

**ORDINANCE NO. 2019-4075**

**AN ORDINANCE AMENDING CHAPTER 103, “BUILDING REGULATIONS,” ARTICLE III, “TECHNICAL CODES,” DIVISION 1 “BUILDING CODES” AND DIVISION 2 “ELECTRICAL CODE, OF THE CODE OF ORDINANCES OF THE CITY OF COLLEGE STATION, TEXAS, BY AMENDING CERTAIN SECTIONS RELATING TO BUILDING REGULATIONS; PROVIDING A SEVERABILITY CLAUSE; DECLARING A PENALTY; AND PROVIDING AN EFFECTIVE DATE.**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COLLEGE STATION, TEXAS:**

**PART 1:** That Chapter 103, “Building Regulations,” Article III, “Technical Codes,” Division 1 “Building Codes” and Division 2 “Electrical Code” of the Code of Ordinances of the City of College Station, Texas, be amended as set out in **Exhibit “A”** attached hereto and made a part of this Ordinance for all purposes.

**PART 2:** If any provision of this Ordinance or its application to any person or circumstances is held invalid or unconstitutional, the invalidity or unconstitutionality does not affect other provisions or application of this Ordinance or the Code of Ordinances of the City of College Station, Texas, that can be given effect without the invalid or unconstitutional provision or application, and to this end the provisions of this Ordinance are severable.

**PART 3:** That any person, corporation, organization, government, governmental subdivision or agency, business trust, estate, trust, partnership, association and any other legal entity violating any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine of not less than twenty five dollars (\$25.00) and not more than five hundred dollars (\$500.00) or more than two thousand dollars (\$2,000) for a violation of fire safety, zoning, or public health and sanitation ordinances, other than the dumping of refuse. Each day such violation shall continue or be permitted to continue, shall be deemed a separate offense.

**PART 4:** This Ordinance is a penal ordinance and becomes effective April 1, 2019.

**PASSED, ADOPTED and APPROVED this 25<sup>TH</sup> day of February, 2019.**

**ATTEST:**

  
\_\_\_\_\_  
**City Secretary**

**APPROVED:**

  
\_\_\_\_\_  
**Mayor**

**APPROVED:**

  
\_\_\_\_\_  
**City Attorney**

## EXHIBIT A

That Chapter 103, “Building Regulations,” Article III, “Technical Codes,” Division 1 “Building Codes” and Division 2 “Electrical Code” is hereby amended to read as follows:

### Sec. 103-131. - INTERNATIONAL BUILDING CODE ADOPTED

A booklet entitled 'International Building Code 2018 Edition' as amended and as hereafter may be amended, at least one (1) copy of which is on file in the office of the Building Official of the City of College Station, Texas, is hereby adopted and designated as the Building Code of the City of College Station, Texas. In addition, Appendix D of the 2018 International Building Code is hereby adopted.

### AMENDMENTS TO INTERNATIONAL BUILDING CODE

A. The above referenced International Building Code is hereby amended as follows:

1. **Section 105** (Permits) is amended by adding Section 105.1.3 to read as follows:

#### 105.1.3 Registration of Contractors.

It shall be the duty of every individual who makes contracts to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical, or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, and every individual making such contracts and subletting the same or any part thereof, to first register with the Building Official, giving full name, residence, name and place of business, and in case of removal from one place to another to have made corresponding change to the Building Official.

Exception: Homeowner permits as provided per local amendment by added Section R105.2.4, International Residential Code.

Plumbing Contractors - Plumbing contractors shall be licensed as prescribed by the State of Texas and shall register their license with the City of College Station before a plumbing permit is issued by the City.

Air Conditioning, Refrigeration and Heating Contractors - Air Conditioning, Refrigeration and Heating Contractors shall be licensed by the State of Texas and shall register their license with the City of College Station before a mechanical permit is issued by the City.

Licensed Irrigators - Irrigation Contractors shall be licensed Irrigators by the State of Texas shall register their license with the City of College Station before a lawn irrigation permit is issued by the City.

Electrical Contractors - Electrical Contractors shall be licensed by the State shall register their license with the City of College Station before an electrical permit is issued by the City.

Electrical Sign Contractors – Electrical Sign Contractors shall be licensed by the State shall register their license with the City of College Station before a permit is issued.

Before any license is registered with the City, the applicant shall have adequate insurance coverage for general liability as provided for by State law for the respective trade.

2. **Section 105.2** (Work exempt from permit) is amended by deleting item #2 under “Building” and replacing with the following:

“2. Fences of wood, chain link, or similar material, and less than eight feet in height, and walls of brick, stone, concrete, or similar material, and less than six feet in height, shall not be construed to be a structure, nor shall they require a building permit.

3. **Section 105.2** (Work exempt from permit) is amended by adding the following under

“Electrical”:

**Replacing Fuses:** No permit shall be required for replacing fuses of like rating.

**Replacing Flush or Snap Switches:** No permit shall be required for replacing flush or snap switches, receptacles, lamp sockets, the installation of lamps, or minor repairs on permanently connected electrical appliances.

**Conveying Signals:** No permit shall be required for the installation, maintenance or alteration of wiring, poles and down guys, apparatus, devices, appliances or equipment for telegraph, telephone, signal service or central station protective service used in conveying signals or intelligence, except where electrical work is done on the primary side of the source of power at a voltage over 50 volts and of more than 500 watts.

**Wiring by Electric Public Service Company:** No permit shall be required for the installation, maintenance or alteration of electric wiring, apparatus devices, appliances or equipment to be installed by an electric public service company for the use of such company in the generation, transmission, distribution, sale or utilization of electrical energy. However, an electric public service company shall not do any wiring on a customer's distribution

system, including metering equipment wherever located and transformer vaults in which customer's transformers are located, nor shall any of its employees do any work other than done for said company as hereinbefore provided for by virtue of this exception.

**Temporary Wiring:** No permit shall be required for the installation of temporary wiring, apparatus, devices, appliances or equipment used by a recognized electrical training school or college.

**Railway Crossing Signal Devices:** No permit shall be required for the installation and maintenance of railway crossing signal devices, when such is performed by due authority of the railroad and in accordance with the standards of the American Railroad Association, and in collaboration with and approval of the Department of Public Services of the City of College Station.

4. **Section 107.1** (General) is amended to include the following at the end of the section and before the exception: “The design professional shall be an architect or engineer legally registered and in compliance under the laws of Texas and shall affix his official seal to the construction documents for the following:
  1. All group A, E and I occupancies.
  2. Building and structures three or more stories in height
  3. Buildings and structures 5,000 square feet or more in total area

Exception: “Group R-3 buildings, regardless of size”
5. **Section 109.4** (Work commencing before permit issuance) is amended by deleting the existing text in its entirety and replacing it with the following:
 

“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 penalty of 100% of the usual fee in addition to the required permit fees.”
6. **Section 109.6** (Refunds) is amended by deleting the existing text in its entirety and replacing it with the following:
 

“The City Manager or his designee is authorized to establish a refund policy.”
7. **Section [A] 110.3.1** (Footing and foundation inspection) is amended by adding the following to the end of said section:
 

“The Building Official shall have the authority to require a form survey to verify building setbacks. Such survey shall be provided to the Building Official prior to

placement of concrete and prepared by a surveyor licensed to perform work in the State of Texas.”

8. **Section 110.3.5** (Lath and gypsum board inspection) is amended by deleting the section in its entirety.
9. **Section 111.2** (Certificate issued) is amended by deleting items number 4, 5, 7, 10, and 11.
10. **Section 113** (Board of Appeals) is amended by deleting the section in its entirety.
11. **Section 116.1** (Conditions) is amended by deleting the sentence, “Unsafe structures shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this section.” and replacing it with the following: “Unsafe structures shall be taken down, removed or made safe as provided for in Section 1 (C), Chapter 3, Code of Ordinances.”
12. **Section 202** (Definitions) is amended by adding “Porte-Cocheres”
  1. A passageway through a building or screen wall designed to let vehicles pass from street to an interior courtyard.
  2. A roofed structure extending from the entrance of a building over an adjacent driveway and sheltering those getting in or out of vehicles.
13. **Section 202** (Definitions) is amended by deleting the Townhouse definition and replacing it with the following:

“Townhouse. A single family dwelling unit constructed in a group of attached units separated by property lines in which each unit extend from foundation to roof and with open space on at least two sides.”
14. **Section 303.1** (Assembly Group A-3) is amended by adding “tutorial services”.
15. **Section 502.1** (Address identification) is amended by deleting the existing text in its entirety and replacing it with the following:

“502.1 Address identification. An official address, assigned by the Building Official or his designee, shall be provided and placed pursuant to this section in such a position as to be clearly visible from the public street or roadway fronting the property. Addresses placed pursuant to this section shall be a minimum four (4) inches in height and stroke of minimum one-half (1/2) inch, composed of a durable material and of a color that provides a contrast to the background itself. The official address shall be placed a minimum of thirty-six (36) inches and a maximum of thirty (30) feet in height measured from the ground level. Buildings or structures located more than fifty (50) feet from the street curb shall have an official address

at least five (5) inches in height. Durable materials used for the official address shall include, but not be limited to, wood, plastic, metal, weather resistant paint, weather resistant vinyl, or weather resistant material designed for outside use on a glass surface. For single family residences, the requirement of this section may be met by providing a minimum of two (2) inch high numbers on both sides of a U. S. mailbox located near the curb in front of the house, or a freestanding structure with numbers at least four (4) inches in height.

A building complex composed of multiple structures or dwellings shall have an official suite or unit number assigned to each building, suite or tenant as well as a street address number. If there is sufficient street frontage, each building, suite or tenant may also be assigned an official street address number. The official street address number of each structure must be prominently posted on the building so that it is visible from the nearest public street or designated fire lane. Each number designated by the Building Official, or his designee, for each individual suite or unit must be conspicuously posted on each suite or unit.

Commercial buildings with side or rear access in addition to the main entrance, shall also display the business name and official address on each side or rear door with characters at least two (2) inches in height. Residential structures which provide for rear vehicular access from a dedicated public alley, street or designated fire lane shall conspicuously post an official address at least two (2) inches in height so that it is visible from the public alley, street or designated fire lane.

The owner or manager of a building complex, which contains an enclosed shopping mall, shall submit to the Fire Official four (4) copies of diagrams acceptable to the Fire Marshal of the entire complex, indicating the location and number of each business. When a change in a business name or location is made, the owner or manager shall so advise the Fire Marshal in writing of the change.

When required by the Fire Code Official, address numbers shall be provided in additional approved locations to facilitate emergency response.”

16. **Table 803.13** (Interior Wall And Ceiling Finish Requirements by Occupancy) is amended by deleting the existing text in footnote “d” and replacing it with the following:
 

“Class A interior finish material shall be required in all areas of all assembly occupancies, whether sprinklered or not, except as provided for in notes e and f below.”
17. **Section 902.1.2** (Marking on access doors). Is amended by replacing 2 inches with 4 inches.
18. **Section 903.1** (General) is amended by adding the following text at the end of said section:

"For the purpose of this section, the term "fire area" shall be replaced with "building area."

