ORDINANCE NO. 6939

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SHERMAN, TEXAS, AMENDING THE CODE OF ORDINANCES OF THE CITY OF SHERMAN, TEXAS, CHAPTER 3 (BUILDING REGULATIONS), ARTICLE 3.04 (FIRE PREVENTION CODE), CHAPTER 5 (FIRE PREVENTION AND PROTECTION), ARTICLE 5.05 (PERMIT AND FIRE SERVICE FEES) AND APPENDIX C (FEE SCHEDULE); MODIFYING CERTAIN EXISTING REGULATIONS AND ESTABLISHING CERTAIN NEW REGULATIONS RELATING TO FIRE PREVENTION; MODIFYING CERTAIN EXISTING FEES AND CHARGES AND ESTABLISHING CERTAIN NEW FEES AND CHARGES; PROVIDING A PENALTY CLAUSE WITH A MAXIMUM FINE OF $2,000, SAVINGS/REPEALING CLAUSE, SEVERABILITY CLAUSE AND AN EFFECTIVE DATE; PROVIDING FOR THE PUBLICATION OF THE CAPTION HEREOF; FINDING AND DETERMINING THAT THE MEETING AT WHICH THIS ORDINANCE IS PASSED WAS NOTICED AND IS OPEN TO THE PUBLIC AS REQUIRED BY LAW

WHEREAS, the City Council of the City of Sherman, Texas ("City Council") finds that it is necessary to amend Chapter 3 (Building Regulations), Article 3.04 (Fire Prevention Code), Chapter 5 (Fire Prevention and Protection), Article 5.05 (Permit and Fire Service Fees) and Appendix C (Fee Schedule) of the Code of Ordinances, City of Sherman, Texas ("Code of Ordinances") to modify certain existing regulations and establish certain new regulations relating to fire prevention and associated fees and charges in the City of Sherman, Texas ("City" or "Sherman"); and

WHEREAS, Sherman has complied with all legal notices and public hearings as required by law; and

WHEREAS, the City Council finds that adopting this Ordinance promotes the health, safety, welfare and morals of Sherman and is in the best interest of the citizens of Sherman.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SHERMAN, TEXAS:

SECTION 1: Findings Incorporated. The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

SECTION 2: Amendment to Chapter 3 (Building Regulations), Article 3.04 (Fire Prevention Code) of the Code of Ordinances. Article 3.04 (Fire Prevention Code) of the Code of Ordinances is hereby amended as follows[1]:

"**ARTICLE 3.04 FIRE PREVENTION CODE**

Sec. 3.04.001 Fire Code Amendments.

(a) The 2021 edition of the International Fire Code, published by the International Code Council, being chapters 1 through 67 and 80 together with appendices A through J and

[1] Deletions are evidenced by ~~strikethrough~~; additions are *italicized.*

N, is hereby adopted in its entirety, as if fully set forth herein, as the fire prevention code of the City. The latest edition of NFPA standards shall be adopted and will be referred to when referenced in the 2021 International Fire Code. The following additions, amendments and/or deletions to the International Fire Code, 2021 edition, are hereby adopted:

(1) Section 102 is hereby amended to add section 102.1.1 to read as follows:

Section 102.1.1. The latest edition of NFPA standards shall be adopted and will be referred to when referenced in the 2021 International Fire Code.

(2) Section 103.1 is hereby amended to read as follows:

Section 103.1 Creation of agency. Sherman Fire Marshal's Office is hereby created and the official in charge thereof shall be known as the fire code official. The function of the agency shall be the implementation, administration and enforcement of the provisions of this code.

(3)~~(2)~~ Section 103.2 is hereby amended to read as follows:

Section 103.2 Appointment. The *fire code official* (fire marshal) shall be appointed by the fire chief.

(4) Section 104.8.3 is hereby added to read as follows:

104.8.3 Listed compliance. Where this code or a referenced standard requires equipment, materials, products or services to be listed and a listing standard is specified, the listing shall be based on the specified standard. Where a listing standard is not specified, the listing shall be based on an approved listing criteria. Listings shall be germane to the provision requiring the listing. Installation shall be in accordance with the listing and the manufacturer's instructions, and where required to verify compliance, the listing standard and manufacturer's instructions shall be made available to the fire code official.

(5) Section 105.5.53 is hereby added to read as follows:

105.5.53 Lithium batteries. An operational permit is required for an accumulation of more than 15 cubic feet (0.42 m³) of lithium-ion and lithium metal batteries, where required by Section 322.2.

(6) Section 105.6.25 is hereby added to read as follows:

105.6.25 Electric vehicle (EV) charging stations. Construction permits are required to install or modify an electric vehicle charging station. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

(7) Section 105.6.26 is hereby added to read as follows:

105.6.26 Automatic sprinkler systems. A construction permit is required for installation of or modification to an automatic sprinkler system. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

(8) Section 105.6.27 is hereby added to read as follows:

105.6.27 Electronic access control systems. Construction permits are required to install or modify an electronic access control system, as specified in Chapter 10. A separate construction permit is required to install or modify a fire alarm system that may be connected to the access control system. Maintenance

performed in accordance with this code is not considered to be a modification and does not require a permit.

(9)~~(3)~~ Section 112.4 is hereby amended to read as follows:

112.4 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the *approved* construction documents or directive of the *fire code official*, or of a permit or certificate used under provisions of this code, shall be guilty of an offense, punishable by a fine of not more than $2,000. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

(10)~~(4)~~ Section 202 is hereby amended to add the following definitions:

City. The City of Sherman, Texas.

Emergency access easement. An access road or fire lane located on private property dedicated by the owner(s) of the property to provide fire apparatus access.

Fire code official. The ~~fire chief,~~ fire marshal~~, or member of the fire department charged with the duties of administration and enforcement of this code,~~ or a duly authorized representative.

Self-service storage facility. Real property designated and used for the purpose of renting or leasing individual spaces to customers for the purpose of storing and removing personal property on a self-service basis.

Standby personnel. Qualified fire service personnel, *approved* by the fire chief. When utilized, the number required shall be as directed by the fire chief. Charges for utilization shall be as normally calculated by the jurisdiction.

(11)~~(5)~~ Section 307.2 is hereby amended to read as follows:

307.2 Permit required. A permit shall be obtained from the *fire code official* in accordance with section 105.5 prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or a bonfire. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

Exceptions:

(A) Fires which meet all the following requirements:

(i) The pile size is 5 feet (3048 mm) or less in diameter and 5 feet (1524 mm) or less in height.

(ii) Atmospheric humidity is 40 percent or greater and maximum wind speed is 15 miles per hour or less.

(iii) No more than one pile burning at any one time.

(iv) Prior notification given to the Sherman Fire Marshal's Office.

(v) Conducted in accordance with all Texas Commission on Environmental Quality conditions.

(12)~~(6)~~ Section 307.4 is hereby amended to read as follows:

307.4 Location. The location for open burning shall not be less than 100 feet

(30 480 mm) from any structure or the property boundary, and provisions shall be made to prevent the fire from spreading to within 100 feet (30 480 mm) of any structure or the property boundary. The location for open burning shall not be less than 300 feet (91 440 mm) from any sensitive receptor as defined by Texas Commission on Environmental Quality 30 TAC 111.203(8), unless written permission is obtained from the owner of the sensitive receptor, including any occupied buildings.

Exceptions:

(A) Fires in *approved* containers that are not less than 15 feet (4572 mm) from a structure, fencing or property boundary.

(B) The minimum required distance from a structure, fencing or property boundary shall be 25 feet (7620 mm) where the pile size is 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.

