provided:

1. The corridor walls and ceiling of the tenant space are constructed to limit the transfer of smoke into the corridor.
2. Corridor doors shall provide an effective barrier to limit the transfer of smoke.
3. Sprinkler heads shall be placed within 18 inches (457 mm) of the corridor wall at a spacing of not more than 6 feet (1829 mm) on-center on the tenant side of the wall.

## **SECTION 809 MECHANICAL**

**809.1 Reconfigured or converted spaces.** All reconfigured spaces intended for occupancy and all spaces converted to habitable or occupiable space in any work area shall be provided with natural or mechanical ventilation in accordance with the International Mechanical Code. The physical limits of the reconfigured or converted space are defined by the perimeter walls, the floor slab, and the roof/floor deck above. This definition applies to issues of ventilation, unsafe conditions, minor alterations to mechanical equipment and/or systems, and new mechanical equipment and systems.

**809.1.1 Ventilation requirements.** If the occupant load of the reconfigured or converted space is similar to the occupant load of the original design and there is no change in occupant classification, then the existing ventilation systems may be utilized. If there is a change in occupant classification or occupant load, the ventilation of the reconfigured or converted space shall comply with the International Mechanical Code.

**809.1.2 New mechanical equipment and/or systems.** New mechanical systems and/or equipment, which will be incorporated into the reconfigured or converted space, shall comply with the International Mechanical Code.

**809.1.3 Unsafe conditions.** If the building official determines there are unsafe conditions or code violations, these must be abated and the condition brought into compliance with the International Mechanical Code.

**809.1.4 Minor alterations/system extensions.** If the scope of the mechanical work is limited to minor alterations and/or extensions of the existing systems within the reconfigured or converted

space, then that work need only conform to the International Mechanical Code under which the original work was installed. If the mechanical system is extended into areas not previously served by that system then system load calculations shall be provided.

**809.2 Altered existing systems.** – Delete and replace as follows:

**809.2 Local exhaust.** All newly introduced devices, equipment, or operations that produce airborne particulate matter, odors, fumes, vapor, combustion products, gaseous contaminants, pathogenic and allergenic organisms, and microbial contaminants in such quantities as to affect adversely or impair health or cause discomfort to occupants shall be provided with local exhaust.

**1117.109 Amendments to the International Existing Building Code, 2015 Edition - Chapter 9 Alterations – Level 3.** --The following provisions amend Chapter 9 Alterations – Level 3 in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

## **SECTION 909 MECHANICAL**

**909.1 Mechanical requirements.** If the existing ventilation system(s) conform to the ventilation requirements of the International Mechanical Code, they may be re-utilized for the alteration. If not, the mechanical equipment and systems shall be modified, upgraded or replaced by equipment and systems that conform to the requirements of the International Mechanical Code.

**1117.110 Amendments to the International Existing Building Code, 2015 Edition - Chapter 10 Change of Occupancy.** --The following provisions amend Chapter 10 Change of Occupancy in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1004.1 General.** Fire protection requirements of Section 1012 shall apply where:

1. A building or portions thereof undergo a change of occupancy classification; or
2. Where there is a change of occupancy within a space where there is a different fire protection system threshold requirement in Chapter 9 of the International Building Code; or
3. Is converted to a nightclub.

## **Section 1009 Mechanical**

**1009.1 Mechanical requirements.** Where the occupancy of an existing building or part of an existing building is changed, the new occupancy shall be subject to the applicable requirements of the International Mechanical Code.

**1009.1.1 Ventilation requirements.** If the existing mechanical equipment and systems conform to the requirements of the International Mechanical Code for the new occupancy classification and occupant load, the existing mechanical equipment and systems may be re-used.



**1009.1.2 New mechanical equipment and/or systems.** New mechanical systems and/or equipment, which will be incorporated into the areas and/or building effected by the change in occupancy, shall comply with the International Mechanical Code.

**1009.1.3 Unsafe conditions.** If the building official determines there are unsafe conditions or code violations these unsafe conditions or violations must be abated and the condition brought into compliance with the International Mechanical Code.

**1117.114 Amendments to the International Existing Building Code, 2015 Edition - Chapter 14 Performance Compliance Methods.** --The following provisions amend Chapter 14 Performance Compliance Methods in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1401.2 Applicability.** Structures existing prior to December 19, 1951, in which there is work involving additions, alterations, or changes of occupancy shall be made to conform to the requirements of this chapter or the provisions of Chapters 5 through 13. The provisions of Sections 1401.2.1 through 1401.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, I-2, M, R, and S. These provisions shall not apply to buildings with occupancies in Group H or I-1, I-3 or I-4.

**1401.3.1 Hazards.** Where the building official determines that an unsafe condition exists as provided for in Section 116, such unsafe condition shall be abated in accordance with Section 116.

**1117.115 Amendments to the International Existing Building Code, 2015 Edition - Chapter 15 Construction Safeguards.** --The following provisions amend Chapter 15 Construction Safeguards in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**1502.1 Protection required.** Adjoining public and private property shall be protected from damage during construction and demolition work. The adjoining buildings and properties must be protected by the person causing the work to be done. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water run-off and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the owners of adjoining buildings and properties advising them that the excavation is to be made. Said notification shall be delivered not less than 30 days prior to the scheduled starting date of the excavation.

**1117.116 Amendments to the International Existing Building Code, 2015 Edition - Chapter 16 Referenced Standards.** --The following provisions amend Chapter 16 Referenced Standards in the International Existing Building Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

Amend CHAPTER 16 - Referenced Standards - Sections not shown herein as being modified are adopted without amendments.