19. **Section 903.2** (Where Required) is amended by adding the following text at the end of the section:  
 In addition to the requirements of this section, an automatic sprinkler system shall be provided throughout all new buildings and structures as follows:
  1. Where the total building area exceeds 12,000 square feet in area.
  2. Where the height exceeds two stories, regardless of area.
20. **Section 903.2.1.6** (Assembly Occupancies on Roofs) is amended by deleting the exception in its entirety.
21. **Section 903.2.3** (Group E) is amended by deleting the exception in its entirety.
22. **Section 903.2.4** (Group F-1) is amended by deleting items "2" and "3."
23. **Section 903.2.7** (Group M) No. 2 is amended by replacing "three stories above grade" with "two stories in height" and by deleting No. 3 in its entirety.
24. **Section 903.2.8** (Group R) is amended by deleting the section in its entirety.
25. **Section 903.2.9** (Group S-1) is amended by replacing "three stories above grade" with "two stories above grade" in item "2" and by replacing "24,000 square feet" with "12,000 square feet" in item "3."
26. **Section 903.2.10** (Group S-2 Enclosed Parking Garage) is amended by deleting the exception in its entirety.
27. **Section 903.2.13** (Porte-cocheres). All porte-cocheres shall be protected with fire sprinklers.  
  
 Exception: Porte-cocheres of non-combustible construction or a distance of 10 foot or greater.
28. **Section 903.3.1.2.3** (Attics). is amended by deleting items 3.4 and 4.5
29. **Section 903.4** (Sprinkler systems supervision and alarms) is amended by adding the following:  
 Exceptions: 8. Valves located outside buildings or in a vault that are sealed or locked in the open position.
30. **Section 904.3.5**, (Monitoring). is amended by deleting the section and replacing it with:

904.3.5 (Monitoring). Where a building fire alarm or sprinkler monitoring system is installed, automatic fire-extinguishing systems shall be monitored by the building fire alarm or sprinkler monitoring system.

31. **Section 905.1**, (General). is amended by adding Section 905.1.1, Safety factor, as follows:

905.1.1 (Safety factor). All standpipe systems with the exception of manual standpipes shall be designed with a minimum safety factor of 5 PSI or 10% of required pressure (whichever is greater) taken at the source for the hydraulically most demanding system and/or outlet.

32. **Section 905.4**, (Location of Class I standpipe hose connections), is amended as follows with all other code text to remain as written:

905.4 (Location of Class I standpipe hose connections). Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required interior exit stairway, a hose connection shall be provided for each story above and below grade plane. Hose connections shall be located at [the main] an intermediate [floor] landing between stories unless otherwise approved by the fire code official.

Exception: A single hose connection shall be permitted to be installed in the open corridor or open breezeway between open stairs that are not greater than 75 feet (22 860 mm) apart.

33. **Section 906.1** (Where required) is amended by deleting exception 1 and 2 all others remain the same.

34. **Section 907.2.1** (Group A) is amended by adding the following section:

907.2.1.3 Group A-2. An automatic alarm system shall be provided for fire areas containing Group A-2 occupancies that have an occupant load of 100 or more.

35. **Section 907.2.7.1**, (Occupant notification). is repealed in its entirety.

36. **Section 907.2.8.2**, (Automatic smoke detection system), is hereby amended to read as follows:

907.2.8.2 (Automatic smoke detection system). An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed throughout all interior corridors serving sleeping units. The automatic smoke detection system requirement is met only by the installation of smoke or beam detectors whenever possible. If environmental conditions do not allow the installation of smoke detectors, fire alarm heat detectors may be used on a limited basis when approved by the fire code official.

Exception: An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

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has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

37. **Section 907.2.12.2**, (Fire department communication system), is hereby deleted in its entirety.
38. **Section 907.2.12.1.2**, (Duct smoke detection), is amended to read as follows:

907.2.12.1.2 (Duct smoke detection). Duct smoke detectors complying with Section 907.3.1 shall be located in accordance with the NFPA 90A: Standard for the Installation of Air-Conditioning and Ventilating Systems or as follows:

1. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m<sup>3</sup>/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.

2. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm (2.4 m<sup>3</sup>/s) and serving not more than 10 air-inlet openings.

39. **Section 907.2**, (Where required) - new buildings and structures, is amended by adding Section 907.2.24, Fire alarm systems for property protection, to read as follows:

907.2.24 (Fire alarm systems for property protection). Fire alarm systems dedicated solely to the protection of property are permitted to be installed in facilities where a fire alarm system is not required by other sections of this code or the International Building Code provided the following conditions are met:

1. Any and all automatic detection is installed, located and maintained in accordance with the requirements of NFPA 72 and a documentation cabinet as required by NFPA 72 is provided and installed.

2. The installed system is monitored by a supervising station which provides remote and central station service.

3. One manual means of activation is installed in an approved location

4. Where the fire alarm system control unit is located in an area that is not readily accessible to response personnel, a remote fire alarm system annunciator panel is installed.

40. **Section 907.2**, (Where Required) – is amended by adding Section 907.2.25, Fire alarm systems for property protection, to read as follows:  
 907.2.25 (Group R-4) Fire alarm systems and smoke alarms shall be installed in Group R-4 occupancies as required in Sections 907.2.10.1 through 907.2.10.3. Section 907.2.10.1 Manual fire alarm system. A manual fire alarm system that

activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-4 occupancies.

Exceptions:

1. A manual fire alarm system is not required in buildings not more than two stories in height where all individual sleeping units and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by not less than 1-hour fire partitions and each individual sleeping unit has an exit directly to a public way, egress court or yard.

2. Manual fire alarm boxes are not required throughout the building where all of the following conditions are met:

2.1. The building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

2.2. The notification appliances will activate upon sprinkler water flow.

2.3. Not fewer than one manual fire alarm box is installed at an approved location.

3. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at exits where located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that the distances of travel required in Section 907.4.2.1 are not exceeded.

907.2.10.2 Automatic smoke detection system. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens.

Exceptions:

1. Smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

2. An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

907.2.10.3 Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.

41. **Section 907.3.1**, (Duct smoke detectors), is amended to read as follows:

907.3.1 (Duct smoke detectors). Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit where a fire alarm system is required by Section 907.2. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a Central monitoring station and shall perform the intended fire safety function in accordance with this code, NFPA 90A: Standard for the Installation of Air-Conditioning and Ventilating Systems and the International Mechanical Code. In facilities that are required to be monitored by a supervising station, duct smoke detectors shall report only as a supervisory signal and not as a fire alarm. They shall not be used as a substitute for required open area detection. 2018 International Building-Related Codes

Exceptions:

1. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

2. For fire alarm systems which cannot be programmed for supervisory signals, duct detectors shall be allowed to activate the alarm signal.

42. **Section 907.3.**, (Fire safety functions), is amended by adding 907.3.5, Fire alarm systems - emergency control, as follows:

907.3.5 (Fire alarm systems - emergency control). At a minimum, the following functions, where provided, shall be activated by the fire alarm system:

1. Elevator capture and control in accordance with ASME/ANSI A17.1b, Safety Code for Elevators and Escalators.

2. Release of automatic door closures and hold open devices

3. Stairwell and/or elevator shaft pressurization.

4. Smoke management and/or smoke control systems.

5. Initiation of automatic fire extinguishing equipment.

6. Emergency lighting control.

7. Unlocking of doors.

8. Emergency shutoff of gas and fuel supplies that may be hazardous provided the continuation of service is not essential to the preservation of life.

9. Emergency shutoff of audio systems for sound reinforcement or entertainment (i.e. music systems, systems for announcement and broadcast which

are separate from public address systems) provided that such systems are not used to issue emergency instructions.

10. Emergency shutoff of systems used for the creation of displays or special effects (i.e. lighting effects, laser light shows, projection equipment).

43. **Section 907.4.2.1**, (Location), is amended to add the Exception to read as follows:

907.4.2.1 (Location). Manual fire alarm boxes shall be located not more than 5 feet (1524 mm) from the entrance to each exit. In buildings not protected by an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, additional manual fire alarm boxes shall be located so that the distance of travel to the nearest box does not exceed 200 feet (60 960 mm).

Exception: Where construction of the building prohibits the proper installation of a pull station (e.g. glass walls, interior brick or rock walls), a pull station shall be allowed to be located in the normal path of egress, where approved by the Fire Marshal or his/her designee.

44. **Section 907.5.1**, (Presignal feature), is amended to read as follows:

907.5.1 (Presignal feature and positive alarm sequences). A presignal feature or Positive Alarm Sequence as defined in NFPA 72 shall not be installed unless approved by the fire code official. Request to use a presignal feature or a Positive Alarm Sequence must be submitted in writing to the Fire Marshal and approval granted before installation. Where a presignal feature or Positive Alarm Sequence is provided, a signal shall be annunciated at a constantly attended location approved by the fire code official, so that occupant notification can be activated in 2018 International Building-Related Codes the event of fire or other emergency. When approved by the fire code official, the presignal feature or Positive Alarm Sequence shall be implemented in accordance with the requirements of NFPA 72.

45. **Section 907.5.2.1**, (Audible alarms), is amended by adding Section 907.5.2.1.3, Testing of audible alarms in occupancies other than Group R, and Section 907.5.2.1.4, Testing of audible alarms in Group R occupancies, as follows:

907.5.2.1.3 (Testing of audible alarms in occupancies other than Group R). Audibility levels for all occupancies other than Group R shall be in accordance with the public mode requirements of NFPA 72, and shall be tested utilizing the following criteria:

1. A UL listed sound pressure level meter, which has been calibrated within the last calendar year, and supplied by the fire alarm system installing contractor, shall be utilized to obtain readings. The sound pressure level meter will be held five feet above floor, pointed in the direction of the audible device.
2. All doors within the occupancy, including the bathroom and balcony doors shall be in the closed position.

3. Measurements shall be taken in the most remote areas of the occupancy first, including bathrooms and balconies.

4. Initial measurements to confirm the average ambient sound level in each area shall be taken.

5. The fire alarm system shall be activated and measurements in the tested areas shall be retaken and compared with the requirements.

907.5.2.1.4 (Testing of audible alarms in Group R occupancies). Audibility levels for all Group R occupancies shall be in accordance with the requirements of Section 907.5.2.1.1, and shall be tested utilizing the following criteria:

1. A UL listed sound pressure level meter, which has been calibrated within the last calendar year, and supplied by the fire alarm system installing contractor, shall be utilized to obtain readings. The sound pressure level meter will be held five feet above floor, pointed in the direction of the audible device.

2. All doors within the occupancy, including the bathroom and balcony doors shall be in the closed position.

3. Ambient sound level shall be established with the television set at 50% of maximum volume, showers running, bathroom exhaust systems running, and air conditioning units running.

4. Measurements shall be taken in the most remote area of the dwelling or sleeping unit first, including bathrooms and balconies.

5. Initial measurements to confirm the ambient sound level in each area shall be taken.

6. The fire alarm system shall be activated and measurements in the tested areas shall be retaken and compared with the requirements.