(13)~~(7)~~ Section 307.4.1 is hereby amended to read as follows:

307.4.1 Bonfires. Bonfires are prohibited.

(14)~~(8)~~ Section 307.4.2 is hereby amended to read as follows:

307.4.2 Recreational fires. Recreational fires shall not be conducted within 100 feet (30 480 mm) of a structure or combustible material. Conditions which could cause a fire to spread to within 100 feet (30 480 mm) of a structure shall be eliminated prior to ignition.

(15) Section 314.4 is hereby amended to read as follows:

314.4 Vehicles. Electric, liquid-fueled, or gaseous-fueled vehicles, aircraft, boats, or other motorcraft shall not be located indoors except as follows:

1. The engine starting system is made inoperable or ignition batteries are disconnected except where the fire code official requires that the batteries remain connected to maintain safety features.

2. Fuel in fuel tanks does not exceed any of the following:

2.1. Class I, II, and III liquid fuel does not exceed one-quarter tank or 5 gallons (19 L), whichever is less.

2.2. LP gas does not exceed one-quarter tank or 6.6 gallons (25 L), whichever is less.

2.3. CNG does not exceed one-quarter tank or 630 cubic feet (17.8 m^3), whichever is less.

2.4. Hydrogen does not exceed one-quarter tank or 2,000 cubic feet (57 m^3), whichever is less.

3. Fuel tanks and fill openings are closed and sealed to prevent tampering.

4. Vehicles, aircraft, boats, or other motor craft equipment are not fueled or defueled within the building.

5. Electric vehicles shall not be charged inside buildings or other structures, other than where approved in parking garages, or unless otherwise approved by the fire code official.

(16) Section 322 is hereby added to read as follows:

Section 322 Lithium-ion and lithium metal battery storage.

322.1 General

The storage of lithium-ion and lithium metal batteries shall comply with Section 322.

Exceptions:

1. *New or refurbished batteries installed in the equipment, devices or vehicles they are designed to power.*
2. *New or refurbished batteries packed for use with the equipment, devices or vehicles they are designed to power.*
3. *Batteries in original retail packaging that are rated at not more than 300 watt-hours for lithium-ion batteries or contain not more than 25 grams of lithium metal for lithium metal batteries.*
4. *Temporary storage of batteries or battery components during the battery manufacturing process prior to completion of final quality control checks.*
5. *Temporary storage of batteries during the vehicle manufacturing or repair process.*

322.2 Permits

Permits shall be required for an accumulation of more than 15 cubic feet (0.42 m³) of lithium-ion and lithium metal batteries, other than batteries listed in the exceptions to Section 322.1, as set forth in Section 105.5.53.

322.3 Fire safety plan

A fire safety plan shall be provided in accordance with Section 404. In addition, the fire safety plan shall include emergency response actions to be taken upon detection of a fire or possible fire involving lithium-ion or lithium metal battery storage.

322.4 Storage requirements

Lithium-ion and lithium metal batteries shall be stored in accordance with Section 322.4.1, 322.4.2, or 322.4.3, as applicable.

322.4.1 Limited indoor storage in containers

Not more than 15 cubic feet (0.42 m³) of lithium-ion or lithium metal batteries shall be permitted to be stored in containers in accordance with all of the following:

1. *Containers shall be open top and constructed of noncombustible materials or shall be approved for battery collection.*
2. *Individual containers and groups of containers shall not exceed a capacity of 7.5 cubic feet (0.21 m³).*
3. *A second container or group of containers shall be separated by not less than 3 feet (914 mm) of open space or 10 feet (3048 mm) of space that contains combustible materials.*
4. *Containers shall be located not less than 5 feet (1524 mm)*

from exits or exit access doors.

322.4.2 Indoor storage areas.

Indoor storage areas for lithium-ion and lithium metal batteries, other than those complying with Section 322.4.1, shall comply with Section 322.4.2.1 through 322.4.2.6.

322.4.2.1 Technical opinion and report

A technical opinion and report complying with Section 104.8.2 shall be prepared to evaluate the fire and explosion risks associated with the indoor storage area and to make recommendations for fire and explosion protection. The report shall be submitted to the fire code official and shall require the fire code official's approval prior to issuance of a permit. In addition to the requirements of Section 104.8.2, the technical opinion and report shall specifically evaluate the following:

1. *The potential for deflagration of flammable gases released during a thermal runaway event.*
2. *The basis of design for an automatic sprinkler system or other approved fire suppression system. Such design basis shall reference relevant full-scale fire testing or another approved method of demonstrating sufficiency of the recommended design.*

322.4.2.2 Construction requirements

Where indoor storage areas for lithium-ion and lithium metal batteries are located in a building with other uses, battery storage areas shall be separated from the remainder of the building by 2-hour rated fire barriers or horizontal assemblies. Fire barriers shall be constructed in accordance with Section 707 of the International Building Code, and horizontal assemblies shall be constructed in accordance with Section 711 of the International Building Code.

Exceptions:

1. *Where battery storage is contained in one or more approved prefabricated portable structures providing a complete 2-hour fire-resistance-rated enclosure, fire barriers and horizontal assemblies are not required.*
2. *Where battery storage is limited to new batteries in packaging that has been demonstrated to and approved by the fire code official as sufficient to isolate a fire in packaging to the package interior, fire batteries and horizontal assemblies are not required.*

322.4.2.3 Fire protection systems

Indoor storage area for lithium-ion and lithium metal batteries shall be protected by an automatic sprinkler system complying with Section 903.3.1.1 or an approved alternative fire suppression system. The system design shall be based on recommendations in the approved technical opinion and report required by section 322.4.2.1.

322.4.2.4 Fire alarm systems

Indoor storage areas for lithium-ion and lithium metal batteries shall be provided with an approved automatic fire detection and alarm system complying with Section 907. The fire detection system shall use air-aspirating smoke detection, radiant energy-sensing fire detection or both.

322.4.2.5 Explosion Control

Where the approved technical opinion and report required by Section 322.4.2.1 recommends explosion control, explosion control complying with section 911 shall be provided.

322.4.2.6 Reduced requirements for storage of partially charged batteries

Indoor storage areas for lithium-ion and lithium metal batteries with a demonstrated state of charge not exceeding 30 percent shall not be required to comply with Sections 322.4.2.1, 322.4.2.2, and 322.4.2.5, provided that procedures for limiting and verifying that the state of charge will not exceed 30 percent have been approved.

322.4.3 Outdoor Storage

Outdoor storage of lithium-ion or lithium metal batteries shall comply with Sections 322.4.3.1 through 322.4.3.3.

322.4.3.1 Distance from storage to exposures.

Outdoor storage of lithium-ion or lithium metal batteries, including storage beneath weather protection in accordance with Section 414.6.1 of the International Building Code, shall comply with one of the following:

1. *Battery storage shall be located not less than 20 feet (6096 mm) from any building, lot line, public street, public alley, public way, or means of egress.*
2. *Battery storage shall be located not less than 3 feet (914 mm) from any building , lot line, public street, public alley, public way, or means of egress, where the battery storage is separated by a 2-hour fire-resistance-rated assembly without openings or penetration and extending 5 feet (1524 mm) above and to the sides of the battery storage area.*
3. *Battery storage shall be located not less than 3 feet (914 mm) from any building, lot line, public street, public alley, public way, or means of egress, where the batteries are contained in approved, prefabricated portable structures providing a complete 2-hour fire-resistance-rated enclosure.*

322.4.3.2 Storage area size limits and separation

Outdoor storage areas for lithium-ion or lithium metal batteries, including storage beneath weather protection in accordance with Section 414.6.1 of the International Building Code, shall not exceed 900 square feet (83.6 m²). The height of battery storage in such areas shall not exceed 10 feet (3048 mm). Multiple battery storage areas shall be separated from each other by not less than 10 feet (3048 mm) of open space.