**ASME** – American Society of Mechanical Engineers. Amend Referenced Standards (Standards not amended by this code amendment and shown in the code as published are adopted without amendments.):

<b>ASME</b>	American Society of Mechanical Engineers Three Park Avenue New York, NY 10016-5990	
Standard reference number	Title	Referenced in code section number
A17.3-2008	Safety Code for existing Elevators and Escalators	701.1.1, 902.1.2

**GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI.** Add the following St. Louis County Codes, Ordinances and Standards.

<b>GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI</b>	St. Louis County Department of Transportation and Public Works 41 S. Central Ave. St. Louis, MO 63105	
Standard reference number	Title	Referenced in code section number
Building Code – Title XI, Chapter 1115 SLCRO 1974, as amended	Building Code	117, 118, 119, 202, 805.2
Electrical Code – Title XI, Chapter 1102 SLCRO 1974, as amended	Electrical Code	102.2.1, 202
Floodplain Management Regulations – Title X, Chapter 1008 SLCRO 1974 as amended	Floodplain Management Regulations	102.4.3
Mechanical Code – Title XI, Chapter 1108 SLCRO 1974, as amended	Mechanical Code	102.2.1, 202
Plumbing Code – Title XI, Chapter 1103 SLCRO 1974, as amended	Plumbing Code	102.2.1, 202
Zoning Ordinance – Title X, Chapter 1003 SLCRO 1974 as amended	Zoning Ordinance	102.2.2, 102.4.3, 202

**ICC - International Code Council.** Amend Referenced Standards. (Standards not amended by this code amendment and shown in the code as published are adopted without amendments.):

<b>ICC</b>	International Code Council, Inc. 500 New Jersey Ave., NW 6 <sup>th</sup> Floor Washington, DC 20001	
Standard reference number	Title	Referenced in code section number
IBC – 15	International Building Code®	101.2, 101.4.1, 102.4.3, 103.1, 104.1, 105.1, 107.1, 108.1, 109.1, 110.1, 111.1, 112.1, 113.1, 114.1, 115.1, 116.1, 117.1, 118.1, 119.1, 201.3, 202, 301.1, 301.1.4, 301.1.4.1, 301.1.4.2, 401.2.3, 402.1, 402.2, 402.3, 402.3.1, 402.4, 403.1, 403.2, 403.3, 403.3.1, 403.4, 403.4.1, 403.8, 403.9, 404.2.1, 404.2.3, 404.3, 404.4, 404.5, 406.3, 407.1, 407.3, 407.4, 408.3, 410.4, 410.4.2, 410.6, 410.8.1, 410.8.4, 410.8.5, 410.8.6, 410.8.7, 410.8.8, 410.8.10, 410.8.14, 410.9, 410.9.3, 410.9.4, 501.3, 601.3, 602.3, 606.1, 606.2.2.1, 606.2.2.3, 606.2.3, 606.2.4, 701.2, 701.3, 702.1, 702.2,

<b>ICC</b>	International Code Council, Inc. 500 New Jersey Ave., NW 6 <sup>th</sup> Floor Washington, DC 20001	
Standard reference number	Title	Referenced in code section number
		702.3, 702.4, 702.5, 702.6, 705.1, 705.1.1, 705.1.4, 705.1.7, 705.1.8, 705.1.9, 706.1, 706.3, 706.3.2, 707.2, 707.3.1, 707.3.2, 801.3, 802.1, 803.2.1, 803.2.3, 803.3, 803.4, 803.5.2, 803.6, 804.1.1, 804.2, 804.2.2, 804.2.3, 804.2.4, 804.3, 805.3.1, 805.3.1.2.1, 805.4.3, 805.5, 805.6, 805.7.1, 805.8.1, 805.9.2, 805.10.1.1, 805.10.1.2, 805.10.1.3, 805.10.2, 805.11.2, 806.2, 806.3, 806.4, 806.5, 807.2, 807.4, 807.5, 807.6, 904.1.2, 904.1.3, 904.2, 904.2.1, 904.2.2, 905.2, 905.3, 906.2, 907.4, 907.4.2, 1001.3, 1002.1, 1002.2, 1004.1, 1007.1, 1007.2, 1007.3.1, 1011.1, 1012.1.1.1, 1012.1.1.2, 1012.2.1, 1012.2.2, 1012.3, 1012.4.1, 1012.4.2, 1012.4.3, 1012.5.1, 1012.5.1.1, 1012.5.3, 1012.6.1, 1012.6.3, 1012.7.1, 1012.7.2, 1012.7.3, 1012.7.5, 1012.8, 1012.8.2, 1102.1, 1102.2, 1102.3, 1103.1, 1103.2, 1103.3, 1103.3.1, 1103.3.2, 1103.4, 1103.5, 1201.4, 1202.3, 1202.4, 1203.12, 1204.1, 1204.1.4, 1205.2, 1205.9, 1205.15, 1301.2, 1302.1, 1302.2, 1302.2.1, 1302.3, 1302.4, 1302.5, 1302.6, 1401.2.2, 1401.2.3, 1401.2.4, 1401.3.3, 1401.4.1, 1401.6.1, 1401.6.1.1, 1401.6.2, 1401.6.2.1, 1401.6.3.1, 1401.6.3.2, 1401.6.4.1, 1401.6.5, 1401.6.5.1, 1401.6.6, 1401.6.7.1, 1401.6.8, 1401.6.9, 1401.6.9.1, 1401.6.10, 1401.6.10.1, 1401.6.11, 1406.11.1, 1401.6.12.1, 1401.6.13, 1401.6.15.1, 1401.6.16.1, 1401.6.17, 1401.6.17.1, 1401.6.18, 1401.6.18.1, 1401.6.19, Table 1401.6.19, 1501.5, 1501.6.1, 1501.6.4.1, 1501.6.7, 1506.1, 1506.3
IMC – 15	International Mechanical Code®	101.2, 102.4.3, 201.3, 301.2, 608.2, 702.6, 809.1, 809.1.1, 809.1.2, 809.1.3, 902.1.1, 902.2.1, 1009.1, 1401.6.7.1, 1401.6.8, 1401.6.8.1
IPC – 15	International Plumbing Code®	101.2, 102.4.3, 201.3, 301.2, 609.1, 702.6, 810.1, 1010.1, 1010.2, 1010.3, 1010.5, 1501.7
IPMC – 15	International Property Maintenance Code®	101.4.2, 102.4.3, 201.3, 301.2, 1301.2, 1401.3.2
IRC – 15	International Residential Code®	101.2, 101.4.1, 102.4.3, 201.3, 202, 301.2, 402.2, 403.2, 404.5, 408.3, 602.3, 701.3, 702.5, 702.6, 706.2, 707.2, 707.4, 707.5, 708.1, 807.4, 808.3, 811.1, 907.4, 908.1, 1103.2, 1103.3, 1103.4, 1104.1, 1106.1, 1201.4, 1301.2, 1302.1, 1302.2, 1302.2.1, 1302.3, 1302.4, 1302.5, 1302.6, 1401.2.2, 1401.2.3, 1401.3.3