46. **Section 907.5.2.2**, (Emergency voice/alarm communication systems), is amended to read as follows:

907.5.2.2 (Emergency voice/alarm communication systems). Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404 of the International Fire Code. In high-rise buildings, the system shall operate on at least the alarming floor, the floor above and the floor below. If the system is not reset after five minutes, the building shall sound the general evacuation signal 2018 International Building-Related Codes and message in all zones unless an alternative Positive Alarm Sequence has been approved by the Fire Marshal. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

1. Elevator groups.

2. Interior exit stairways.

3. Each floor.

4. Areas of refuge as defined in Chapter 2.  
Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.
47. **Section 907.5.2.2.4**, (Emergency voice/alarm communication captions), is repealed in its entirety.
48. **Section 907.5.2.3**, (Visible alarms), is amended by adding a subsection 907.5.2.3.4, Group R-2 sleeping areas, and Section 907.5.2.3.5, Combination devices, to read as follows:  
907.5.2.3.4 (Group R-2 sleeping areas). Living rooms in Group R-2 occupancies shall have audible notification appliances that meet the sleeping area audible requirements of NFPA 72, Chapter 18, Section 18.4.5, and Subsection 18.4.5.1. When such units are required to be equipped with visible notification for the hearing impaired or when such units are designated as accessible in accordance with ICC/ANSI A117.1, combination audible and visible notification appliances that meet both the sleeping area audible requirements of NFPA 72, Chapter 18, Section 18.4.5, Subsection 18.4.5.1 and the effective intensity settings of NFPA 72, Chapter 18.5.5.7.2 shall be installed.  
907.5.2.3.5 (Combination devices). Combination 120 VAC single or multiple-station smoke detectors with an onboard visible notification appliance if utilized to meet the requirements of Section 907.2.11, will not be given credit for meeting the visible alarm notification requirements of Section 907.5.2.3.3 if these devices do not have the capability of supplying backup power for the visible notification appliance portion of the device. Should such devices be utilized to comply with Section 907.2.11, the visible appliance side of the device shall flash in synchronization with the notification appliances required in the unit.
49. **Section 907.5.2.3.1** (Public Use Areas and Common Use Areas) is amended by deleting the exception and adding Section 907.5.2.3.1.1 to read as follows:  
**Section 907.5.2.3.1.1** (Employee Work Areas). Where a fire alarm and detection system is required, employee work areas shall be provided with devices that provide audible and visible alarm notification.
50. **Section 907.6.3**, (Initiating device identification), is amended to read as follows with exceptions to remain as written:  
907.6.3 (Initiating device identification). The fire alarm system shall identify the specific initiating device address, location, device type, and floor level where applicable and status including indication of normal, alarm, trouble and supervisory status, to the fire alarm panel, annunciator panel and to the supervising station as appropriate.
51. **Section 912**, (Fire Department Connections), is amended by adding Section 912.8, Location and type, as follows:  
912.8 (Location and type). Sprinkler system and standpipe fire department hose connections shall be as follows:  
1. Any riser 4" in diameter or larger are required to have a five inch "Storz" connection.

2. Within 40 feet of a public street, approved fire lane, or access roadway.
  3. Within 100 feet of an approved fire hydrant measured per hose lay.
  4. Minimum of two feet above finished grade and a maximum of four feet above finished grade for standard inlets and minimum of 30 inches at lowest point above finished grade and maximum of four feet above finished grade for the five inch "Storz" inlet.
  5. Freestanding FDCs shall be installed a minimum of one foot and a maximum of seven feet from the gutter face of the curb.
  6. The Fire Code Official shall approve the location of freestanding fire department connections. Freestanding FDCs must be physically protected against impact per the requirements of Section 312 or other approved means.
  7. Where provided, the five inch "Storz" inlet shall be installed at a 30 degree angle pointing down.
  8. Fire department connections for H occupancies shall be freestanding, remote and located as determined by the fire code official.
  9. Fire department connections for systems protecting fuel storage tanks shall be freestanding, remote and located as determined by the fire code official.
  10. There shall be no more than one "Storz" connection per riser in any configuration.
  11. One (1) 2.5 inch inlet is required for all systems designed per NFPA 13R. If the system demand is greater than 250 GPM, two (2) 2.5 inch inlets are required to be installed. No FDC is required for projects designed per NFPA 13D.
52. **Section 912.2.1**, (Visible location), is amended by adding the following sentence to the end of that section to read as follows:  
912.2.1 (Visible location). Fire department connections shall be located on the street side of buildings or facing approved fire apparatus access roads, fully visible and recognizable from the street, fire apparatus access road or nearest point of fire department vehicle access or as otherwise approved by the fire code official. The fire department connection shall be identified by a sign installed above the connection with the letters "FDC" not less than 6 inches high and mounted at least 3 feet above the FDC to the bottom edge of the sign unless approved by the fire code official and if multiple FDC's a sign identifying the corresponding riser.
53. **Section 912.2.2**, (Existing buildings), is amended to read as follows:

912.2.2 (Existing buildings). On existing buildings, wherever the fire department connection is not visible to approaching fire apparatus, the fire department connection shall be indicated by an approved sign mounted on the street front or on the side of the building. Such sign shall have the letters "FDC" not less than 6 inches (152 mm) high and words in letters not less than 2 inches (51 mm) high or an arrow to indicate the location. Signs shall be mounted no lower than 7 feet from grade to the bottom edge of the sign and are subject to the approval of the fire code official.

54. **Section 912.2** (Location), is amended to add the following:

**Section 912.2.3** (Distance). Fire department connection shall not be located further than 100 feet from the fire hydrant measured by lay of hose from the engine.

55. **Section 912.4.1**, (Locking fire department connection caps), is amended to read as follows:

912.4.1 (Locking fire department connection caps). Locking caps are required on all fire department connections for water-based fire protection systems including but not limited to FDC's and standpipes.

56. **Section 1004.5.1** (Increased occupant load) is amended by deleting the section in its entirety.

57. **Section 1004.9** (Posting of occupant load) is amended by adding the following text to the end of said section:

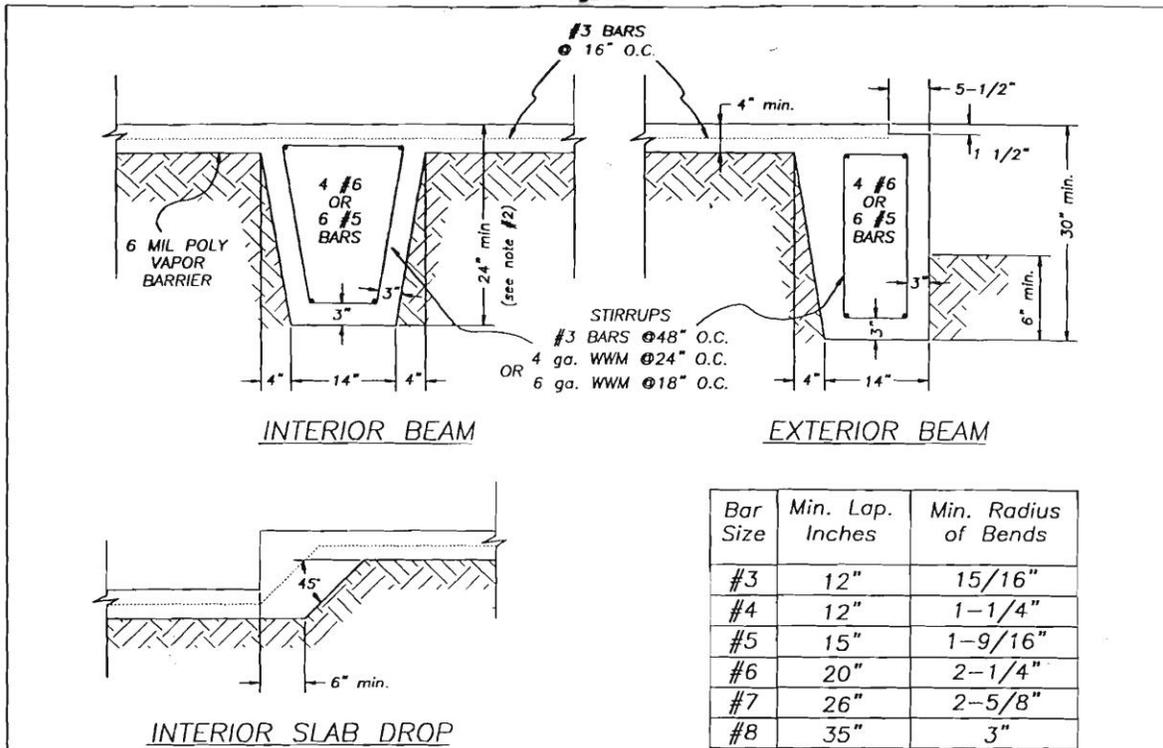
"For the purposes of this section, the occupant load shall be the number of occupants computed at the rate of one occupant per unit of area as prescribed in Table 1004.5."

58. **Section 1612.3** (Establishment of flood hazard areas) is amended by inserting "Brazos County" for name of jurisdiction and "July 2, 1992 or February 9, 2000" for the date of issuance.

59. **Section 1907** (Minimum slab provisions) is amended by adding Section 1907.2 to read as follows:

down  
"Section 1907.2 Minimum foundation standard. All slabs-on-grade with turned-down footings shall comply with the Minimum Foundation Standard as shown in figure 1."

Figure 1



GENERAL NOTES:

1. Exterior beam shall extend a minimum of 6 inches into undisturbed soil or fill which is compacted to 95% Standard Proctor (ASTM D 698) within (±) 2% of optimum moisture content. All fill material shall have a Plasticity Index (P.I.) between 5 and 18.
2. Interior beams that exceed 60 ft. in length must be a min. of 30" deep.
3. Maximum beam spacing shall be 15 feet and shall be continuous over the length or width of the foundation.
4. Steel to be set to clear bare earth minimum 3", wood or steel forms by 1-1/2".
5. Minimum concrete specified compression strength shall be 3000 psi @ 28 days.
6. Masonry fireplace footings shall be a minimum of 30" deep with 2 mats of #5's @ 12" O.C. both ways.
7. These minimum standards shall apply to all foundations.  
 Exceptions:  
 A. Foundations for temporary buildings and permanent buildings not exceeding one story in height and 400 square feet in area.  
 B. Foundations designed by an Architect registered in the State of Texas or a civil/structural Engineer registered in the State of Texas and approved for use by the Building Official.
8. All foundations designed by an Architect or Engineer shall be installed as designed. Revisions and exceptions must be submitted in writing by the Architect or Engineer and approved by the Building Official.
9. Reinforcing steel shall be grade 60 (grade 40 allowed for stirrups only). All deformations shall meet ASTM A615.

REV.	DESCRIPTION	DATE	CITY OF COLLEGE STATION BUILDING DIVISION		
			MINIMUM FOUNDATION STANDARDS		
			SIZE A	PREPARED 9/98	SHEET 1 OF 1

1. **APPENDIX D (FIRE DISTRICTS)** is hereby adopted.

**AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE**

B. the International Residential Code adopted by reference in Section 101.2, 2018 International Building Code, is hereby amended as follows:

1. **Section R102.4 (Referenced codes and standards)** is amended by adding the following to said section:

“Any reference to the *ICC Electrical Code* shall mean the *National Electrical Code*, as adopted and amended by the City of College Station.”

2. **Section R105.2 (Work exempt from permit)** is amended by deleting number one under “Building” and replacing it with the following:

“1. One detached accessory structure per residential lot, provided the floor area does not exceed 120 square feet and the structure complies with all of the following:

- a. The accessory structure is not located in a surface drainage easement.
- b. The accessory structure is not permanently affixed to the ground.
- c. The accessory structure is located in the rear yard.
- d. The accessory structure is not provided with utilities (sewer, water, gas or electricity).”

3. **Section R105.2 (Work exempt from permit)** is amended by deleting number ten under “Building” and replacing with the following:

“10. Uncovered decks, patios or other raised floor surfaces located not more than 30 inches above adjacent grade and are not attached to a dwelling.”

4. **Section R105.2.4 is added to read as follows:**

“R105.2.4 Homeowner permit. A property owner may obtain a building permit to perform work on a building owned and occupied by him as his homestead without registering with the City as a contractor. However, work involving the electrical, plumbing and mechanical systems must be permitted and installed by licensed contractors.”

5. **Section R106.3.1 (Approval of construction documents)** is amended by deleting the last sentence in said section.

6. **Section R108.3 (Building permit valuations)** is amended by adding the following to said section:

“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. Final permit valuation shall be set by the building official.”