322.4.3.3 Fire detection

Outdoor storage areas for lithium-ion or lithium metal batteries, regardless of

whether such areas are open, under weather protection or in a prefabricated portable structure, shall be provided with an approved automatic fire detection and alarm system complying with Section 907. The fire detection system shall use radiant energy-sensing fire detection.

(17) Section 323 is hereby added to read as follows:

323 Electric vehicles (EVs).

323.1 Electric vehicle charging stations.

Electric vehicle (EV) charging stations shall not be located inside buildings and/or structures, except where approved for parking garage locations as per the National Electrical Code.

323.1.1 Charging stations inside parking garage.

EV charging stations located in parking garages shall be located at grade level along the exterior perimeter walls and shall be within 150 feet of fire apparatus access roadway, or shall be located on the top level of the garage with no roof or structure above.

323.1.2 Charging stations inside R-3 and R-4 occupancies.

Approved charging stations in the private garage shall have a listed heat alarm installed in the garage and interconnected to the smoke alarms inside the dwelling.

323.2 Disconnect

Locations containing electric vehicle charging stations shall be provided with a clearly identified and readily accessible emergency disconnect installed in an approved location.

The emergency disconnects for exterior electric vehicle charging stations shall be located within 100 feet (30,480 mm) of, but not less than 20 feet (6096 mm) from the charging stations, unless otherwise approved by the fire code official.

323.2.1 Height

The height of the emergency disconnect switch shall be not less than 42 inches (1067 mm) and not more than 48 inches (1219 mm) measured vertically, from the floor level to the activating button.

323.2.2 Emergency disconnect sign

Emergency disconnect devices shall be distinctly labeled as: "EMERGENCY ELECTRIC VEHICLE CHARGER DISCONNECT." Signs shall be placed in an approved location and shall consist of all of the following:

1. White reflective background with red letters.

2. Weather-resistant durable material.

3. Lettering not less than 2 inches (51 mm) high.

4. Permanently affixed to the building or structure in an approved manner.

4.1 If no building or structure is available, the location will be approved by the Fire Code Official.

323.3 Damaged Electric Vehicle Batteries.

Damaged electric vehicle batteries shall not be stored inside any building or structure, unless otherwise approved by the Fire Code Official.

(18)~~(9)~~ Section 503.1.1 is hereby amended to read as follows:

503.1.1 Buildings and facilities. *Approved* fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an *approved* route around the exterior of the building or facility. Except for one- or two-family dwellings, the path of measurements shall be along a minimum ten foot (10') wide level (not exceeding 3 percent grade) and unobstructed pathway around the external walls of the structure.

Exceptions:

1. The *fire code official* is authorized to increase the dimension of 150 feet (45 720 mm) where any of the following conditions occur:

1.1. The building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3. Where applicable, hose lay may be extended to 200 feet for occupancies other than those containing a Group H, High Hazard occupancy classification or those containing high-piled combustible storage as defined in Section 202.

1.2 Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an *approved* alternative means of fire protection is provided.

1.3. Ther are not more than two Group R-3 or Group U occupancies.

2. Where approved by the *fire code official*, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

(19)~~(10)~~Section 503.2.1 is hereby amended to read as follows:

503.2.1 Dimensions. Fire apparatus access roads and security gate openings shall have an unobstructed width of not less than the *approved* fire apparatus access road, except for *approved* security gates in accordance with section 503.6, and an unobstructed vertical clearance of not less than 14 feet (4267 mm).

(20)~~(11)~~Section 503.2.2 is hereby amended to read as follows:

503.2.2 Authority. The *fire code official* shall have the authority to require an increase in the minimum access widths and vertical clearances where they are inadequate for fire or rescue operations.

(21)~~(12)~~Section 503.3 is hereby amended to add section 503.3.1 to read as follows:

503.3.1 Fire lane marking.

(A) Striping. Fire apparatus access roads shall be marked by painted lines of red traffic paint six inches (6") in width to show the boundaries of the lane. The words "NO PARKING FIRE LANE" or "FIRE LANE NO PARKING" shall appear in four-inch (4") white letters at 15-foot intervals on the red border markings along both sides of the fire lanes.

Where a curb is available, the striping shall be on the vertical face of the curb.

(B) When required by the *fire code official*, fire lane striping shall include an enlarged box that is eighteen inches (18") in length and twelve inches (12") in width to show the boundaries of the box. The words "BUILDING [APPROPRIATE BUILDING DESIGNATION]" shall appear in ten-inch (10") white letters on the red box and will appear directly in front of the appropriate structure.

(C) Signs. Signs shall read "NO PARKING FIRE LANE" or "FIRE LANE NO PARKING" and shall be twelve inches (12") wide and eighteen inches (18") high. Signs shall be painted on a white background with letters and borders in red, using not less than two-inch (2") lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6'6") above finished grade. Signs shall be spaced not more than fifty feet (50') apart. Signs may be installed on permanent buildings or walls or as approved by the *fire code official.*

(22)~~(13)~~Section 503.4 is hereby amended to read as follows:

503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be, obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in section 503.2.1 and any area marked as a fire lane as described in section 503.3 shall be maintained at all times. The operator of a premises shall maintain, free of obstruction, all fire lanes on their premises. The operator of the premises may include but not limited to the owner, manager, and/or general contractor. No person may mark, post or otherwise identify a non-fire lane private vehicular passageway as a fire lane or in such a manner as tends to create confusion as to whether the passageway is a fire lane. The Fire Chief and Police Chief, and their designated representatives, are authorized to remove or cause to be removed any material, vehicle, or object obstructing a fire apparatus access road at the expense of the owner of such material, vehicle, or object.

(23)~~(14)~~Section 503.7 is hereby added to read as follows:

503.7 Measuring of hose lay. Hose lay shall be measure from the centerline of the fire lane along an unobstructed and level path measuring 10 feet in width.

(24)~~(15)~~Section 505.1 is hereby amended to read as follows:

505.1 Address identification. New and existing buildings shall be provided with *approved* address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where required by the *fire code official*, address identification shall be provided in additional *approved* locations to facilitate emergency response. Strip malls in addition to the front identification shall provide the name of the business and numeric address or suite identifier on the rear access door. Town homes with rear alley garage access in addition to the front identification shall provide the numeric address

near the garage door. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

(25)~~(16)~~Section 506.1 is hereby amended to read as follows:

506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the *fire code official* is authorized to require a key box to be installed in an *approved* location. The key box shall be of an *approved* type listed in accordance with UL 1037 and shall contain keys to gain necessary access as required by the *fire code official*. Any new and existing buildings that have a fire sprinkler riser, standpipe system and/or a fire alarm control panel shall have a Knox key box that contains keys or a keycard to gain access to every door leading from the exterior of the building to the fire sprinkler riser, standpipe system and/or the fire alarm control panel.

(26)~~(17)~~Section 507.5.4 is hereby amended to read as follows:

507.5.4 Obstruction. Unobstructed access to fire hydrants shall be maintained at all times. Posts, fences, vehicles, growth, trash, storage and other materials or objects shall not be placed or kept near fire hydrants, fire department inlet connections or fire protection system control valves in a manner that would prevent such equipment or fire hydrants from being immediately discernible and/or accessible. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants.