**NFPA - National Fire Protection Association. Amend Referenced Standards:**

<b>NFPA</b>	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02169-7471	
Standard reference number	Title	Referenced in code section number
NFPA 13R – 13	Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height	804.2.5

<b>NFPA</b>	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02169-7471	
Standard reference number	Title	Referenced in code section number
NFPA 70 – 14	National Electric Code	101.2, 102.4.3, 107.3, 201.3, 301.2, 607.1.1, 607.1.2, 607.1.3, 607.1.4, 607.1.5, 702.6, 808.1, 808.3.4, 808.3.7, 1008.1, 1008.2, 1008.3, 1008.4
NFPA 72 – 13	National Fire Alarm Code	804.2.5, 804.4
NFPA 99 – 15	Health Care Facilities	607.1.4

**SECTION 4.** Title XI SLCRO 1974, as amended "Public Works and Building Regulations" is hereby amended by enacting Chapter 1118 "Swimming Pool and Spa Code," which shall read as follows:

**TITLE XI  
PUBLIC WORKS AND BUILDING REGULATIONS**

**CHAPTER 1118  
SWIMMING POOL AND SPA CODE**

**1118.010 Short Title.** This chapter shall be known and may be cited as the "Swimming Pool and Spa Code".

**1118.020 Swimming Pool and Spa Code Adopted.** --That a certain document, three copies of which are on file in the office of the Director of the St. Louis County Department of Transportation and Public Works and in the office of the Administrative Director, being marked and designated as the International Swimming Pool and Spa Code, 2015 edition, as published by the International Code Council, be and is hereby adopted as the Swimming Pool and Spa Code of St. Louis County, in the State of Missouri, for regulating and governing the construction, alteration, replacement, repair, equipment, location, and demolition of swimming pools and spas, as herein provided; providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said International Swimming Pool and Spa Code on file in the office of the Director of the Department of Transportation and Public Works and in the office of the Administrative Director are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in this ordinance.

**1118.030 General Administrative Definitions.** --Throughout the International Swimming Pool and Spa Code, 2015 edition, whenever the terms "jurisdiction" or "local jurisdiction" appear it shall be deemed to mean "St. Louis County," likewise whenever the term "department of building safety" appears it shall be deemed to mean "St. Louis County Department of Transportation and Public Works," wherever the terms "Code Official" or "building official" appear it shall mean the Director of the Department of Transportation and Public Works or the Director's duly authorized representative and whenever the terms "code," "this code," or "Swimming Pool and Spa Code" appear it shall be deemed to mean the International Swimming Pool and Spa Code, 2015 edition, as adopted herein with the additions, deletions and changes as prescribed in this ordinance.

**1118.040 References to Other St. Louis County Adopted Codes.** Throughout this ordinance and the International Swimming Pool and Spa Code, 2015 edition, wherever a reference appears to the "International Building Code" it shall mean the "Building Code" as adopted by Chapter 1115, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Residential Code" it shall mean the "Residential Code" as adopted by Chapter 1116, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Existing Building Code" it shall mean the "Existing Building Code" as adopted by Chapter 1117, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Mechanical Code" it shall mean the "Mechanical Code" as adopted by Chapter 1108, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Fuel Gas Code" it shall mean the "Mechanical Code" as adopted by Chapter 1108, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to "NFPA 70" it shall mean the "Electrical Code" as adopted by Chapter 1102, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Plumbing Code" it shall mean the "Plumbing Code" as adopted by Chapter 1103, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Private Sewage Disposal Code" it shall mean the "Plumbing Code" as adopted by Chapter 1103, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein. Wherever a reference appears to the "International Property Maintenance Code" it shall mean the

"Property Maintenance Code" as adopted by Chapter 1110, SLCRO 1974 as amended with the additions, deletions and changes prescribed therein.