7. **Section R108.5 (Refunds)** is amended by deleting the text in said section and replacing it with the following:

“The City Manager or his designee is authorized to establish a refund policy.”

8. **Section R109.1.1 (Foundation Inspection)** is amended by adding the following to the end of said section:

“The Building Official shall have the authority to require a form survey to verify building setbacks. Such survey shall be provided to the Building Official prior to placement of concrete and prepared by a surveyor licensed to perform work in the State of Texas.”

9. **Section R112 (Board of Appeals)** is amended by deleting the section in its entirety.

10. **Section R202 (Definitions)** is also amended by adding the following definitions:

**Air Gap, Irrigation System.** A complete physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel.

**Atmospheric Vacuum Breaker.** An assembly containing an air inlet valve, a check seat, and an air inlet port. The flow of water into the body causes the air inlet valve to close the air inlet port. When the flow of water stops the air inlet valve falls and forms a check against back-siphonage. At the same time it opens the air inlet port allowing air to enter and satisfy the vacuum. Also known as an Atmospheric Vacuum Breaker Back- Siphonage Prevention Assembly.

**Backflow Prevention, Irrigation System.** The mechanical prevention of reverse flow, or back siphonage, of nonpotable water from an irrigation system into the potable water source.

**Backflow Prevention Assembly.** Any assembly used to prevent backflow into a potable water system. The type of assembly used is based on the existing or potential degree of health hazard and backflow condition.

**Completion of Irrigation System Installation.** When the landscape irrigation system has been installed, all minimum standards met, all tests performed, and the irrigator is satisfied that the system is operating correctly.

**Consulting, Irrigation System.** The act of providing advice, guidance, review or recommendations related to landscape irrigation systems.

**Cross-Connection.** An actual or potential connection between a potable water source and an irrigation system that may contain contaminants or pollutants or any source of water that has been treated to a lesser degree in the treatment process.

**Design, Irrigation System.** The act of determining the various elements of a landscape irrigation system that will include, but not be limited to, elements such as collecting site specific information, defining the scope of the project, defining plant watering needs, selecting and laying out emission devices, locating system components, conducting

hydraulics calculations, identifying any local regulatory requirements, or scheduling irrigation work at a site. Completion of the various components will result in an irrigation plan.

**Design Pressure, Irrigation System.** The pressure that is required for an emission device to operate properly. Design pressure is calculated by adding the operating pressure necessary at an emission device to the total of all pressure losses accumulated from an emission device to the water source.

**Double Check Valve.** An assembly that is composed of two independently acting, approved check valves, including tightly closed resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks. Also known as a Double Check Valve Backflow Prevention Assembly.

**Emission Device.** Any device that is contained within an irrigation system and that is used to apply water. Common emission devices in an irrigation system include, but are not limited to, spray and rotary sprinkler heads, and drip irrigation emitters.

**Employed, Irrigation Systems.** Engaged or hired to provide consulting services or perform any activity relating to the sale, design, installation, maintenance, alteration, repair, or service to irrigation systems. A person is employed if that person is in an employer-employee relationship as defined by Internal Revenue Code, 26 United States Code Service, §3212(d) based on the behavioral control, financial control, and the type of relationship involved in performing employment related tasks.

**Head-to-Head Spacing, Irrigation System.** The spacing of spray or rotary heads equal to the manufacturer's published radius of the head.

**Health Hazard, Irrigation System.** A cross-connection or potential cross-connection with an irrigation system that involves any substance that may, if introduced into the potable water supply, cause death or illness, spread disease, or have a high probability of causing such effects.

**Hydraulics.** The science of dynamic and static water; the mathematical computation of determining pressure losses and pressure requirements of an irrigation system.

**Installer, Irrigation System.** A person who actually connects an irrigation system to a private or public raw or potable water supply system or any water supply, who is licensed according to Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

**Irrigation Inspector.** A person who inspects irrigation systems and performs other enforcement duties for a municipality or water district as an employee or as a contractor and is required to be licensed under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

**Irrigation Plan.** A scaled drawing of a landscape irrigation system which lists required information, the scope of the project, and represents the changes made in the installation of the irrigation system.

**Irrigation Services.** Selling, designing, installing, maintaining, altering, repairing, servicing, permitting, providing consulting services regarding, or connecting an irrigation system to a water supply.

**Irrigation System.** An assembly of component parts, including the backflow device and all equipment downstream, that is permanently installed for the controlled distribution and conservation of water to irrigate any type of landscape vegetation in any location, and/or to

reduce dust or control erosion. This term does not include a system that is used on or by an agricultural operation as defined by Texas Agricultural Code, §251.002.

**Irrigation Technician.** A person who works under the supervision of a licensed irrigator to install, maintain, alter, repair, service or supervise installation of an irrigation system, including the connection of such system in or to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

**Irrigation Zone.** A subdivision of an irrigation system with a matched precipitation rate based on plant material type (such as turf, shrubs, or trees), microclimate factors (such as sun/shade ratio), topographic features (such as slope) and soil conditions (such as sand, loam, clay, or combination) or for hydrological control.

**Irrigator.** A person who sells, designs, offers consultations regarding, installs, maintains, alters, repairs, services or supervises the installation of an irrigation system, including the connection of such system to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30.

**Irrigator-in-Charge.** The irrigator responsible for all irrigation work performed by an exempt business owner, including, but not limited to obtaining permits, developing design plans, supervising the work of other irrigators or irrigation technicians, and installing, selling, maintaining, altering, repairing, or servicing a landscape irrigation system.

**Landscape Irrigation.** The science of applying the necessary amount of water to promote or sustain healthy growth of plant material or turf.

**Irrigation License.** An occupational license that is issued by the Texas Commission on Environmental Quality under Title 30, Texas Administrative Code, Chapter 30 to an individual that authorizes the individual to engage in an activity that is covered by Title 30, Texas Administrative Code, Chapter 30.

**Mainline, Irrigation System.** A pipe within an irrigation system that delivers water from the water source to the individual zone valves.

**Maintenance Checklist, Irrigation System.** A document made available to the irrigation system's owner or owner's representative that contains information regarding the operation and maintenance of the irrigation system, including, but not limited to: checking and repairing the irrigation system, setting the automatic controller, checking the rain or moisture sensor, cleaning filters, pruning grass and plants away from irrigation emitters, using and operating the irrigation system, the precipitation rates of each irrigation zone within the system, any water conservation measures currently in effect from the water purveyor, the name of the water purveyor, a suggested seasonal or monthly watering schedule based on current evapotranspiration data for the geographic region, and the minimum water requirements for the plant material in each zone based on the soil type and plant material where the system is installed.

**Major Maintenance, Alteration, Repair, or Service (Irrigation System).** Any activity that involves opening to the atmosphere the irrigation main line at any point prior to the discharge side of any irrigation zone control valve. This includes, but is not limited to, repairing or connecting into a main supply pipe, replacing a zone control valve, or repairing a zone control valve in a manner that opens the system to the atmosphere.

**Master Valve, Irrigation System.** A remote control valve located after the backflow prevention device that controls the flow of water to the irrigation system mainline.

**Matched Precipitation Rate.** The condition in which all sprinkler heads within an irrigation zone apply water at the same rate.

**New Installation, Irrigation System.** An irrigation system installed at a location where one did not previously exist.

**Pass-through Contract.** A written contract between a contractor or builder and a licensed irrigator or exempt business owner to perform part or all of the irrigation services relating to an irrigation system.

**Pressure Vacuum Breaker.** An assembly containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. Also known as a Pressure Vacuum Breaker Back-siphonage Prevention Assembly.

**Reclaimed Water.** Domestic or municipal wastewater which has been treated to a quality suitable for beneficial use, such as landscape irrigation.

**Records of Landscape Irrigation Activities.** The irrigation plans, contracts, warranty information, invoices, copies of permits, and other documents that relate to the installation, maintenance, alteration, repair, or service of a landscape irrigation system.

**Reduced Pressure Principle Backflow Prevention Assembly.** An assembly containing two independently acting approved check valves together with a hydraulically operating mechanically independent pressure differential relief valve located between the two check valves and below the first check valve.

**Static Water Pressure.** The pressure of water when it is not moving.

**Supervision, Landscape Irrigation.** The on-the-job oversight and direction by a licensed irrigator who is fulfilling his or her professional responsibility to the client and/or employer in compliance with local or state requirements. Also a licensed installer working under the direction of a licensed irrigator or an irrigation technician who is working under the direction of a licensed irrigator to install, maintain, alter, repair or service an irrigation system.

**Water Conservation, Irrigation System.** The design, installation, service, and operation of an irrigation system in a manner that prevents the waste of water, promotes the most efficient use of water, and applies the least amount of water that is required to maintain healthy individual plant material or turf, reduce dust, and control erosion.

**Zone Flow.** A measurement, in gallons per minute or gallons per hour, of the actual flow of water through a zone valve, calculated by individually opening each zone valve and obtaining a valid reading after the pressure has stabilized. For design purposes, the zone flow is the total flow of all nozzles in the zone at a specific pressure.

**Zone Valve, Irrigation System.** An automatic valve that controls a single zone of a landscape irrigation system.

11. **Section R302.1 (Exterior walls)** is amended by deleting the existing text and replacing it with the following:

**R302.1 Exterior walls.** Exterior walls with a fire separation distance less than 3 feet shall have not less than a one hour fire-resistive rating with exposure from both sides. The above provisions shall not apply to walls which are perpendicular to the line used to determine the fire separation distance.

**Exception:** Tool and storage sheds, playhouses and similar structures exempted from permits by Section R105.2 are not required to provide wall protection based on location on the lot.

**Projections.** Projections may extend beyond the exterior wall on zero lot line construction. Projections shall be constructed from non-combustible material on the underside and may allow manufactured perforated soffit material installed for attic ventilation.. The soffit may project a maximum of 18 inches, excluding non-combustible gutters, over the adjacent property line.

**Exception:** Tool and storage sheds, playhouses and similar structures exempted from permits by Section R 105.2 shall not extend over the lot line in zero lot line construction.

**Combustibles in maintenance easement.** The construction of any structure utilizing combustible material or the storage of combustible material is prohibited within the maintenance easement. The term “maintenance easement” is defined in Article 11 of the UDO.

**Exception:** A wood fence may be installed in the maintenance easement.

12. **Section R302.6 (Dwelling-garage fire separation)** is amended by adding the following exception:

“**Exception:** One unprotected attic access opening, not exceeding 30 inches by 54 inches in size, is allowed per garage.”

13. **Section R310.2.1 (Minimum opening area)** is amended by deleting everything except the last sentence.

14. **Section R311.7.8.4 (Continuity)** is amended by deleting the following text in said section:

“Handrail ends shall be returned or shall terminate in newel posts or safety terminals.”

15. **Section R313 (Automatic Fire Sprinkler Systems)** is amended by deleting the section in its entirety.

16. **Section R318.2 (Chemical termiticide treatment)** is amended by adding the following to the end of said section:

“The method of application and contractor hired to apply the chemicals shall submit to the Building Department when applying for the Building Permit, and verification of the application turned in prior to issuance of the Certificate of Occupancy.”

17. **Section R319.1 (Address Identification)** is amended by deleting the existing text in its entirety and replacing it with the following:

“Premises identification shall comply with Section 502.1, International Building Code, as amended.”

18. **Section 322.2.1 (Elevation requirements)** is amended by deleting the existing text, save the exception, and replacing it with the following:

“1. Buildings and structures shall have the lowest floors elevated in accordance with the City of College Station Code of Ordinances, Chapter 13 (Flood Hazard Protection) and the City of College Station Drainage Policy and Design Standards (refer to Section II.D).