(27)~~(18)~~Section 901.4 is hereby amended to read as follows:

901.4 Fire protection and life safety systems. Fire protection and life safety systems shall be installed, repaired, operated, and maintained in accordance with this code and the International Building Code. Any alteration to the fire protection system must be approved and a permit issued by the *fire code official*. Hydrostatic testing and inspection of the system may be required prior to the final acceptance of any system alteration.

(28) Section 901.4.7 is hereby amended to read as follows:

Section 901.4.7 Pump and riser room size. Where provided, fire pump rooms and automatic sprinkler system riser rooms shall be designed with adequate space for all equipment necessary for the installation, as defined by the manufacturer, with sufficient working space around the stationary equipment. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspection, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly. Fire pump and automatic sprinkler system riser rooms shall be provided with doors and unobstructed passage-ways large enough to allow removal of the largest piece of equipment.

The minimum riser room size shall be 36 square foot with the minimum interior wall to wall dimension of 6 feet. Additional risers require an additional minimum of 9 square foot per additional riser.

(29) Section 901.4.7.5 is hereby added to read as follows:

901.4.7.5. Fire protection equipment only. Fire pump and automatic sprinkler system riser rooms shall be limited to equipment that is intended for fire protection equipment and operations only. Limited other utilities, such as domestic water, necessary to serve the building may be permitted by the fire code official.

(30)~~(19)~~Section 901.7 is hereby amended to read as follows:

901.7 Systems out of service. Where a required fire protection system is out of service or in the event of an excessive number of activations, the fire department and the *fire code official* shall be notified immediately and, where required by the *fire code official*, the building shall either be evacuated or an *approved* fire watch shall be provided for all occupants left unprotected by the shut down until the fire protection system has been returned to service.

Where utilized, fire watches shall be provided with not less than one approved means for notification of the fire department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires.

(31) Section 903.2 is hereby amended to read as follows:

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12. Automatic sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoist ways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.

(32) Section 903.2.2 is hereby amended to read as follows:

903.2.2: Group B. An automatic sprinkler system shall be provided for Group B occupancies as required in Sections 903.2.2.1 and 903.2.2.2.

(33) Section 903.2.2.1 is hereby amended to read as follows:

903.2.2.1 Ambulatory care facilities. An automatic sprinkler system shall be installed throughout the entire floor containing an ambulatory care facility where either of the following conditions exist at any time:

1. Four or more care recipients are incapable of self-preservation.

2. One or more care recipients that are incapable of self-preservation are located at other than the level of exit discharge serving such a facility.

In buildings where ambulatory care is provided on levels other than the level of exit discharge, an automatic sprinkler system shall be installed throughout the entire floor as well as all floors below where such care is provided, and all floors between the level of ambulatory care and the nearest level of exit discharge, the level of exit discharge, and all floors below the level of exit discharge.

Exception: Unless otherwise required by this code, floors classified as an open parking garage are not required to be sprinklered.

(34) Section 903.2.2.2 is hereby by added to read as follows:

903.2.2.2 Laboratories involving research and development or testing. An Automatic sprinkler system shall be installed throughout the fire areas utilized for the research and development or testing of lithium-ion or

lithium metal batteries.

(35) Section 903.2.4 is hereby amended to read as follows:

903.2.4 Group F-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 fire area exceeds 6,000 square feet.

2. A Group F-1 fire area is located more than three stories above grade plane.

3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 6,000 square feet.

4. A Group F-1 occupancy is used to manufacture lithium-ion or lithium metal batteries.

5. A Group F-1 occupancy is used to manufacture vehicles, energy storage systems or equipment containing lithium-ion or lithium metal batteries where the batteries are installed as part of the manufacturing process.

(36) Section 903.2.7.2 is hereby added to read as follows:

903.2.7.2 Lithium-ion or lithium metal battery storage. An automatic sprinkler system shall be provided in a room or space within a Group M occupancy where required for the storage of lithium-ion or lithium metal batteries by Section 322 or Chapter 32.

(37)~~(20)~~Section 903.2.9 #5 is hereby added to read as follows:

(#5) Self-service storage facility. An *automatic sprinkler system* shall be installed throughout all self-service storage facilities.

Exception: One-story self-service storage facilities that have no interior corridors, with a one-hour fire barrier separation wall installed between every storage compartment.

(38) Section 903.2.9 #6 is hereby added to read as follows:

(#6) A Group S-1 fire area used for the storage of lithium-ion or lithium metal powered vehicles where the fire area exceeds 500 square feet (46.4 m^2).

(39) Section 903.2.11.3 is hereby amended to read as follows:

Section 903.2.11.3. Buildings 35 feet or more in height. An automatic sprinkler system shall be installed throughout buildings that have one or more stories, other than penthouses in compliance with Section 1511 of the International Building Code, located 35 feet (10,668 mm) or more above the lowest level of fire department vehicle access, measured to the finished floor.

(40) Section 903.2.11.7 is hereby added to read as follows:

903.2.11.7 High-piled combustible storage. For any building with a clear height exceeding 12 feet (4572 mm), see Chapter 32 to determine if those provisions apply.

(41) Section 903.2.11.8 is hereby added to read as follows:

903.2.11.8 Spray booths and rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing

system.

(42) Section 903.2.11.9 is hereby added to read as follows:

903.2.11.9 Buildings over 6,000 sq. ft. An automatic sprinkler system shall be installed throughout all buildings with a building area 6,000 square foot or greater and in all existing buildings that are enlarged to be 6,000 sq. ft. or greater. For the purpose of this provision, fire walls shall not define separate buildings.

Exception: Open parking garages complying with 903.2.10

(43)~~(21)~~Section 903.3.1.1.2 is hereby amended to read as follows:

903.3.1.1.2 Bathrooms. In Group R occupancies, Sprinklers shall be required in all bathrooms regardless of size.

(44) Section 903.3.1.1.3 is hereby added to read as follows:

903.3.1.1.3: Lithium-ion or lithium metal batteries. Where automatic sprinkler systems are required by this code for areas containing lithium-ion or lithium metal batteries, the design of the system shall be based on a series of fire tests. Such tests shall be conducted or witnessed and reported by an approved testing laboratory involving test scenarios that address the range of variables associated with the intended arrangement of the hazards to be protected.

(45)~~(22)~~Section 903.3.1.2 is hereby amended to read as follows:

903.3.1.2 NFPA 13R sprinkler system. Where allowed in buildings of group R, up to and including four stories in height, *automatic sprinkler systems* shall be installed in accordance with NFPA 13R.

Exception:

(A) Mixed use buildings. In buildings that include or may include multiple types of occupancies, the code official may designate the type of system and number of standpipes required.

(46)~~(23)~~Section 903.3.1.2.3 is hereby amended to read as follows:

Section 903.3.1.2.3 Attics and attached garages. Sprinkler protection is required in attached garages and in the following attic spaces.

(A) Attics that are used or intended for living purposes or storage shall be protected by an *automatic sprinkler system.*

(B) Where fuel fired equipment is installed in an attic.

(C) Where located in a building of Type III, Type IV or Type V construction designed in accordance with Section 510.2 or 510.4 of the International Building Code, attics not required by item 1 to have sprinklers shall comply with one of the following if the roof assembly is located more than 1 Story above grade.

(i) Provide *automatic sprinkler system* protection

(ii) Construct the attic using noncombustible materials.

(iii) Construct the attic using fire-retardant-treated wood complying with Section 2302.2 of the International Building Code.

(iv) Fill the attic with noncombustible insulation.

(D) Group R-4, Condition 2 occupancy attics not required by item 1 or 3 to have sprinklers shall comply with one of the following:

(i) Provide *automatic sprinkler system* protection.