**1118.050 Contracting with Municipalities and Fire Protection Districts for Code Enforcement Services.**

1. The building official, with the approval of the County Executive, is hereby authorized to contract with municipalities and fire protection districts within St. Louis County, to provide appropriate enforcement of this code and further to collect fees for applicable permits and inspections issued or made pursuant to such contracts. Contracts shall be approved by the building official and the County Executive, and shall be approved as to legal form by the County Counselor. No contract shall be entered into until the municipality or fire protection district desiring to contract with St. Louis County for the enforcement of this code shall first have duly adopted appropriate legislation authorizing said contract (a certified copy to be attached to and made a part of the contract) and duly adopted a code identical in substance to this code.
2. The building official is authorized to contract with municipalities in St. Louis County to provide temporary code enforcement services with respect to building construction and application of the building codes adopted by the County or municipality, including administration, application processing, plan review, permit issuance, and inspections and for County to either charge the municipality fees or collect fees for applicable permits and inspections issued or made pursuant to such contracts as set out in Chapter 1100 SLCRO, as amended, to cover the costs of providing such temporary code enforcement services. When the contract is for only certain of the services described in this section, the building official is authorized to pro-rate the fees set out in Chapter 1100 to cover the costs of performing the service or services. The term of the temporary contract shall not exceed twelve (12) months except that the contract may be extended by the building official when: a) the services are related to a specific project or projects that are still in progress, or b) the municipality commits in writing to transitioning to a long term contract with the County as set out in Section 1118.050(1).

**1118.051 Municipal Zoning Approval for Buildings and Structures by Contracting Municipalities. --**

All plans for the construction or use of buildings and structures regulated by this code shall be reviewed and approved by the contracting municipality for compliance with the zoning or other local regulatory ordinances or provisions prior to issuance of a permit by the County.

**1118.052 Exterior Fire Protection Features Approval by Contracting Fire Protection Districts. --**All plans for the construction of buildings and structures within a contracting fire protection district shall be reviewed and approved for compliance with exterior fire protection features prior to issuance of a building permit by the County.

**1118.060 Code Review Committee Assignments. --**The Building Code Review Committee, as established in the Building Code, shall be responsible for considering updates and changes to this code. The Building Code Review Committee shall coordinate with the Mechanical Code Review Committee, the Electrical Code Review Committee and the Plumbing Code Review Committee as these committees are defined in making its recommendation to the Building Commission.

**1118.101 Amendments to the International Swimming Pool and Spa Code, 2015 Edition – Chapter 1 Scope and Administration. --**The following provisions amend Chapter 1 Scope and Administration in the International Swimming Pool and Spa Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**101.1 Title.** These regulations shall be known as the Swimming Pool and Spa Code of St. Louis County, herein after referred to as "this code."

**101.5 Applicability of St. Louis County, Missouri Codes and Ordinances.** Throughout this code, whenever the terms NFPA 70, International Plumbing Code, International Mechanical Code, International Property Maintenance Code, International Building Code, International Residential Code, International Existing Building Code, Zoning Ordinance or Floodplain Management Regulations Ordinance appears it shall be deemed to mean the codes adopted by St. Louis County as listed in Chapter 43 Referenced Standards, of this code and as identified in Title XI, Chapters 1102, 1103, 1108, 1110, 1115, 1116, 1117, and Title X, Chapters 1003 and 1008 SLCRO 1974 as amended, respectively.

**101.6 Correction of violations of other codes.** Repairs or alterations mandated by any property, housing, or fire safety maintenance code or mandated by any licensing rule or ordinance adopted pursuant to law shall conform only to the requirements of that code, rule, or ordinance and shall not be required to conform to this code unless the code requiring such repair or alteration so provides.

**102.9.1 Licensing.** Applicable licensing provisions of the Mechanical Code, the Electrical Code and the Plumbing Code shall apply to work regulated under this code.

**102.9.2 Compliance with county and municipal zoning and other applicable codes and ordinances.**

Subject to the provisions of this code, neither the granting of a permit, nor the approval of construction documents, nor inspections made by the building official, or the building official's authorized representative, during the erection, movement or demolition of a building or structure, or any alteration or addition thereto, shall in any way relieve the owner or tenant of such building, structure or property from complying with the requirements of this code, the Zoning Ordinance, or the zoning ordinance or other applicable laws of any municipality in St. Louis County. Provided, however, that nothing in this code shall be construed to subject any land or structure owned or controlled by St. Louis County to any municipal zoning or other ordinances.

## **SECTION 103**

### **DEPARTMENT OF BUILDING SAFETY**

**103.1 Creation of enforcement agency.** SECTION 103 DEPARTMENT OF BUILDING SAFETY (Sections 103.1 through 103.4.1) in the International Swimming Pool and Spa Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 103 DEPARTMENT OF BUILDING SAFETY in the International Building Code.

## **SECTION 104**

### **DUTIES AND POWERS OF BUILDING OFFICIAL**

**104.1 General.** SECTION 104 DUTIES AND POWERS OF THE CODE OFFICIAL (Sections 104.1 through 104.12) in the International Swimming Pool and Spa Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL in the International Building Code.

## **SECTION 105**

### **PERMITS**

**105.1 Required.** SECTION 105 PERMITS (Sections 105.1 through 105.6.3) in the International Swimming Pool and Spa Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 105 PERMITS in the International Building Code.

## **SECTION 106**

Reserved for future use.

## **SECTION 107 SUBMITTAL DOCUMENTS**

**107.1 General.** SECTION 107 SUBMITTAL DOCUMENTS (Sections 107.1 through 107.5) of the International Building Code is adopted as part of this code.

## **SECTION 108 Reserved for future use.**

## **SECTION 109 FEES**

**109.1 Payment of fees.** SECTION 109 FEES (Sections 109.1 through 109.6) of the International Building Code is adopted as part of this code.