2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated above the highest adjacent grade as the depth number specified in feet on the Flood Insurance Rate Maps, or at least 2 feet if a depth number is not specified, plus the additional footage requirements in the City of College Station Code of Ordinances, Chapter 13 (Flood Hazard Protection) and the City of College Station Drainage Policy and Design Standards (refer to Section II.D).

3. Basement floors that are below grade on all sides shall be elevated in accordance with the City of College Station Code of Ordinances, Chapter 13 (Flood Hazard Protection) and the City of College Station Drainage Policy and Design Standards (refer to Section II.D).

19. **Section R403.1.3.3 (Slabs-on-ground with turned-down footings)** is amended by deleting the existing text and replacing it with the following to read as follows:

“All slabs-on-ground with turned-down footings shall comply with the minimum foundation standard in Section 1907.2, International Building Code.”

20. **Chapter 11 (Energy Efficiency)** is amended by deleting this chapter in its entirety and replacing it with the following.

“One-and-two family dwellings shall comply with the 2018 International Energy Conservation Code as amended.”

21. **Section M1411.3 (Condensate disposal)** is amended by deleting the existing text and replacing with the following:

“Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to the sanitary sewer system, if available. The condensate drain shall be connected to the sanitary sewer system in a manner approved by the code official.

**Exception:** When a sanitary sewer system is not available on the premises, or connection thereto is not practical, the condensate shall discharge into an approved french drain.”

22. **Section M1501.1 (Outdoor discharge)** is amended by deleting the last sentence in said section.

23. **Section M1505.2 (Recirculation of air)** is amended by deleting the second sentence in said section, and replacing it with the following:

“Exhaust air from bathrooms and toilet rooms shall discharge directly to the outdoors or the vent termination shall be unobstructed and within 6 inches of the soffit vent or ridge vent.”

24. **Section G2408.3 (Private garages)** is amended by deleting the section in its entirety.

25. **Section G2414.5.3 (Copper or copper-alloy tubing)** is amended by deleting said section in its entirety.

26. **Section G2417.1.2 (Repairs and additions)** is amended by deleting the existing text in its entirety and replacing it with the following:

“In the event repairs or additions are made after the pressure test, the affected piping shall be tested. If approved by the code official, minor repairs and additions are not required to be pressure tested provided the work is inspected and connections are tested with a noncorrosive leak-detecting fluid or other leak detecting methods.”

27. **Section G2417.4 (Test pressure measurement)** is amended by deleting the existing text in its entirety and replacing it with the following:

“Test pressure measurement shall comply with Section 406.4, 2018 International Fuel Gas Code, as amended.”

28. **Section G2417.4.1 (Test pressure)** is amended by deleting the existing text in its entirety and replacing it with the following:

“Test pressure shall comply with Section 406.4.1, 2018 International Fuel Gas Code, as amended.”

29. **Section P2503.8 (Inspection and testing of backflow prevention devices)** is amended by deleting the section in its entirety and replacing with the following:

“Inspection and testing of backflow prevention devices shall comply with Section 312.10, 2018 International Plumbing Code, as amended.”

30. **Section P2804.6.1 (Requirements for discharge pipe)** is amended by deleting the text in number five and replacing it with the following:

“Discharge to an indirect waste receptor or to the outdoors.”

31. **Section P2902.5.3 (Lawn irrigation systems)** is amended by deleting the existing text in its entirety and replacing it with the following:

**“P2902.5.3 Lawn Irrigation Systems**

**P2902.5.3.1 Valid License Required.** Any person who connects an irrigation system to the water supply within the city or the city’s extraterritorial jurisdiction, commonly referred to as the ETJ, must hold a valid license, as defined by Title 30, Texas Administrative Code, Chapter 30 and required by Chapter 1903 of the Texas Occupations Code, or as defined by Chapter 365, Title 22 of the Texas Administrative Code and required by Chapter 1301 of the Texas Occupations Code.

**Exception:** A property owner is not required to be licensed in accordance with Texas Occupations Code, Title 12, §1903.002(c)(1) if he or she is performing irrigation work in a building or on a premises owned or occupied by the person as the person’s home. A home or property owner who installs an irrigation system must meet the standards contained in Title 30, Texas Administrative Code, Chapter 344 regarding spacing, water pressure, spraying water over impervious materials, rain or moisture shut-off devices or other technology, backflow prevention and isolation valves. See Texas Occupations Code §1903.002 for other exemptions to the licensing requirement.

**P2902.5.3.2 Permit Required.** Any person installing an irrigation system within the territorial limits or extraterritorial jurisdiction of the city is required to obtain a permit from the city prior to beginning work on the irrigation system. A completed irrigation permit application and irrigation plan must be submitted to the city and approved before a permit will be issued by the city. The irrigation plan must be in compliance with the requirements of this section.

**Exceptions:**

- (1) An irrigation system that is an on-site sewage disposal system, as defined by Section 366.002, Health and Safety Code; or
- (2) An irrigation system used on or by an agricultural operation as defined by Section 251.002, Agriculture Code; or
- (3) An irrigation system connected to a groundwater well used by a property owner strictly for domestic use.

**P2902.5.3.3 Backflow Prevention Methods and Devices.** Any irrigation system that is connected to the potable water supply must be connected through a backflow prevention method approved by the Texas Commission on Environmental Quality (TCEQ). The backflow prevention device must be approved by the Foundation for Cross-Connection Control and Hydraulic Research, the University of Southern California, the International Plumbing Code, or any other laboratory that has equivalent capabilities for both the laboratory and field evaluation of backflow prevention assemblies. The backflow prevention device must be installed in accordance with the laboratory approval standards or if the approval does not include specific installation information, the manufacturer’s current published recommendations. If conditions that present a health hazard exist, one of the following methods must be used to prevent backflow;

- (1) An air gap may be used if:
  - (a) there is an unobstructed physical separation; and
  - (b) the distance from the lowest point of the water supply outlet to the flood rim of the fixture or assembly into which the outlet discharges is at least one inch or twice the diameter of the water supply outlet, whichever is greater.

- (2) Reduced pressure principle backflow prevention assemblies may be used if:
- (a) the device is installed at a minimum of 12 inches above ground in a location that will ensure that the assembly will not be submerged; and
  - (b) drainage is provided for any water that may be discharged through the assembly relief valve.
- (3) Atmospheric vacuum breakers may only be used as replacements on existing systems utilizing atmospheric vacuum breakers if:
- (a) no back-pressure will be present;
  - (b) there are no shutoff valves downstream from the atmospheric vacuum breaker;
  - (c) the device is installed at a minimum of six inches above any downstream piping and the highest downstream opening. Pop-up sprinklers are measured from the retracted position from the top of the sprinkler;
  - (d) there is no continuous pressure on the supply side of the atmospheric vacuum breaker for more than 12 hours in any 24-hour period; and
  - (e) a separate atmospheric vacuum breaker is installed on the discharge side of each irrigation control valve, between the valve and all the emission devices that the valve controls.
- (4) Pressure vacuum breakers may be used if:
- (a) no back-pressure condition will occur; and
  - (b) the device is installed at a minimum of 12 inches above any downstream piping and the highest downstream opening. Pop-up sprinklers are measured from the retracted position from the top of the sprinkler.

All backflow prevention devices used in applications designated as health hazards must be tested upon installation and annually thereafter.

If there are no conditions that present a health hazard, double check valve backflow prevention assemblies may be used to prevent backflow if the device is tested upon installation and test cocks are used for testing only. A double check valve may be installed below ground if:

- (a) the double check valve assembly is installed in a vault or other approved enclosure that which is constructed of a durable material. The vault or enclosure shall either be of solid (waterproof) construction with an integral bottom or bottomless to facilitate drainage. If the vault or enclosure is bottomless, a minimum of four (4) inches of washed gravel shall be installed below the assembly. The washed gravel shall have a diameter of between 3/8 inch and 3/4 inch (inclusive);
- (b) the test cocks are plugged with a non-ferrous material (brass, plastic, etc.) except when the double check valve is being tested;
- (c) the test cock plugs are threaded, water-tight, and made of non-ferrous material;
- (d) a y-type strainer is installed on the inlet side of the double check valve;
- (e) a minimum clearance of three (3) inches is provided between any fill material and the bottom of the double check valve to allow space for testing and repair; and
- (f) a minimum clearance of four (4) inches is provided on the sides of the double check valve to test and repair the double check valve.

If an existing irrigation system without a backflow-prevention assembly requires major maintenance, alteration, repair, or service, the system must be connected to the potable water supply through an approved, properly installed backflow prevention method before any major maintenance, alteration, repair, or service is performed.

If an irrigation system is connected to a potable water supply through a double check valve, pressure vacuum breaker, or reduced pressure principle backflow assembly and includes an automatic master valve on the system, the automatic master valve must be installed on the discharge side of the backflow prevention assembly.

The irrigator shall ensure the backflow prevention device is tested by a licensed Backflow Prevention Assembly Tester prior to being placed in service. The tester must be registered with the City of College Station and the test results must be provided to the local water purveyor and the irrigation system's owner or owner's representative within ten business days of testing of the backflow prevention device.

**P2902.5.3.4 Specific Conditions and Cross-Connection Control.** Before any chemical is added to an irrigation system connected to the potable water supply, the irrigation system must be connected through a reduced pressure principle backflow prevention assembly or air gap.

Connection of any additional water source to an irrigation system that is connected to the potable water supply can only be done if the irrigation system is connected to the potable water supply through a reduced-pressure principle backflow prevention assembly or an air gap.

Irrigation system components with chemical additives induced by aspiration, injection, or emission system connected to any potable water supply must be connected through a reduced pressure principle backflow device.

If an irrigation system is designed or installed on a property that is served by an on-site sewage facility, as defined in Title 30, Texas Administrative Code, Chapter 285, then:

(1) all irrigation piping and valves must meet the separation distances from the On-Site Sewage Facilities system as required for a private water line in Title 30, Texas Administrative Code, Section 285.91(10);

(2) any connections using a private or public potable water source that is not the city's potable water system must be connected to the water source through a reduced pressure principle backflow prevention assembly as defined in Title 30, Texas Administrative Code, Section 344.50; and

(3) any water from the irrigation system that is applied to the surface of the area utilized by the On-Site Sewage Facility system must be controlled on a separate irrigation zone or zones so as to allow complete control of any irrigation to that area so that there will not be excess water that would prevent the On-Site Sewage Facilities system from operating effectively.

**P2902.5.3.5 Water Conservation.** All irrigation systems shall be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation as defined in the Definitions section of this ordinance.

**P2902.5.3.6 Irrigation Plan Design.** An irrigator shall prepare an irrigation plan for each site where a new irrigation system will be installed. A paper or electronic copy of the irrigation plan must be

on the job site at all times during the installation of the irrigation system. A drawing showing the actual installation of the system is due to each irrigation system owner after all new irrigation system installations. During the installation of the irrigation system, variances from the original plan may be authorized by the licensed irrigator if the variance from the plan does not:

- (1) diminish the operational integrity of the irrigation system;
- (2) violate any requirements of this ordinance; and
- (3) go unnoted in red on the irrigation plan.