(ii) Provide a heat detection system throughout the attic that is arranged to activate the building fire alarm system.

(iii) Construct the attic using noncombustible materials.

(iv) Construct the attic using fire-retardant-treated wood complying with section 2303.2 of the International Building Code.

(v) Fill the attic with noncombustible insulation.

(47)~~(24)~~Section 903.3.1.3 is hereby amended to read as follows:

903.3.1.3 NFPA 13D sprinkler systems.

Automatic sprinkler systems installed in one- and two-family dwellings; Group R-3; Group R-4, Condition 1; and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D.

Throughout shall include bathrooms and garage areas.

(48) Section 903.3.5 is hereby amended to read as follows:

903.3.5 Water supplies. Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the International Plumbing Code. For connections to public waterworks systems, the water supply test used for design of fire protection systems shall be adjusted to account for seasonal and daily pressure fluctuations based on information from the water supply authority and as approved by the fire code official.

Water supply as required for such systems shall be provided in conformance with the supply requirements of the respective NFPA standards; however, every water-based fire protection system shall be designed with a 10 psi. safety factor. Reference Section 507.4 for additional design requirements.

(49)~~(25)~~Section 903.3.7 is hereby amended to read as follows:

903.3.7 Fire department connections. Fire department connections for *automatic sprinkler systems* shall be installed in accordance with Section 912. Fire department connections shall be located not more than 100 ft (30.5 m) from the nearest fire hydrant connected to an *approved* water supply. Fire department connections shall be a 2.5-inch threaded fitting design. Fire department connections shall be equipped with locking Knox caps that operate *with the Authority Having Jurisdiction's Knox key.*

(50)~~(27)~~Section 903.4 is hereby amended to read as follows:

903.4 Sprinkler system monitoring and alarms. All valves controlling the water supply for *automatic sprinkler systems*, pumps, tanks, water levels and temperatures, critical air pressures, and water-flow switches on all sprinkler systems shall be electrically supervised. Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds and less than 90 seconds. All control valves in the sprinkler and standpipe systems

except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

Exceptions:

(A) *Automatic sprinkler systems* protecting one- and two-family dwellings installed with NFPA 13D systems.

(B) *Automatic sprinkler systems* installed in accordance with NFPA 13R where a common supply main is used to supply both domestic water and the *automatic sprinkler system*, and a separate shutoff valve for the *automatic sprinkler system* is not provided.

(C) Jockey pumps control valves that are sealed or locked in the open position.

(D) Control valves to commercial kitchen hoods, paint spray booths or dip tanks that are sealed or locked in the open position.

(E) Valves controlling the fuel supply to the fire pump engines that are sealed or locked in the open position.

(F) Trim valves to pressure switches in dry, pre-action and deluge sprinkler systems that are sealed or locked in the open position.

(G) Underground key or hub gate valves in roadway boxes.

(51) Section 903.4.3 is hereby amended to read as follows:

903.4.3 Alarms. An approved audible device, located on the exterior of the building in an approved location, shall be connected to each automatic sprinkler system. Such sprinkler waterflow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.

The alarm device required on the exterior of the building shall be a weatherproof horn/strobe notification appliance with a minimum 75 candela strobe rating, installed as close as practicable to the fire department connection.

(52)~~(26)~~Section 904.13.2 is hereby amended to read as follows:

904.13.2 System interconnection. The actuation of the fire extinguishing system shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual. When the building is not open for twenty-four hours a day for seven days a week and the building is not equipped with a fire alarm system, a single horn strobe shall be provided on the exterior of the building that activates upon actuation of the system.

(53)~~(28)~~Section 905.2 is hereby amended to read as follows:

905.2 Installation standards. Standpipe systems shall be installed in accordance with this section and NFPA 14. Fire department connections for standpipe systems shall be in accordance with section 912. Manual dry standpipe systems shall be supervised with a minimum of 10 psig and a maximum of 40 psig air pressure with a high/low alarm. In addition to this section, the *fire code official* may require the installation of standpipe systems in buildings where because of

type of occupancy, access or use requires additional fire protection. The *fire code official* may designate the type and location of standpipes within this system.

(54)~~(29)~~Section 905.3.9 is hereby added to read as follows:

905.3.9 Buildings Exceeding 10,000 sq. ft. In buildings exceeding 10,000 square feet in area per story and where any portion of the building's interior is more than 200 feet (60960mm) of travel, vertically and horizontally, from the nearest point of fire department vehicle access, Class 1 automatic wet or manual wet standpipes shall be provided.

Exceptions:

(A) Automatic dry, semi-automatic dry, and manual dry standpipes are allowed as provided for in NFPA 14, where approved by the *fire code official.*

(B) R-2 occupancies of four stories or less in height having no interior corridors.

(55)~~(30)~~Section 907.1.4 is hereby added to read as follows:

907.1.4 Design standards. All alarm systems new or replacement shall be analog intelligent addressable fire detection systems.

Exception: Existing systems need not comply unless the total building remodel or expansion initiated after the effective date of this code, as adopted, exceeds 30% of the building square footage. When cumulative building remodels or expansions exceed 50% of the building square footage the system must comply.

(56) Section 907.2.2.2 is hereby added to read as follows:

907.2.2.2: Laboratories involving research and development or testing. A fire alarm system activated by an air-sampling-type smoke detection system or a radiant-energy-sensing detection system shall be installed throughout the entire fire area utilized for the research and development or testing of lithium-ion or lithium metal batteries.

(57)~~(31)~~Section 907.2.3 is hereby amended to read as follows:

907.2.3 Group E. A manual fire alarm system that activates the occupant notification system in accordance with section 907.6 shall be installed in group E occupancies. When *automatic sprinkler systems* or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system. An *approved* smoke detection system shall be installed in group E day care occupancies. Unless separated by a minimum of 100' open space, all buildings, whether portable buildings or the main building, will be considered one building for alarm occupant load consideration and interconnection of alarm systems.

Exceptions:

(A) Group E occupancies with an occupant load of less than 50 when provided with an *approved automatic sprinkler system*.

(B) Residential in-home day care with not more than 12 children may use interconnected single station detectors in all habitable rooms. (For care of more than five children 2-1/2 or less years of age, see section 907.2.6.)

(C) Manual fire alarm boxes are not required in group E occupancies where all the following apply:

(i) Interior corridors are protected by smoke detectors with alarm verification.

(ii) Auditoriums, cafeterias, gymnasiums and the like are protected by heat detectors or other *approved* detection devices.

(iii) Shops and laboratories involving dusts or vapors are protected by heat detectors or other *approved* detection devices.

(iv) Off-premises monitoring is provided.

(v) The capability to activate the evacuation signal from a central point is provided.

(vi) In buildings where normally occupied spaces are provided with a two-way communication system between such spaces and a constantly attended receiving station from where a general evacuation alarm can be sounded, except in locations specifically designated by the *fire code official*.

(58) Section 907.2.4.1 is hereby added to read as follows:

907.2.4.1: Manufacturing involving lithium-ion or lithium metal batteries. A fire alarm system activated by an air-sampling-type smoke detection system or a radiant-energy-sensing detection system shall be installed throughout the entire fire area where lithium-ion or lithium metal batteries are manufactured; and where the manufacturer of vehicles, energy storage systems or equipment containing lithium–ion or lithium metal batteries where the batteries are installed as part of the manufacturing process.

(59) Section 907.2.7.2 is hereby added to read as follows:

907.2.7.2: Storage of lithium-ion or lithium metal batteries.

A fire alarm system activated by an air sampling-type smoke detection system or radiant-energy-sensing detection system shall be installed in a room or space within a Group M occupancy where required for the storage of lithium-ion or lithium metal batteries in accordance with Section 322.