## **SECTION 110 INSPECTIONS**

**110.1 General.** SECTION 106 INSPECTIONS (Sections 106.1 through 106.19) in the International Swimming Pool and Spa Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 110 INSPECTIONS in the International Building Code.

## **SECTION 111 CERTIFICATE OF OCCUPANCY**

**111.1 Use and occupancy.** SECTION 111 CERTIFICATE OF OCCUPANCY (Sections 111.1 through 111.4) of the International Building Code is adopted as part of this code.

## **SECTION 112 SERVICE UTILITIES**

**112.1 Connection of service utilities.** SECTION 112 SERVICE UTILITIES (Sections 112.1 through 112.3) of the International Building Code is adopted as part of this code.

## **SECTION 113 BOARD OF APPEALS**

**113.1 General.** SECTION 108 MEANS OF APPEALS (Sections 108.1 through 108.7) in the International Swimming Pool and Spa Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 113 BOARD OF APPEALS in the International Building Code.

## **SECTION 114 VIOLATIONS**

**114.1 Unlawful acts.** SECTION 107 VIOLATIONS (Sections 107.1 through 107.7.3) in the International Swimming Pool and Spa Code, 2015 edition is deleted in its entirety and adopted in lieu thereof is SECTION 114 VIOLATIONS in the International Building Code.

## **SECTION 115 STOP WORK ORDER**

**115.1 Authority.** SECTION 115 STOP WORK ORDER (Sections 115.1 through 115.3) in the International Building Code is adopted as part of this code.



## **SECTION 116 UNSAFE STRUCTURES AND EQUIPMENT**

**116.1 Conditions.** SECTION 116 UNSAFE BUILDINGS AND EQUIPMENT (Sections 116.1 through 116.5) in the International Building Code is adopted as part of this code.

## **SECTION 117 EMERGENCY MEASURES**

**117.1 Imminent danger.** SECTION 117 EMERGENCY MEASURES (Sections 117.1 through 117.6) in the International Building Code is adopted as part of this Code.

## **SECTION 118 UNFIT BUILDINGS AND STRUCTURES**

**118.1 General.** SECTION 118 DEMOLITION (Sections 118.1 through 118.4) in the International Building Code is adopted as part of this code.

## **SECTION 119 DEMOLITION OF STRUCTURES**

**119.1 Demolition of structures.** SECTION 119 DEMOLITION OF STRUCTURES (Sections 119.1 through 119.3) of the International Building Code is adopted as part of this code.

**1118.102 Amendments to the International Swimming Pool and Spa Code, 2015 Edition – Chapter 2 Definitions.** --The following provisions amend Chapter 2 Definitions in the International Swimming Pool and Spa Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**201.3 Terms defined in other codes.** Where terms are not defined in this code and are defined in the International Building Code, International Energy Conservation Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Residential Code, International Existing Building Code, International Property Maintenance Code or NFPA 70, such terms shall have the meanings ascribed to them as in those codes.

## **SECTION 202 DEFINITIONS**

Retain all definitions listed in Section 202 of the International Swimming Pool and Spa Code, 2015 edition and add the following definitions to the section.

**Affected Parties.** The owner, occupant, lessee, mortgagee, agent and all other persons having an interest in the structure or its premises as shown by the records of the Recorder of Deeds as of the date said structure is declared to be a public nuisance by the building official.

**Board of Appeals.** The Building Commission created in Article IV, Section 4.330 of the St. Louis County Charter.

**Building Code Official.** The Code Official as defined herein.

**Building Code Review Committee.** The Committee established by, and acting in accordance with, section 1115.060 of the Building Code, SLCRO 1974, Title XI, Chapter 1115, as amended.

**Building Commission.** The Building Commission created in Article IV, Section 4.330 of the St. Louis County Charter.

**Building Official.** The Code Official as defined herein.

**Code Official.** The Director of the St. Louis County Department of Transportation and Public Works or the Director's duly authorized representative.

**Dangerous.** Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, partially collapsed, has moved off its foundation or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads.
3. The building or structure or any portion thereof is likely to collapse partially or completely because:
  - 3.1. Of dilapidation, deterioration or decay;
  - 3.2. Of construction in violation of the this code;
  - 3.3. The soil supporting the foundation is unstable, moved or removed;
  - 3.4. The foundation is inadequate, decayed or deteriorated; or
  - 3.5. It is damaged due to fire, earthquake, wind or flood; or any other similar cause.
4. The exterior walls or other vertical structural member 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.
5. Any building or structure with substantial structural damage.

**Disaster.** A disaster shall include but not necessarily be limited to flood, windstorm, tornado, severe storm, earthquake, bomb blast, explosion or similar natural or man-made type event. The building official shall make the determination whether an event shall be declared a disaster.

**Electrical Code Review Committee.** The Committee established by, and acting in accordance with the Electrical Code, SLCRO 1974, Title XI, Chapter 1102, as amended.

**Flood Hazard Area.** An area that has been determined to be prone to flooding in accordance with section 1612 of the International Building Code or Section R322 of International Residential Code as applicable.

**Lowest Floor.** The floor of the lowest enclosed area, including a basement. An unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage, in an area other than a basement area, is not considered a building's lowest floor provided that such enclosure is not built so as to render the structure in violation of section 1612 of the International Building Code.

**Mechanical Code Review Committee.** The Committee established by, and acting in accordance with the Mechanical Code, SLCRO 1974, Title XI, Chapter 1108, as amended.