The irrigation plan must include complete coverage of the area to be irrigated. If a system does not provide complete coverage of the area to be irrigated, it must be noted on the irrigation plan. All irrigation plans used for construction must be drawn to scale. The plan must include, at a minimum, the following information:

- (1) the irrigator's seal, signature, and date of signing;
- (2) all major physical features and the boundaries of the areas to be watered;
- (3) a North arrow;
- (4) a legend;
- (5) the zone flow measurement for each zone;
- (6) location and type of each:
  - (a) controller; and
  - (b) sensor (for example, but not limited to, rain, moisture, wind, flow, or freeze);
- (7) location, type, and size of each:
  - (a) water source, such as, but not limited to a water meter and point(s) of connection;
  - (b) backflow prevention device;
  - (c) water emission device, including, but not limited to, spray heads, rotary sprinkler heads, quick-couplers, bubblers, drip, or micro-sprays;
  - (d) valve, including but not limited to, zone valves, master valves, and isolation valves;
  - (e) pressure regulation component; and
  - (f) main line and lateral piping.
- (8) the scale used; and
- (9) the design pressure.

**P2902.5.3.7 Design and Installation.** No irrigation design or installation shall require the use of any component, including the water meter, in a way which exceeds the manufacturer's published performance limitations for the component.

**P2902.5.3.7.1 Spacing.** The maximum spacing between emission devices must not exceed the manufacturer's published radius or spacing of the device(s). The radius or spacing is determined by referring to the manufacturer's published specifications for a specific emission device at a specific operating pressure. New irrigation systems shall not utilize above-ground spray emission devices in landscapes that are less than 48 inches not including the impervious surfaces in either length or width and which contain impervious pedestrian or vehicular traffic surfaces along two or more perimeters. If pop-up sprays or rotary sprinkler heads are used in a new irrigation system, the sprinkler heads must direct flow away from any adjacent surface and shall not be installed

closer than four inches from a hardscape, such as, but not limited to, a building foundation, fence, concrete, asphalt, pavers, or stones set with mortar.

**Exception:**

Narrow paved walkways, jogging paths, golf cart paths or other small areas located in cemeteries, parks, golf courses or other public areas if the runoff drains into a landscaped area.

**P2902.5.3.7.2 Water Pressure.** Emission devices must be installed to operate at the minimum and not above the maximum sprinkler head pressure as published by the manufacturer for the nozzle and head spacing that is used. Methods to achieve the water pressure requirements include, but are not limited to, flow control valves, a pressure regulator, or pressure compensating spray heads.

**P2902.5.3.7.3 Piping.** Piping in irrigation systems must be designed and installed so that the flow of water in the pipe will not exceed a velocity of five feet per second for polyvinyl chloride (PVC) pipe.

**P2902.5.3.7.4 Irrigation Zones.** Irrigation systems shall have separate zones based on plant material type, microclimate factors, topographic features, soil conditions, and hydrological requirements.

**P2902.5.3.7.5 Matched Precipitation Rate.** Zones must be designed and installed so that all of the emission devices in that zone irrigate at the same precipitation rate.

**P2902.5.3.7.6 Impervious Surfaces.** Irrigation systems shall not spray water over surfaces made of concrete, asphalt, brick, wood, stones set with mortar, or any other impervious material, such as, but not limited to, walls, fences, sidewalks, streets, etc.

**P2902.5.3.7.7 Master Valve.** When provided, a master valve shall be installed on the discharge side of the backflow prevention device on all new installations.

**P2902.5.3.7.8 PVC Pipe Primer Solvent.** All new irrigation systems that are installed using PVC pipe and fittings shall be primed with a colored primer prior to applying the PVC cement in accordance with the International Plumbing Code (Section 605).

**P2902.5.3.7.9 Rain or Moisture Sensor.** All new automatically controlled irrigation systems must include sensors or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall. Rain or moisture shut-off technology must be installed according to the manufacturer's published recommendations. Repairs to existing automatic irrigation systems that require replacement of an existing controller must include a sensor or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall.

**P2902.5.3.7.10 Isolation Valve.** All new irrigation systems must include an isolation valve between the water meter and the backflow prevention device.

**P2902.5.3.7.11 Depth Coverage of Piping.** Piping in all irrigation systems must be installed according to the manufacturer's published specifications for depth coverage of piping. If the

manufacturer has not published specifications for depth coverage of piping, the piping must be installed to provide minimum depth coverage of six inches of select backfill, between the top of the pipe and the natural grade of the topsoil. All portions of the irrigation system that fail to meet this standard must be noted on the irrigation plan. If the area being irrigated has rock at a depth of six inches or less, select backfill may be mounded over the pipe. Mounding must be noted on the irrigation plan and discussed with the irrigation system owner or owner's representative to address any safety issues. If a utility, man-made structure or roots create an unavoidable obstacle, which makes the six-inch depth coverage requirement impractical, the piping shall be installed to provide a minimum of two inches of select backfill between the top of the pipe and the natural grade of the topsoil. All trenches and holes created during installation of an irrigation system must be backfilled and compacted to the original grade.

**P2902.5.3.7.12 Irrigation System Wiring.** Underground electrical wiring used to connect an automatic controller to any electrical component of the irrigation system must be listed by Underwriters Laboratories as acceptable for burial underground. Electrical wiring that connects any electrical components of an irrigation system must be sized according to the manufacturer's recommendation. Electrical wire splices which may be exposed to moisture must be waterproof as certified by the wire splice manufacturer. Underground electrical wiring that connects an automatic controller to any electrical component of the irrigation system must be buried with a minimum of six inches of select backfill.

**P2902.5.3.13 Irrigation System Water.** Water contained within the piping of an irrigation system is deemed to be non-potable. No drinking or domestic water usage, such as, but not limited to, filling swimming pools or decorative fountains, shall be connected to an irrigation system. If a hose bib (an outdoor water faucet that has hose threads on the spout) is connected to an irrigation system for the purpose of providing supplemental water to an area, the hose bib must be installed using a quick coupler key on a quick coupler installed in a covered purple valve box and the hose bib and any hoses connected to the bib must be labeled "non potable, not safe for drinking." An isolation valve must be installed upstream of a quick coupler connecting a hose bib to an irrigation system.

**P2902.5.3.7.14 Licensed Person On Site During Installation.** Beginning January 1, 2010, either a licensed irrigator or a licensed irrigation technician shall be on-site at all times while the landscape irrigation system is being installed. When an irrigator is not onsite, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.

**P2902.5.3.8 Completion of Irrigation System Installation.** Upon completion of the irrigation system, the irrigator or irrigation technician who provided supervision for the on-site installation shall be required to complete the following four items:

- (1) a final walk through with the irrigation system's owner or the owner's representative to explain the operation of the system;
- (2) The maintenance checklist on which the irrigator or irrigation technician shall obtain the signature of the irrigation system's owner or owner's representative and shall sign, date, and seal the checklist. If the irrigation system's owner or owner's representative is unwilling or unable to sign the maintenance checklist, the irrigator shall note the time and date of the refusal on the

irrigation system's owner or owner's representative's signature line. The irrigation system owner or owner's representative will be given the original maintenance checklist and a duplicate copy of the maintenance checklist shall be maintained by the irrigator.

The items on the maintenance checklist shall include but are not limited to:

- (a) the manufacturer's manual for the automatic controller, if the system is automatic;
- (b) a seasonal (spring, summer, fall, winter) watering schedule based on either current/real time evapotranspiration or monthly historical reference evapotranspiration (historical ET) data, monthly effective rainfall estimates, plant landscape coefficient factors, and site factors;
- (c) a list of components, such as the nozzle, or pump filters, and other such components; that require maintenance and the recommended frequency for the service; and
- (d) the statement, "This irrigation system has been installed in accordance with all applicable state and local laws, ordinances, rules, regulations or orders. I have tested the system and determined that it has been installed according to the Irrigation Plan and is properly adjusted for the most efficient application of water at this time."

(3) A permanent sticker which contains the irrigator's name, license number, company name, telephone number and the dates of the warranty period shall be affixed to each automatic controller installed by the irrigator or irrigation technician. If the irrigation system is manual, the sticker shall be affixed to the original maintenance checklist. The information contained on the sticker must be printed with waterproof ink and include:

(4) The irrigation plan indicating the actual installation of the system must be provided to the irrigation system's owner or owner representative.

**P2902.5.3.9 Maintenance, Alteration, Repair, or Service of Irrigation Systems.** The licensed irrigator is responsible for all work that the irrigator performed during the maintenance, alteration, repair, or service of an irrigation system during the warranty period. The irrigator or business owner is not responsible for the professional negligence of any other irrigator who subsequently conducts any irrigation service on the same irrigation system. All trenches and holes created during the maintenance, alteration, repair, or service of an irrigation system must be returned to the original grade with compacted select backfill. Colored PVC pipe primer solvent must be used on all pipes and fittings used in the maintenance, alteration, repair, or service of an irrigation system in accordance with the adopted International Plumbing Code (Section 605). When maintenance, alteration, repair or service of an irrigation system involves excavation work at the water meter or backflow prevention device, an isolation valve shall be installed, if an isolation valve is not present.

**P2902.5.3.10 Reclaimed Water.** Reclaimed water may be utilized in landscape irrigation systems if:

- (1) there is no direct contact with edible crops, unless the crop is pasteurized before consumption;
- (2) the irrigation system does not spray water across property lines that do not belong to the irrigation system's owner;
- (3) the irrigation system is installed using purple components;

(4) the domestic potable water line is connected using an air gap or a reduced pressure principle backflow prevention device, in accordance with §290.47(i) of this title (relating to Appendices);

(5) a minimum of an eight inch by eight inch sign is prominently posted on/in the area that is being irrigated, that reads, "RECLAIMED WATER – DO NOT DRINK" ; and

(6) backflow prevention on the reclaimed water supply line shall be provided in accordance with the regulations of the city's water provider.

**P2902.5.3.11 Advertisement Requirements.** All vehicles used in the performance of irrigation installation, maintenance, alteration, repair, or service must display the irrigator's license number in the form of "LI \_\_\_\_\_" in a contrasting color of block letters at least two inches high, on both sides of the vehicle. All forms of written and electronic advertisements for irrigation services must display the irrigator's license number in the form of "LI \_\_\_\_\_." Any form of advertisement, including business cards, and estimates which displays an entity's or individual's name other than that of the licensed irrigator must also display the name of the licensed irrigator and the licensed irrigator's license number. Trailers that advertise irrigation services must display the irrigator's license number. The name, mailing address, and telephone number of the commission must be prominently displayed on a legible sign and displayed in plain view for the purpose of addressing complaints at the permanent structure where irrigation business is primarily conducted and irrigation records are kept.

**P2902.5.3.12 Contracts.** All contracts to install an irrigation system must be in writing and signed by each party and must specify the irrigator's name, license number, business address, current business telephone numbers, the date that each party signed the agreement, the total agreed price, and must contain the statement, "Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), MC-178, P.O. Box 13087, Austin, Texas 78711-3087. TCEQ's website is: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)." All contracts must include the irrigator's seal, signature, and date. All written estimates, proposals, bids, and invoices relating to the installation or repair of an irrigation system(s) must include the irrigator's name, license number, business address, current business telephone number(s), and the statement: "Irrigation in Texas is regulated by the Texas Commission On Environmental Quality (TCEQ) (MC-178), P.O. Box 13087, Austin, Texas 78711-3087. TCEQ's web site is: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)." An individual who agrees by contract to provide irrigation services as defined in §344.30 of this title (relating to License Required) shall hold an irrigator license issued under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations) unless the contract is a pass-through contract as defined in §344.1(36) of this title (relating to Definitions). If a pass-through contract includes irrigation services, then the irrigation portion of the contract can only be performed by a licensed irrigator. If an irrigator installs a system pursuant to a pass-through contract, the irrigator shall still be responsible for providing the irrigation system's owner or through contract, the irrigator shall still be responsible for providing the irrigation system's owner or owner's representative a copy of the warranty and all other documents required under this chapter. A pass-through contract must identify by name and license number the irrigator that will perform the work and must provide a mechanism for contacting the irrigator for irrigation system warranty work. The contract must include the dates that the warranty is valid.