(60)~~(32)~~Section 907.2.8.4 is hereby added to read as follows:

907.2.8.4 Carbon monoxide detectors. An *approved* carbon monoxide detection system shall be installed and maintained in all buildings that include an underground garage or vehicle storage area and in buildings that provide parking as part of the structure. The detection system shall be monitored and shall signal an alarm as part of the fire alarm panel.

Exception:

(A) Group R-3.

(61) Section 907.2.10.2 is hereby added to read as follows:

907.2.10.2: Storage of lithium-ion or lithium metal batteries. A fire alarm system activated by an air sampling-type smoke detection system or radiant-energy-sensing detection system shall be installed throughout the entire fire area where required for the storage of lithium-ion or lithium metal batteries in

accordance with Section 322.

(62)~~(33)~~Section 907.4.2 is hereby amended to read as follows:

907.4.2 Manual fire alarm boxes. Where a manual fire alarm system is required by another section of this code, it shall be activated by fire alarm boxes installed in accordance with sections 907.4.2.1 through 907.4.2.6 Manual alarm actuating devices shall be an *approved* double action type.

(63)~~(34)~~Section 907.4.2.7 is hereby added to read as follows:

Section 907.4.2.7. Where any fire alarm system is installed without a supervised sprinkler system installed, manual fire alarm boxes shall be installed at all exits. Audio-visual notification devices shall be installed to provide complete coverage as required by the *fire code official*.

(64)~~(35)~~Section 907.6.1.1 is hereby added to read as follows:

907.6.1.1 Installation. All fire alarm systems shall be installed in such a manner that the failure of any single alarm-actuating or alarm-indicating device will not interfere with the normal operation of any other such devices. All systems shall be Class "A" wired with a minimum of six feet separation between supply and return loops. IDC-Class "A" style-D- SLC Class "A" *Style 6-notification Class "B" Style Y.*

(65)~~(36)~~Section 907.6.3.2 is hereby added to read as follows:

907.6.3.2 Point addressable systems. When a fire alarm system is required by this section or by the *fire code official,* the system shall be "point addressable"; providing the type and location of the alarm. The alarm type and location must display on the alarm panel and provide type and location information to the Sherman Fire-Rescue dispatch.

(66) Section 907.7.3.1 is hereby added to read as follows:

907.7.3.1 Alarm annunciator. Alarm annunciators shall comply with all of the following:

1. If a building has a main entrance/foyer, a remote annunciator shall be provided inside the building at the main entrance/foyer.

Exceptions:

1. High-rise buildings provided with a fire command center and secondary response point.

2. When the fire alarm control unit is located inside the building at the main entrance/foyer, a remote annunciator is not required at the main entrance/foyer.

2. If a building has one or more fire riser room(s) with an exterior door, a remote annunciator shall be provided within each such fire riser room.

Exceptions:

1. High-rise buildings provided with a fire command center and secondary response point.

2. When the fire alarm control unit is located within the fire riser room, a remote annunciator is not required within the fire riser room.

3. The location of an operated initiating device shall be displayed by alphanumeric display at the annunciator.

4. The alphanumeric display shall state the device type, the floor level (if applicable), the device address and a descriptive location for the operated device(s).

5. The visible annunciation of the location of operated initiating devices shall not be canceled by the means used to deactivate alarm notification appliances.

Weatherproof horn/strobe is required outside in the direct vicinity of the FDC and visible from the fire lane or fire access road.

(67) Section 912.8 is added to read as follows:

912.8 Remote fire department connection. If the fire department connection is remote of the riser, an approved weatherproof horn/strobe device shall be installed above and within 10 feet of the fire department connection. The horn/strobe shall be at a height and location that is visible to responding emergency crews. The horn/strobe shall initiate upon sprinkler water flow.

An approved sign is required on the remote fire department connection containing the address of the system it supplies.

(68)~~(37)~~Section 913.2 is hereby amended to read as follows:

913.2 Protection against interruption of service. The fire pump, driver, and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions. The *fire code official* may require a stand-alone power source, or secondary source of power where a fire pump is installed to maintain the required fire flow in assembly occupancies, high-rise structures or any structure with greater than one hundred thousand (100,000) square feet.

(69) Section 913.2.1 is hereby amended to read as follows:

913.2.1 Protection of fire pump rooms. Rooms where fire pumps are located shall be separated from all other areas of the building in accordance with Section 913.2.1 of the International Building Code.

When located on the ground level at an exterior wall, the fire pump room shall be provided with an exterior fire department access door that is not less than 3 ft. in width and 6 ft. - 8 in. in height, regardless of any interior doors that are provided. A key box shall be provided at this door, as required by section 506.1.

Exception: When it is necessary to locate the fire pump room on other levels or not at an exterior wall, the corridor leading to the fire pump room access from the exterior of the building shall be provided with equivalent fire resistance as that required for the pump room, or as approved by the fire code official. Access keys shall be provided in the key box as required by Section 506.1.

(70)~~(38)~~Section 913.2.2 #5 is hereby added to read as follows:

5. Fire pump system shall be supervised for "loss of power," "phase reversal" and "pump running" conditions by supervisory signal on distinct circuits.

(71)~~(39)~~Section 914.3.1.1.1.1 is hereby added to read as follows:

Section 914.3.1.1.1.1 Exterior access to sprinkler control rooms. Exterior access door directly into the sprinkler control room is required.

(72) Section 1107 is hereby added to read as follows:

Section 1107: Energy storage systems.

1107.1: Lithium-ion technology energy storage systems.

The owner of an energy storage system (ESS) utilizing lithium-ion battery technology having capacities exceeding the values in Table 1207.1.1 and installed prior to the jurisdiction's adoption of the 2018 or later edition of the International Fire Code shall provide the fire code official a failure modes and effects analysis (FMEA) or other approved hazard mitigation analysis in accordance with Section 104.8.2 for review and approval.

Exception: Detached one- and two-family dwellings and townhouses.

1107.1.1: Early detection.

In addition to the requirements of Sections 1207.1.6.1 and 1207.1.6.2, the analysis shall include an assessment of the ability of the installed protection systems to provide for early detection and notification of a thermal runaway event in relation to the ability of emergency responders to safely mitigate the size and impact of a thermal runaway event.

1107.1.2: Corrective action plan.

Where hazards are identified by the analysis, a plan that includes a timetable for corrective action shall be submitted to the fire code official for review and approval. The plan shall include actions and system improvements necessary for eliminating or mitigating any identified hazards, including listed methods for early detection and notification of a thermal runaway event.

(73) The table in section 1207.1.1 is hereby amended to read as follows:

TABLE 1207.1.1

ENERGY STORAGE SYSTEM (ESS) THRESHOLD QUANTITIES

TECHNOLOGY	***ENERGY CAPACITY***[a]
Capacitor ESS	*3 kWh*
Flow batteries[b]	*20 kWh*
Lead-acid batteries, all types	*70 kWh*[c]
Lithium-ion batteries	*20 kWh*
Nickel metal hydride (Ni-MH)	*70 kWh*
Nickel-cadmium batteries (Ni-Cd) and nickel zinc (Ni-Zn) batteries	*70 kWh*
Nonelectrochemical ESS[d]	*70kWh*
Other battery technologies	*10 kWh*
Other electrochemical ESS technologies	*3 kWh*
Sodium nickel chloride batteries	*70kWh*
Zinc manganese dioxide batteries (Zn-MnO_2)	*70kWh*

For SI:1 kilowatt hour = 3.6 megajoules.

a. Energy capacity is the total energy capable of being stored (nameplate rating), not the usable energy rating. For units rated in amp-hours, kWh shall equal rated voltage times amp-hour rating divided by 1,000.
b. Shall include vanadium, zinc-bromine, polysulfide-bromide and other flowing electrolyte-type technologies.
c. Fifty gallons of lead-acid battery electrolyte shall be considered equivalent to 70 kWh.
d. Covers nonelectrochemical technologies such as flywheel and thermal ESS.