**Plumbing Code Review Committee.** The Committee established by, and acting in accordance with the Plumbing Code, SLCRO 1974, Title XI, Chapter 1103, as amended.

**Zoning Ordinance.** St. Louis County Zoning Ordinance, Title X, Chapter 1003 SLCRO 1974 as amended.

**1118.103 Amendments to the International Swimming Pool and Spa Code, 2015 Edition – Chapter 3 General Compliance.** --The following provisions amend Chapter 3 General Compliance in the International Swimming Pool and Spa Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**302.1 Electrical.** Electrical requirements for aquatic facilities shall be in accordance with NFPA 70.

**302.5 Backflow protection.** Water supplies for pools and spas shall be protected against backflow in accordance with the International Plumbing Code.

**302.6 Waste-water discharge.** Where waste water from pools or spas, backwash from filters and water from deck drains discharge to the building drainage system, such installation shall be in accordance with the International Plumbing Code.

**305.2.1 Barrier height and clearances.** Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 72 inches (1829 mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.

**Exception:** For residential swimming pools the top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.

2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches (51 mm) for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches (102 mm) where measured on the side of the required barrier that faces away from the pool or spa.
4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on top of the pool or spa, the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches (102 mm).

**305.2.10 Poolside barrier setbacks.** The pool or spa side of the required barrier shall be not less than 60 inches (1524 mm) from the water's edge.

**Exception:** For residential swimming pools the pool or spa side of the required barrier shall be not less than 20 inches (508 mm) from the water's edge.

**305.5 Onground residential pool structure as a barrier.** An onground residential pool wall structure or a barrier mounted on top of an onground residential pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.
2. Where the barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.
3. Ladders or steps used as a means of access to the pool are surrounded by a barrier that meets the requirements of Section 305.
4. Barriers that are mounted on top of onground residential pool walls are installed in accordance with the pool manufacturer's instructions.

**TABLE 306.5  
MINIMUM DRAINAGE SLOPES FOR DECK SURFACES**

Surface	Minimum Drainage Slope (Inch Per Foot)
Exposed aggregate	1/4
Textured, hand-finished concrete	1/8
Travertine/brick-set pavers, public pools or spas	3/8
Travertine/brick-set pavers, residential pools or spas	1/8
Wood, residential pools or spas only	1/8
Wood/plastic composite	1/8

**306.9.1 Hose bibbs.** Hose bibbs shall be provided for rinsing down the entire deck and shall be installed in accordance with the International Plumbing Code.

**306.10 Decking surface.** Materials used for decking surfaces shall only be the materials listed in Table 306.5 or materials approved by the code official.

**311.4 Piping and fittings.** Plastic piping and fittings used in circulation systems shall be provided in accordance with the International Plumbing Code.

**311.4.1 Fittings.** Fittings used in circulation systems shall be provided in accordance with the International Plumbing Code.

**311.4.2 Joints.** Joints shall be provided in accordance with the International Plumbing Code.

**311.4.3 Piping subject to freezing.** Piping subject to freezing shall be installed in accordance with the International Plumbing Code.

**311.4.4 Suction outlet fitting assemblies.** Suction outlet fitting assemblies shall be installed in accordance with the International Plumbing Code.

**311.5 System draining.** Equipment shall be designed and fabricated to drain the water from the equipment, together with exposed face piping, by removal of drain plugs, manipulating valves, or by other methods. Drainage shall be in accordance with the International Plumbing Code.

**311.9 Hydrostatic pressure test.** Circulation piping, other than that integrally included in the manufacture of the pool or spa shall be subject to hydrostatic pressure testing in accordance with the International Plumbing Code.

**318.2 Protection of potable water supply.** Potable water supply systems shall be designed, installed and maintained in accordance with the International Plumbing Code.

**320.1 Backwash water or draining water.** Backwash water and draining water shall be discharged in accordance with the International Plumbing Code.

**Exception:** Residential pools may discharge into storm sewers or shall be drained by other means as approved by the code official.

**321.4 Residential pool and deck illumination.** Where lighting is installed for, and in, residential pools and permanent residential spas, such lighting shall be installed in accordance with NFPA 70.

**1118.104 Amendments to the International Swimming Pool and Spa Code, 2015 Edition – Chapter 4 Public Swimming Pools.** --The following provisions amend Chapter 4 Public Swimming Pools in the International Swimming Pool and Spa Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**401.1 Public swimming pools.** The provisions of this chapter shall apply to public swimming pools. Public swimming pools covered in this chapter include Class A, Class B, Class C, Class E and Class F pools.

**401.4.1 Class A pool tolerances.** Dimensional tolerances for Class A pools shall be determined by the authority that governs such pools but not less than the construction tolerances shown in Table 401.4.

**402.2 Manufactured and fabricated diving equipment.** Manufactured and fabricated diving equipment shall be in accordance with this Chapter and shall be designed for swimming pool use.

**403.1 Maximum bather load.** The maximum bather load of Class A, Class B, Class C and Class F pools shall be in accordance with Table 403.1

**TABLE 403.1  
MAXIMUM BATHER LOAD**

Pool Type	Bather Load
A, B, C, F	20 sq. ft. of water surface area per user
Diving area (per diving board)	300 sq. ft. of water surface area per user
Deck at A, B, C, F	50 sq. ft. of deck surface area per user

For SI: 1 square foot = 0.0929 square meters

**405.1 Wading pools.** Class F wading pools shall be separate pools with an independent circulation system, shall be physically separated from other classes of pools by a minimum distance of 15 feet (4572 mm) or by a barrier in accordance with Section 305 and shall be constructed in accordance with Sections 405.2 through 405.6.