**P2902.5.3.13** Warranties for Irrigation Systems. On all installations of new irrigation systems, an irrigator shall present the irrigation system's owner or owner's representative with a written warranty covering materials and labor furnished in the new installation of the irrigation system. The irrigator shall be responsible for adhering to terms of the warranty. If the irrigator's warranty is less than the manufacturer's warranty for the system components, then the irrigator shall provide the irrigation system's owner or the owner's representative with applicable information regarding the manufacturer's warranty period. The warranty must include the irrigator's seal, signature, and date. If the warranty is part of an irrigator's contract, a separate warranty document is not required. An irrigator's written warranty on new irrigation systems must specify the irrigator's name, business address, and business telephone number(s), must contain the signature of the irrigation system's owner or owner's representative confirming receipt of the warranty and must include the statement: "Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), MC-178, P.O. Box 130897, Austin, Texas 78711-3087. TCEQ's website is: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)." On all maintenance, alterations, repairs, or service to existing irrigation systems, an irrigator shall present the irrigation system's owner or owner's representative a written document that identifies the materials furnished in the maintenance, alteration, repair, or service. If a warranty is provided, the irrigator shall abide by the terms. The warranty document must include the irrigator's name and business contact information.

**P2902.5.3.14** Duties and Responsibilities of City Irrigation Inspectors. A licensed irrigation inspector or plumbing inspector shall enforce the ordinance of the city, and shall be responsible for:

- (1) verifying that the appropriate permits have been obtained for an irrigation system and that the irrigator and installer or irrigation technician, if applicable, are licensed;
- (2) inspecting the irrigation system;
- (3) determining that the irrigation system complies with the requirements of this section;
- (4) determining that the appropriate backflow prevention device was installed and tested;
- (5) investigating complaints related to irrigation system installation, maintenance, alteration, repairs, or service of an irrigation system and advertisement of irrigation services; and
- (6) maintaining inspection records according to this section."

32. **Table P2906.4** (Water service pipe) is amended by deleting the following materials:

“Acrylonitrile butadiene styrene (ABS) plastic pipe  
 Asbestos-cement pipe  
 Polyethylene/aluminum/polyethylene (PE-AL-PE) pipe  
 Polyethylene (PE) plastic pipe  
 Polyethylene (PE) plastic tubing”

33. **Table P2906.5** (Water distribution pipe) is amended by deleting the following materials:

“Polyethylene/aluminum/polyethylene (PE-AL-PE) composite pipe”

34. **Section P2906.5** (Water-distribution pipe.) is amended by adding the following text to the end of the section:

“Inaccessible water distribution piping under slabs shall be copper (minimum type K) or cross-linked polyethylene (PEX) tubing all installed without joints or connections. Materials subject to corrosion shall be protected when exposed to concrete or corrosive soils.”

35. **Section 2906.10** (Cross-linked polyethylene plastic (PEX)) is amended by adding P2906.10.3 to read as follows:

“P2906.10.3. Sleeving. When a sleeve is provided for cross-linked polyethylene (PEX) plastic piping or tubing installed under concrete slabs the annular space between the piping or tubing and the sleeve must be caulked, foamed, or otherwise sealed to prevent the entrance of termiticide.”

36. **Section P3002.2.** (Building sewer) is amended by adding P3002.2.1 to read as follows:

“P3002.2.1 Depth of building sewer. Building sewer pipe shall be installed with a minimum of twelve (12) inches of cover. Where conditions prohibit the required amount of cover, cast iron pipe with approved joints may be used unless other means of protecting the pipe is provided as approved by the Building Official.”

37. **Section E3401.1** (applicability) is amended by deleting the section in its entirety and replacing with the following:

“Electrical installations shall comply with the *National Electrical Code*, as adopted and amended by the City of College Station.”

**AMENDMENTS TO THE INTERNATIONAL FUEL GAS CODE**

“C. The International Fuel Gas Code adopted by reference in Section 101.4.1, 2018 International Building Code is hereby amended as follows:

1. **Section 102.8** (Referenced codes and standards) is amended by adding the following exception:

“Exception: Any reference to the ICC Electrical Code shall mean the National Electrical Code, as adopted and amended by the City of College Station.”

2. **Section 106.3** (Application for permit) is amended by deleting the text in said section and replacing it with the following:

“The code official may require a permit application for work regulated by this code.”

3. **Section 106.6.2** (Fee schedule) is amended by deleting the section in its entirety.

4. **Section 106.6.3** (Fee refunds) is amended by deleting the text in said section and replacing it with the following:

“The City Manager or his designee is authorized to establish a refund policy.”

5. **Section 109** (Means of Appeal) is amended by deleting the section in its entirety.

6. **Section 305.5** (Private garages) is amended by deleting the section in its entirety.

7. **Section 403.4.3** (Copper and copper alloy) is amended by deleting the section in its entirety.

8. **Section 403.5.3** (Copper and copper alloy tubing) is amended by deleting the section in its entirety.

9. **Section 406.1.2** (Repairs and additions) is amended by deleting the existing text in its entirety and replacing it with the following:

“In the event repairs or additions are made after the pressure test, the affected piping shall be tested. If approved by the code official, minor repairs and additions are not required to be pressure tested provided the work is inspected and connections are tested with a noncorrosive leak-detecting fluid or other leak detecting methods.

10. **Section 406.4** (Test pressure measurement) is amended by adding the following to the end of said section:  
'For gas systems with a working pressure up to and including five (5) psi., a diaphragm gauge utilizing a dial with a minimum diameter of three and one-half inches (3 ½"), a set hand, 2/10 pound incrementation and a pressure range not more than twenty (20) psi shall be acceptable. A mechanical spring gauge is only acceptable for use on gas systems requiring a pressure test of more than 20 psig.'
11. **Section 406.4.1** (Test pressure) is amended by deleting the existing text in its entirety and replacing it with the following:  
  
'The test pressure to be used shall be no less than twice the proposed maximum working pressure, but no less than five (5) psig, irrespective of design pressure.'
12. **Section 406.4.2** (Test duration) is amended by deleting the existing text in its entirety and replacing it with the following:  
  
"Gas piping systems shall withstand the required pressure test for a period of not less than ten (10) minutes without showing any drop in pressure."

**AMENDMENTS TO THE INTERNATIONAL MECHANICAL CODE**

“D. The International Mechanical Code adopted by reference in Section 101.4.2, 2018 International Building Code is hereby amended as follows:

1 **Section 102.8** (Referenced codes and standards) is amended by adding the following exception:

‘Exception: Any reference to the ICC Electrical Code shall mean the National Electrical Code, as adopted and amended by the City of College Station.’

2 **Section 106.3** (Application for permit) is amended by deleting the text in said section and replacing it with the following:

‘The code official may require a permit application for work regulated by this code.’

3 **Section 106.5.2** (Fee schedule) is amended by deleting the section in its entirety.

4 **Section 106.5.3** (Fee refunds) is amended by deleting the text in said section and replacing it with the following:

‘The City Manager or his designee is authorized to establish a refund policy.’

5 **Section 108.5** (Stop work orders) is amended by inserting the following amounts in the blanks provided at the end of said section:

‘twenty-five (\$25.00) in the first blank and two-thousand (\$2,000.00) in the second blank’

6 **Section 109** (Means of Appeal) is amended by deleting the section in its entirety.

7 **Section 304.7** (Private garages) is amended by deleting the section in its entirety.

8 **Section 507.6.1** (Capture and containment test) is amended by deleting the section in its entirety.

**AMENDMENTS TO THE INTERNATIONAL PLUMBING CODE**

“E. The International Plumbing Code adopted by reference in Section 101.4.3, 2012 International Building Code is hereby amended as follows:

- 1 **Section 102.8** (Referenced codes and standards) is amended by adding the following exception:

‘Exception: Any reference to the ICC Electrical Code shall mean the National Electrical Code, as adopted and amended by the City of College Station.’

- 2 **Section 106.3** (Application for permit) is amended by deleting the text in said section and replacing it with the following:

‘The code official may require a permit application for work regulated by this code.’

- 3 **Section 106.6.2** (Fee Schedule) is amended by deleting this section in its entirety.

4. **Section 106.6.3** (Fee refunds) is amended by deleting the text in said section and replacing it with the following:

‘The City Manager or designee is authorized to establish a refund policy.’

5. **Section 108.5** (Stop work orders) is amended by inserting the following amounts in the blanks provided at the end of said section:

‘twenty-five (\$25.00) in the first blank and two-thousand (\$2,000.00) in the second blank’

6. **Section 109** (Means of Appeal) is amended by deleting the section in its entirety.

7. **Section 305.4.1** (Sewer depth) is amended by inserting “twelve (12)” in both blanks and adding the following sentence to the end of said section.

‘Where conditions prohibit the required amount of cover, cast iron pipe with approved joints may be used unless other means of protecting the pipe is provided as approved by the Building Official.’

8. **Section 312.1** (Required tests) is amended by deleting the following text from said section:

‘, for piping systems other than plastic, by’

9. **Section 312.2** (Drainage and vent water test) is amended by deleting said section in its entirety and replacing with the following:

‘312.2 Drainage water test. A water test shall be applied to the drainage system either in its entirety or in sections. If applied to the entire system, all openings in the piping shall be tightly closed, except the highest opening, and the system shall be filled with water to the point of overflow. If the system is tested in sections, each opening shall be tightly plugged except the highest opening of the section under test, and each section shall be tested with not less than a 5-foot head of water. This pressure shall be held for at least 15 minutes. The drainage system shall then be tight at all points.’

10. **Section 312.3** (Drainage and vent air test) is amended by deleting said section in its entirety and replacing with the following:

‘312.3 Drainage air test. An air test shall be applied to the drainage piping by forcing air into the system until there is uniform gauge pressure of 5 pounds per square inch (psi) or sufficient to balance a 10-inch column of mercury. This pressure shall be held for a test period of at least 15 minutes. Any adjustment to the test pressure required because of changes in ambient temperature or the seating of gaskets shall be made prior to the beginning of the test period.’

11. **Section 312.6** (Gravity sewer test) is amended by replacing “10-foot” with “5-foot”.

12. **Section 312.10** (Inspection and testing of backflow prevention assemblies.) is amended by deleting said section in its entirety and replacing with the following:

‘312.10 Inspection and testing of backflow prevention assemblies. Upon initial installation, an inspection shall be made of all backflow prevention devices and assemblies to determine whether they are operable. Testing of all backflow prevention devices and assemblies shall be in accordance with Chapter 11, Section 10, Subsection F, of the Code of Ordinances, City of College Station, Texas.’

13. **Section 410.4** (Substitution) is amended by deleting the last sentence in said section and replacing it with the following:

‘Where bottle water dispensers are provided in other occupancies, drinking fountains shall not be required.’

14. **Table 605.3** (Water Service Pipe) is amended by deleting the following materials:

Acrylonitrile butadiene styrene (ABS) plastic pipe  
Polyethylene (PE) plastic pipe  
Polyethylene (PE) plastic tubing

Polyethylene/aluminum/polyethylene (PE-AL-PE) pipe

15. **Section 606** (Installation of the Building Water Distribution System) is amended by adding section 606.8 to read as follows:

‘606.8 Materials below slab. Water distribution piping installed under concrete slabs shall be copper (minimum type K), cross-link polyethylene (PEX) tubing, or cross-linked polyethylene/aluminum/ polyethylene (PEX-AL-PEX) pipe, all installed without joints or connections. Materials subject to corrosion shall be protected when exposed to concrete or corrosive soils.’