(74) Section 1207.1.1.1 is hereby added to read as follows:

Section 1207.1.1.1 Utilities applicability. Plans and specification associated with ESS owned and operated by electric utilities as a component of the electric grid that are considered critical infrastructure documents in accordance with the provisions of the North American Electric Reliability Corporation and other applicable governmental laws and regulation shall be made available to the fire code official for viewing based on the requirements of the applicable governmental laws and regulations. (material based on NFPA 855 2023 Ed.)

(75) Section 1207.1.4.1 is hereby amended to read as follows:

Section 1207.1.4.1 Fault condition. The hazard mitigation analysis shall evaluate the consequences of the following failure modes. Only single failure modes shall be considered.

1. *A thermal runaway condition in a single electrochemical ESS unit.*
2. *A mechanical failure of a nonelectrochemical ESS unit.*
3. *Failure of any battery (energy) management system or fire protection system within the ESS equipment that is not covered by product listing failure mode effects analysis (FMEA).*
4. *Failure of any required protection system external to the ESS, including but not limited to ventilation (HVAC), exhaust ventilation smoke detection, fire detection, gas detection or fire suppression system. (Material based on NFPA 855 2023 Ed.)*

(76) Section 1207.1.4.2 is hereby amended to read as follows:

Section 1207.1.4.2 Analysis approval. The fire code official is authorized to approve the hazardous mitigation analysis provided that the consequences of the hazard mitigation analysis demonstrate:

1. Fires will be contained within unoccupied ESS rooms or areas for the minimum duration of the fire-resistance-rated separations identified in Section 1207.7.4.

2. Fires involving the ESS will allow occupants or the general public to evacuate to a safe location. (Material based on NFPA 855 2023 Ed.)

(77) Section 1207.2 is hereby amended to read as follows:

1207.2 Commissioning, decommissioning, operation and maintenance. Commissioning, decommissioning, operation and maintenance shall be conducted in accordance with this section. In addition to the ordinary inspection and test requirements that buildings, structures and parts thereof are required to undergo, Energy Storage Systems subject to the provisions of Section 1207 shall undergo special inspections and tests sufficient to verify the proper commissioning of the Energy Storage System in its final installed condition. The design submission accompanying the construction documents shall clearly detail procedures and methods to be used and the items subject to

such inspections and tests. Such commissioning shall be in accordance with generally accepted engineering practice and, where possible, based on published standards for the particular testing involved. The special inspections and tests required by this section shall be conducted under the same terms as in Chapter 17 of the International Building Code.

(78) The table in 1207.5 is hereby amended to read as follows:

TABLE 1207.5

MAXIMUM ALLOWABLE QUANTITIES OF ELECTROCHEMICAL ESS

TECHNOLOGY	***MAXIMUM ALLOWABLE QUANTITIES[a]***
STORAGE BATTERIES	
Flow batteries[b]	*600 kWh*
Lead-acid, all types	*Unlimited*
Lithium-ion	*600 kWh*
Nickel-cadmium (Ni-Cd), nickel-metal hydride (NI-MH) and nickel zinc (NI-Zn)	*Unlimited*
Sodium nickel chloride	*600 kWh*
Zinc-manganese dioxide (Zn-MnO_2)	*Unlimited*
Other battery technologies	*200 kWh*
CAPACITORS	
All types	*20 kWh*
OTHER ELECTROCHEMICAL ESS	
All types	*20 kWh*

For SI: 1 kilowatt hour = 3.6 megajoules.

a. For electrochemical ESS units rated in amp-hours, kWh shall equal rated voltage times the amp-hour rating divided by 1,000.

b. Shall include vanadium, zinc-bromine, polysulfide-bromide and other flowing electrolyte-type technologies.

(79) Section 1207.5.4.1 is hereby amended to read as follows:

1207.5.4.1: System status. Lead-acid and nickel-cadmium battery systems that are used for DC power for control of substations and control or safe shutdown of generating stations under the exclusive control of the electric utility, and located outdoors or in building spaces used exclusively for such installations, shall be allowed to use the process control system to monitor the smoke or radiant energy-sensing fire detectors required in Section 1207.5.4.

(80) Section 1207.5.5 is hereby amended to read as follows:

1207.5.5 Fire suppression systems. Rooms and areas within buildings and walk-in units containing electrochemical ESS shall be protected by an automatic fire suppression system designed and installed in accordance with one of the following:

1. Automatic sprinkler systems designed and installed in accordance with Section 903.3.1.1 for ESS units (groups) with a maximum stored energy capacity of 50 kWh, as described in Section 1207.5.1 shall be designed with a minimum density of 0.3 gpm/ft^2 (1.14 L/min) based over the area of the room or 2,500 square-foot (232m^2) design area, whichever is smaller, unless a lower density is approved based on large-scale fire testing in accordance with Section 1207.1.5.

2. Automatic sprinkler systems designed and installed in accordance with Section 903.3.1.1 for ESS units (groups) exceeding 50 kWh shall use a density based on large-scale fire testing complying with Section 1207.1.5.

3.The following alternative automatic fire-extinguishing systems designed and installed in accordance with Section 904, provided that the installation is approved by the fire code official based on large-scale fire testing complying with Section 1207.1.5:

3.1.NFPA 12, Standard on Carbon Dioxide Extinguishing Systems.

3.2.NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection.

3.3.NFPA 750, Standard on Water Mist Fire Protection Systems.

3.4.NFPA 2001, Standard on Clean Agent Fire-Extinguishing Systems.

3.5.NFPA 2010, Standard for Fixed Aerosol Fire-Extinguishing Systems.

Exceptions:

1. Fire suppression systems for lead-acid and nickel-cadmium battery systems at facilities under the exclusive control of communications utilities that operate at less than 50 VAC and 60 VDC shall be provided where required by NFPA 76.

2. Lead-acid and nickel-cadmium systems that are used for DC power for control of substations and control or safe shutdown generating stations under the exclusive control of the electric utility and located outdoors or in building spaces used exclusively for such installations, shall not be required to have a fire suppression system installed.

3. Lead-acid battery systems in uninterruptable power supplies listed and labeled in accordance with UL 1778, utilized for standby power applications, which is limited to not more than 10 percent of the floor area on the floor in which the ESS is located, shall not be required to have a fire suppression system. (Material based on NFPA 855 2023 Ed.)

(81) Section 2401.2 is hereby amended to read as follows:

Section 2401.2 Nonapplicability. Is deleted in its entirety.

(82)~~(40)~~Section 3202.1 Definition "high-piled combustible storage" is hereby amended to read as follows:

High-piled combustible storage. Any building exceeding 6,000 sq. ft. that has a clear height in excess of 12 feet, making it possible to be used for storage in excess of 12 feet, shall be considered to be high piled storage and shall comply with the provisions of this section. When a specific product cannot be identified, a fire protection system shall be installed as for class IV commodities, to the maximum pile height.

(83)~~(41)~~Section 5601.1.3 is hereby amended to read as follows:

5601.1.3 Fireworks. The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

Exceptions:

(A) Only when approved for fireworks displays, storage and handling of fireworks as provided in section 5604 and 5608.