**405.6 Suction entrapment avoidance.** Wading pools shall not have suction outlets. Skimmers or overflow gutters shall be installed and shall accommodate 100 percent of the circulation system flow rate. Exception: Wading pools having gravity or suction outlets for cleaning/maintenance purposes only, shall comply with APSP-7 and shall have suction outlet covers that are flush to the floor so as not to present a tripping hazard.

**410.2 Plumbing Fixtures.** Class A through F public swimming pools shall be provided with plumbing fixtures in accordance with Section 609.

**Exception:** Class C pools are required to provide only the rinse showers as required by Section 609 when the other plumbing fixtures required by Section 609 are provided within the associated lodgings.

**1118.105 Amendments to the International Swimming Pool and Spa Code, 2015 Edition – Chapter 5 Public Spas and Public Exercise Spas.** --The following provisions amend Chapter 5 Public Spas and Public Exercise Spas in the International Swimming Pool and Spa Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

## SECTION 510 CIRCULATION SYSTEMS

**510.1 General.** Circulation systems for spas shall comply with Section 311 and the provisions of this section.

**510.2 Turnover.** Circulation equipment shall be sized to turn over the entire water capacity of the spa as specified in Table 510.2. The system shall be designed to provide the required turnover rate based on the maximum pressure and flow rate recommended by the manufacturer of the filter with clean filter media.

**TABLE 510.2  
MAXIMUM BATHER LOAD AND TURNOVER RATE**

Class of Pool	Temperature	Maximum Bather Load	Maximum Turnover Time (hours)
E	≤72° - 93°F (22° - 34°C)	>2500 gallons/person	4 hours
E	≤72° - 93°F (22° - 34°C)	>450 gallons/person	2 hours
E	≤72° - 93°F (22° - 34°C)	≤450 gallons/person	1 hour
E	≥93°F - 104°F (34° - 40°C)	All	0.5 hours
Deck at E		50 sq. ft. of deck surface area per user	

For SI: 1 square foot = 0.0929 square meters, 1 gallon = 0.0038 cubic meters

**1118.106 Amendments to the International Swimming Pool and Spa Code, 2015 Edition – Chapter 6 Aquatic Recreation Facilities.** --The following provisions amend Chapter 6 Aquatic Recreation Facilities in the International Swimming Pool and Spa Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**TABLE 604.2  
TURNOVER TIME**

Class of Pool	Maximum Turnover Time <sup>a</sup> (hours)
D – 1	2
D – 2	1
D – 3	1
D – 4	2
D – 5	0.5
D – 6	0.5

For SI: 1 inch = 25.4 mm.

a. Pools with a sand bottom require a 1-hour turnover time.

**608.1 Occupant load.** The occupant load for the pools or spas in the facility shall be calculated in accordance with Table 608.1. The occupant load shall be the combined total of the number of users based on the pool or spa water surface area and the deck area surrounding the pool or spa. The deck area occupant load shall be based on the occupant load calculation where a deck is provided or based on an assumed 5 foot wide (1219 mm) deck surrounding the entire perimeter of the pool or spa, whichever is greater.

**Table 608.1, OCCUPANT LOAD** - Delete and replace with:

**TABLE 608.1  
OCCUPANT LOAD**

Pool Type	Occupant Load
D-1	15 sq. ft. of water surface area per user
D-2	10 sq. ft. of water surface area per user
D-3	Per manufacturer
D-4	15 sq. ft. of water surface area per user
D-5	15 sq. ft. of water surface area per user
D-6	10 sq. ft. of water surface area per user
Deck	50 sq. ft. of deck surface area per user
Diving area (per board)	300 sq. ft. of water surface area per user

For SI: 1 square foot = 0.0929 square meters

**609.2 Number of fixtures.** Pools shall have toilet facilities with the number of fixtures in accordance with Table 609.2. Separate toilet facilities shall be provided for each sex. The minimum number of fixtures shall be calculated at 50 percent male and 50 percent female based on the total occupant load. Where applying the fixture ratios in Table 609.2, results in fractional numbers shall be rounded to the next whole number.

**Table 609.2  
MINIMUM PLUMBING FIXTURES**

WATER CLOSETS (FIXTURES PER PERSON)		URINALS (FIXTURES PER PERSON)	LAVATORIES (FIXTURES PER PERSON)		CLEANSING SHOWERS	RINSE SHOWERS	DRINKING FOUNTAINS/ FACILITIES (FIXTURES PER PERSON)	OTHER
Male 1: 1-100 2: 101-200 3: 201-400	Female 1: 1-25 2: 26-50 3: 51-100 4: 101-200 6: 201-300 8: 301-400	Male 1: 1-100 2: 101-200 3: 201-400 4: 401-600	Male 1: 1-200 2: 201-400 3: 401-600 4: 601-750	Female 1: 1-100 2: 101-200 4: 201-300 5: 301-500 6: 501-750	Min. of 1 for each sex for every 4000 square foot of collective water surface and deck area or fraction thereof.	Min. of 1 on the deck at the entry to each pool or spa	1: 1-250 2: 251-500 3: 501-750	1 service sink or laundry tray
Over 400, add 1 fixture for each additional 500 males and 1 fixture for each additional 125 females.		Over 600, add 1 fixture for each additional 300 males.	Over 750, add 1 fixture for each additional 250 males and 1 fixture for each additional 200 females.				Over 750, add 1 fixture for each additional 500 persons.	

**609.3.1 Rinse shower.** Rinse showers shall be located on the deck at the entrance to each pool in accordance with Table 609.2.