16. **Section 606** (Installation of the Building Water Distribution System) is amended by adding section 606.9 to read as follows:

‘606.9 Sleeved cross-polyethylene piping or tubing. ‘When a sleeve is provided for cross-linked polyethylene (PEX) plastic piping or tubing installed under concrete slabs the annular space between the piping or tubing and the sleeve must be caulked, foamed, or otherwise sealed to prevent the entrance of termiticide.’

17. **Section 608.17.5** (Connections to lawn irrigation systems) is amended by deleting the first sentence in said section and replacing it with the following:

‘The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric vacuum breaker, a pressure vacuum breaker assembly, a reduced pressure principle backflow prevention assembly or a double check.’

18. **Section 701.2** (Sewer required) is amended by deleting the section in its entirety and replacing with the following:

‘701.2 Sewer required. Every building in which plumbing fixtures are installed and all premises having sanitary drainage piping shall be connected to an approved sewer. Private sewage systems must comply with City of College Station’s Code of Ordinances. All private sewage disposal systems must comply with the latest adopted standards of the Texas Commission on Environmental Quality and be installed under the direction of the Brazos County Health Department. The installer shall be licensed by the Texas Commission on Environmental Quality.’

19. **Section 1003.3.5** (Hydromechanical grease interceptors, fats, oils and greases disposal systems and automatic grease removal devices) is amended by deleting the first sentence in said section:

**AMENDMENTS TO THE  
INTERNATIONAL PROPERTY MAINTENANCE CODE**

F. The International Property Maintenance Code adopted by reference in Section 101.4.4, 2018 International Building Code is hereby amended as follows:

1. **Section 102.7** (Referenced codes and standards) is amended by adding the following exception:  
‘Exception: Any reference to the ICC Electrical Code shall mean the *National Electrical Code*, as adopted and amended by the City of College Station.’
2. **Section 107** (Notices and orders) is amended by deleting the section in its entirety.
3. **Section 108** (Unsafe Structures and Equipment) is amended by deleting the section in its entirety.
4. **Section 109** (Emergency Measures) is amended by deleting the section in its entirety.
5. **Section 110** (Demolition) is amended by deleting the section in its entirety.
6. **Section 111** (Means of Appeal) is amended by deleting the section in its entirety.
7. **Section 302.4** (Weeds) is amended by deleting the section in its entirety.
8. **Section 304.3** (Premises identification) is amended by deleting the text in said section and replacing it with the following: Premises identification shall be in compliance with Section 502.1, 2018 International Building Code as amended.
9. **Section 304.14** (Insect screens) is amended by deleting the existing text and replacing it with the following:

‘Every door, window, and other outside opening required for ventilation of habitable rooms, food preparation areas, food service areas or any other areas where products to be included or utilized in food for human consumption are processed, manufactured, packaged or stored, shall be supplied with approved tightly fitting screens of not less than 16 mesh per inch (16 mesh per 25mm) and every swinging door shall have a self-closing device in good working condition.

**Exceptions:**

1. Screens shall not be required where other approved means, such as air curtains or Insect repellent fans, are employed.
2. Screens shall not be required for windows and doors enclosing habitable spaces that contain central heating and air conditioning equipment that provide mechanical ventilation.’

10. **Section 602.3** (Heat supply) is amended by adding the following dates in the blanks provided:

‘1 October in first blank and 30 April in second blank’

11. **Section 602.4** (Occupiable work space) is amended by adding the following dates in the blanks provided:

‘1 October in first blank and 30 April in second blank’

12. **Section 602.4** (Occupiable work spaces) is amended by adding the following exception:

‘3. Warehouse, storage rooms and similar areas that are not occupied on a constant basis.’

13. Appendix A (Boarding Standard) is hereby adopted.

**AMENDMENTS TO THE  
INTERNATIONAL ENERGY CONSERVATION CODE**

G. The International Energy Conservation Code adopted by reference in Section 101.4.6, 2018 International Building Code, is hereby amended as follows:

1. **Section C&R106.1** (Referenced codes and standards) is amended by adding the following to said section:

“Any reference to the ICC Electrical Code shall mean the National Electrical Code, as adopted and amended by the City of College Station.”

2. **Section C&R109** (Board of Appeals) is amended by deleting the section in its entirety.
3. **Section C402.5** (Air leakage-thermal envelope (Mandatory)) is amended by adding an exception:

“**Exception:** The air leakage – thermal envelope shall be considered acceptable when the items listed in Table R402.4.1.1, applicable to the method of construction, are field verified. Where required by the code official, an approved third party, independent from the installer, shall inspect and approve the thermal envelope and insulation installation.”

4. **Section R401.3** (Certificate) is amended by deleting the existing text from said section:

“The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list “gas-fired unvented room heater,” “electric furnace” or “baseboard electric heater.” as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters.”

5. **Section R402.4.1.2** (Testing) is amended by adding an exception:

“**Exception:** Building envelope tightness and insulation installation shall be considered acceptable when the items listed in Table R402.4.1.1, applicable to the method of construction, are field verified. Where required by the code official, an approved third party independent from the installer, shall inspect and approve the air barrier and insulation installation.”

6. **Section R403.3.1** (Insulation (Prescriptive)) is amended by adding the following to the end of the section:

“Supply and return air ducts in unconditioned spaces may have an insulation R-Value of 6 when installed in conjunction with an air conditioner having a minimum SEER rating of 15.”

7. **Section R403.3.3** (Duct Testing (Mandatory)) is amended by adding an additional exception below said section:

**Exception:** 2. Duct tightness shall be considered acceptable when the items listed below, applicable to the method of construction, are field verified:

Connections:

- a. Seal core to collar with UL listed mastic or at least 2 wraps of UL 181 listed tape .
- b. Secure connection with mechanical clamp placed over the core and tape.
- c. Pull jacket and insulation back over core. Use a mechanical clamp, two wraps of UL 181 listed tape or UL listed mastic to secure insulation.a

Splices:

- a. Butt two cores together on a 4” length metal sleeve.
- b. Secure core and sleeve with UL listed mastic or two wraps of UL 181 listed tape
- c. Secure connection with 2 clamps placed over the taped core ends.
- d. Pull jacket and insulation back over core. Use two wraps of UL 181 listed tape or UL listed mastic to secure insulation.

8. **Section R403** (Systems) is amended by adding R403.13 to read as follows:

**“403.13 Heating equipment.** Electrical resistance heat may be used as the primary source of heating for residential use not exceeding five hundred (500) square feet in area.”

9. **Section R406.5** (Verification by approved agency) is amended by replacing the existing text with:

“The Code Official may require verification of compliance with Section R406 be completed by an approved third party.”

**SEC. 103-162 - NATIONAL ELECTRICAL CODE ADOPTED**

A booklet entitled 'National Electrical Code 2017 Edition' as amended and as hereafter may be amended, at least one (1) copy of which is on file in the office of the Building Official of the City of College Station, Texas, is hereby adopted and designated as the Electrical Code of College Station, Texas.

**AMENDMENTS TO THE NATIONAL ELECTRICAL CODE**

1. **Section 210.23 (A) 15- and 20- Ampere Branch Circuits.** Shall be amended to delete the reference to 15 ampere branch circuits. It shall also be amended to include the following sentence after said section:  
  
"However, a circuit of twenty (20) amperes shall not serve more than ten openings."
2. **Table 210.24 Summary of Branch-Circuit Requirements** shall be amended by placing an asterisk next to all 14 AWG conductors indicated in the table and by adding this footnote at the bottom of the table:  
  
"\* special note: Except for fixture wires in UL or other listed fixtures, no conductor of a size smaller than 12 AWG solid copper is allowed in branch circuit wiring."
3. **Section 210.52 (B) Small Appliances** shall be amended by adding the following subsection:  
  
"(4) **Separate Circuit Required.** A separate circuit is required for each refrigerator, deep freeze, dishwasher, disposal, trash compactor or any other load exceeding six (6) amperes."
4. **Section 210.52 (C) Countertops** shall be amended to include after the words '...with 210.52 (C) (1) through (C) (5). the following sentence:  
  
"However, a separate circuit is required for microwave ovens or any other counter top appliance with a load exceeding six (6) amperes."
5. **Section 210.52 (F) Laundry Areas.** Shall be amended to include after the words '... for the installation of laundry equipment.' the following sentence:  
  
"However, a separate circuit is required for a washing machine or any other laundry appliance with a load exceeding six (6) amperes."
6. **Section 210.52 Dwelling Unit Receptacle Outlets.** Shall be amended by adding the following subsection:  
  
"(J) **Other Locations.** A separate circuit is required for each well pump or other outdoor loads exceeding six (6) amperes."

7. **Article 230 Services.** Shall be amended by adding the following section:

“230.11 **Meter Mounting Heights.** Individual meters shall be mounted at a height not greater than 5'-6” or less than 4'-6" above finished grade, measured to the center line of the meter base. Meter packs shall be mounted with its horizontal centerline not greater than 4'-6” or less than 4'-0" above finished grade.”

“Exception: Meters and meter packs may be mounted at a different height by special permission of the Building Official or his designee when special conditions make the installation at the above heights impractical. “

8. **Section 230.70 General** shall be amended by adding the following subsection:

“(D) **Service Disconnecting Means for Commercial Buildings and Structures.** For commercial buildings and structures, the service disconnecting means shall be installed on the outside of the building or structure. A power operated disconnect switch (shunt trip) is permitted for service disconnects rated 1000 amps or more. All shunt trip disconnecting means shall be of the maintained contact type in an approved, lockable enclosure. All service disconnects shall be clearly marked in a permanent manner.

**Exception:** A power operated disconnect switch (shunt trip) may be allowed on service disconnects rated less than 1000 amps, if the applicant requests an exception from the Electrical Division and Building Official and satisfies the official that one of the following criteria has been met.

- (a) A power operated disconnect switch (shunt trip) may be used for a service disconnect rated less than 1000 amps when the building or structure is served by a single transformer and the transformer is not anticipated to be used for multiple services; or
- (b) A power operated disconnect switch (shunt trip) may be used for a service disconnect rated less than 1000 amps on an existing building or structure when space is not available to mount an external disconnect.

9. **Article 230 Services.** Shall be amended by adding the following section:

“230.70 (E) **Outside Disconnect Locking Device.** Factory installed key operated lock shall have an alternate locking mechanism approved by the local jurisdiction.”

10. **Section 230.71 (A) General** shall be amended to include the following sentence after said section:

“Any multi-tenant building larger than 5,000 square feet shall have a service disconnect.”

11. **Section 250.52 (A) (5) Rod and Pipe Electrodes** shall be amended by deleting the section in its entirety and replacing with the following:  
  
    **“Rod and Pipe Electrodes.** Rod and pipe electrodes shall not be less than eight (8) feet in length, not less than 5/8” in diameter and shall be copper coated.”
12. **Section 310.106 (B) Conductor Material** shall be amended by adding the following Exception:  
  
    **“Exception:** Aluminum and copper-clad aluminum is not allowed in branch circuits.”
13. **Section 320.12 Uses Not Permitted** shall be amended by deleting the section in its entirety and replacing with the following:  
  
    **“Uses Not Permitted.** Type AC cable shall not be permitted in commercial buildings as a wiring method.”
14. **Section 334.12 (A) Types NM, NMC, and NMS.** Shall be amended to include the following subsection:  
    “(11) In educational occupancies as defined by the City’s “adopted building code.”