**609.9 Infant care.** Baby-changing tables shall be provided in each male, female and unisex toilet facility.

**1118.108 Amendments to the International Swimming Pool and Spa Code, 2015 Edition – Chapter 8 Permanent Inground Residential Swimming Pools.** --The following provisions amend Chapter 8 Permanent Inground Residential Swimming Pools in the International Swimming Pool and Spa Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**801.2 General.** In addition to the requirements of this chapter, permanent inground residential pools shall comply with the requirements of Chapter 3.

**1118.111 Amendments to the International Swimming Pool and Spa Code, 2015 Edition – Chapter 11 Referenced Standards.** --The following provisions amend Chapter 11 Referenced Standards in the International Swimming Pool and Spa Code, 2015 edition. Each code section that corresponds to one of the following provisions is hereby deleted where so noted or amended to read as set forth below. Each provision set out below without a corresponding section, sub-section or clause number in the code is hereby enacted and added thereto.

**APSP** – The Association of Pool & Spa Professionals. Amend Referenced Standards.

<b>APSP</b>	The Association of Pool & Spa Professionals 2111 Eisenhower Avenue Alexandria, VA 22314	
Standard reference number	Title	Referenced in code section number
ANSI/APSP/ICC 4 – 12	Standard for Aboveground/Onground Residential Swimming Pools	702.2.1
ANSI/APSP/ICC 7 – 13	American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins	310.1, 405.6
ANSI/APSP/ICC 14 – 11	American National Standard for Portable Electric Spa Energy Efficiency	303.2
ANSI/APSP/ICC 15a – 2013	American National Standard for Residential Swimming Pool and Spa Energy Efficiency	303.3
ANSI/APSP/ICC 16 – 11	American National Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs	202, 311.4.1, 311.4.4, 505.2.1

**GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI.** Add the following St. Louis County Codes, Ordinances and Standards:

<b>GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI</b>		St. Louis County Department of Transportation and Public Works 41 S. Central Ave. St. Louis, MO 63105
Standard reference number	Title	Referenced in code section number
Building Code – Title XI, Chapter 1115 SLCRO 1974, as amended	Building Code	202
Electrical Code – Title XI, Chapter 1102 SLCRO 1974, as amended	Electrical Code	202
Existing Building Code - Title XI, Chapter 1117	Existing Building Code	201.3



<b>GOVERNMENT OF ST. LOUIS COUNTY, MISSOURI</b>		St. Louis County Department of Transportation and Public Works 41 S. Central Ave. St. Louis, MO 63105
Standard reference number	Title	Referenced in code section number
SLCRO 1974 as amended		
Floodplain Management Regulations – Title X, Chapter 1008 SLCRO 1974 as amended	Floodplain Management Regulations	101.5
Mechanical Code – Title XI, Chapter 1108 SLCRO 1974, as amended	Mechanical Code	202
Plumbing Code – Title XI, Chapter 1103 SLCRO 1974, as amended	Plumbing Code	202
Zoning Ordinance - Title X, Chapter 1003 SLCRO 1974 as amended	Zoning Ordinance	101.3, 202

**ICC - International Code Council. Amend Referenced Standards.**

<b>ICC</b>	International Code Council, Inc. 500 New Jersey Avenue, NW 6 <sup>th</sup> Floor Washington, DC 20001	
Standard reference number	Title	Referenced in code section number
IBC – 15	International Building Code	101.3, 201.3, 202, 304.2, 306.1, 307.2, 307.4, 307.8, 307.9, 410.1
IECC – 15	International Energy Conservation Code	201.3, 316.4
IEBC – 15	International Existing Building Code	101.3, 201.3
IFC – 15	International Fire Code	201.3
IFGC – 15	International Fuel Gas Code	201.3, 316.4
IMC – 15	International Mechanical Code	101.3, 201.3, 316.4
IPC – 15	International Plumbing Code	101.3, 201.3, 302.2, 302.5, 302.6, 306.8, 306.8.1, 318.2, 410.1
IPMC – 15	International Property Maintenance Code	101.3, 201.3
IRC – 15	International Residential Code	101.3, 102.7.1, 201.3, 202, 304.2, 306.1, 306.3, 306.8, 307.2, 307.4, 307.8, 307.9, 316.4, 321.2.1, 703.1, 802.1, 802.2

**NFPA - National Fire Protection Association. Amend Referenced Standards:**

<b>NFPA</b>	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02169-7471	
Standard reference number	Title	Referenced in code section number
NFPA 70 – 2014	National Electric Code	101.3, 201.3, 302.1, 316.4, 321.2.1, 321.4

**SECTION 5.** If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional; such decision shall not affect the validity of the remaining portions of this ordinance. The St. Louis County Council hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

**SECTION 6.** Nothing in this ordinance or in the Codes hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 5 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

**SECTION 7.** The Administrative Director of the County Council is hereby ordered and directed to cause this ordinance to be published and kept available for public viewing.

**SECTION 8.** This ordinance and the rules, regulations, provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full force and effect on the 1<sup>st</sup> day of the month following 90 calendar days from and after the date of its adoption by the County Council and approved by the County Executive.

ADOPTED: December 17, 2019

ERNEST TRAKAS  
PRESIDING OFFICER, COUNTY COUNCIL

SIGNED: December 18, 2019

SAM PAGE  
COUNTY EXECUTIVE

ATTEST: DIANN L. VALENTI  
ACTING ADMINISTRATIVE DIRECTOR

APPROVED AS TO LEGAL FORM:

BETH ORWICK  
COUNTY COUNSELOR