(B) The use of fireworks for *approved* display as permitted in section 5608.

(84)~~(42)~~Section 5703.6.12 is hereby added to read as follows:

5703.6.12 Dry sumps. *Approved* sampling tubes of a minimum 6 inches in diameter shall be installed in the backfill material of each underground flammable or combustible liquid storage tank the tubes shall extend from a point 12 inches below the average grade of the excavation to ground level and shall be provided with suitable surface access caps. Each tank site shall provide a sampling sump at the corners of the excavation with a minimum of 4 sumps. Sampling tubes shall be placed in the product line excavation within 10 feet of the tank excavation and one every 50 feet routed along product lines towards the dispensers, a minimum of two are required.

(85)~~(43)~~ Section 5706.2.4.3 is hereby amended to read as follows:

5706.2.4.3 Location. Tanks containing Class I or II liquids shall be kept outside and not less than 100 feet from buildings and combustible storage. Additional distance shall be provided where necessary to ensure that vehicles, equipment, and containers being filled directly from such tanks will not be less than 100 feet from structures, haystacks, or other combustible storage.

(86)~~(44)~~ Section 5706.3.1.3 is hereby amended to read as follows:

5706.3.1.3 Buildings. Wells shall not be drilled within 200 feet of buildings not necessary to the operation of the well.

(87)~~(45)~~Section 6104.2 is hereby amended to read as follows:

6104.2 Maximum capacity within established limits. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L).

Exceptions:

(A) In particular installations, this capacity limit shall be determined by the

fire code official, after consideration of special features such as topographical conditions, nature of occupancy, and proximity to buildings, capacity of proposed containers, degree of fire protection to be provided and capabilities of the local fire department.

(B) Except as permitted in City Ordinance 6024, section 5.04.005 LP-gas containers are not permitted in residential areas.

(88)~~(46)~~ Appendix D, section D103 figure D103.1 is hereby amended to read as follows:

Figure D.103.1 Dead-end fire apparatus access road turnaround. Where a turnaround is required for fire department access, the minimum road width shall be the same as the *approved* fire lane throughout.

(89)~~(47)~~ Appendix D, section D103.3 is hereby amended to read as follows:

D103.3 Turning radius. The minimum turning radius shall be at least 25 feet radius unless roadway or fire lane exceeds minimum requirement of 24 feet or approved by *fire code official.*

(90)~~(48)~~ Appendix D, section D103.4 table D103.4 is hereby amended as follows:

REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

Length (feet)	Width (feet)	Turnarounds Required
0–150	24	None required
151–700	24	100’ diameter cul-de-sac or 120’ hammerhead
Over 700		Special approval required

(91)~~(49)~~Appendix D, section D103.5 is hereby amended to read as follows:

D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all the following criteria:

(A) Where a single gate is provided, the gate width shall be not less than the *approved* fire apparatus access road.

(B) Gates shall be of the horizontal swing, horizontal slide, vertical lift or vertical pivot type.

(C) Construction of gates shall be of materials that allow manual operation by one person.

(D) Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.

(E) Electric gates shall be equipped with a Knox key switch that operates with the Authority Having Jurisdiction’s Knox key. Emergency opening devices shall be approved by the *fire code official*.

(F) Methods of locking shall be submitted for approval by the *fire code official.*

(G) Electric gate operators, where provided, shall be listing in accordance with UL 325.

(H) Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F2200.

(b) Penalty. Violations of any of the provisions of this article are punishable as provided in Section 1.01.009 of this Code.

Secs. 3.04.002–3.04.999 Reserved

..."

SECTION 3: Amendment to Chapter 5 (Fire Prevention and Protection), Article 5.05 (Permit and Fire Service Fees) of the Code of Ordinances. Article 5.05 (Permit and Fire Service Fees) of the Code of Ordinances is hereby amended as follows[2]:

"**ARTICLE 5.05 PERMIT AND FIRE SERVICE FEES**

Sec. 5.05.001 Permit fees.

*See **APPENDIX C: FEE SCHEDULE** for fire permit and inspection fees.*

~~Automatic fire sprinkler system, underground fire lane~~	~~$250.00~~
~~Automatic fire sprinkler system, above ground system~~	~~$250.00~~
~~Automatic fire sprinkler system, modification~~	~~$250.00~~
~~Fire alarm system~~	~~$250.00~~
~~Fire alarm system, Modification~~	~~$250.00~~
~~Automatic fire-extinguishing system~~	~~$250.00~~
~~Automatic fire pump~~	~~$250.00~~
~~Controlled access gate~~	~~$150.00~~
~~After hours inspections - two (2) hour minimum~~	~~$150.00/hour~~
~~Reinspection (per occurrence)~~	~~$100.00~~
~~Work without permit~~	~~$500.00~~
~~Open burn within city limits~~	~~$1,000.00~~

…"

SECTION 4: Amendment to the Code of Ordinances, Appendix C (Fee Schedule). The Code of Ordinances, Appendix C (Fee Schedule) is amended as follows[3]:

"**APPENDIX C: FEE SCHEDULE**

…

[2] Deletions are evidenced by ~~strikethrough~~; additions are *italicized.*
[3] Deletions are evidenced by ~~strikethrough~~; additions are *italicized.*

(1) Building permit and inspection fees.

…

(E) Other building permit and inspection fees.

After-hours inspections	$150.00
Inspection of work done prior to permit issuance (in addition to permit fees)	$250.00
Reinspection fees:	
1st reinspection	$75.00
2nd reinspection	$100.00
3rd reinspection	$125.00
Contractor registration	No fee
Certificate of occupancy permit	*$100.00* ~~$75.00~~

…

(3) Fire permit, service and third-party review and inspection fees.

(A) Fire Permit and Service Fees.

Automatic fire-extinguishing system	*$250.00*
Automatic fire pump installation/modification	*$250.00*
Automatic fire sprinkler system, above ground system installation/modification per riser	*$250.00 per riser + $0.75 per head*
Controlled access system	*$150.00 base (additional $25 per door/gate)*
Automatic fire sprinkler system, underground fire service per riser	*$250.00*
Electric Vehicle (EV) charger	*$150.00*
Emergency responder communication enhancement system	*$300.00 (includes initial operational permit)*
Energy Storage System	*$150.00*
Fire alarm system per panel installation/modification	*$250.00 per panel + $0.75 per device*
Flammable or combustible liquid storage tank install/removal (per tank)	*$250.00*
Hazardous materials	*$300 (includes initial operational permit)*
High-piled combustible storage	*$300 (includes*

	initial operational permit)
Lithium-ion and lithium-ion battery storage	*$300.00 (includes initial operational permit)*
Solar photovoltaic power systems (excludes single and double family dwellings)	*$150.00*
Tent, membrane structure	*$250 (includes initial operational permit)*
After hours inspections - two (2) hour minimum	*$150.00/hour*
Reinspection (per occurrence)	*$100.00*
Work without permit	*$500.00*
Open burn within city limits	*$1,000.00*
Daycare inspection	*$50.00*
Foster home inspection	*$50.00*
State-mandated facility inspection	*$100.00*

(B) Third-Party Review and Inspections. For new construction projects, the fire code official may require a third-party contractor to provide plan review and inspection services. If so required by the fire code official, the applicant shall pay the City an amount equal to the third-party contractor's fee plus ten (10) percent.

(4)~~(3)~~ Zoning fees.

…"

SECTION 5: Penalty. Any person, firm, corporation or entity violating any provision of this Ordinance, or the Code of Ordinances, as they exist or may be amended, shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be fined in an amount not exceeding FIVE HUNDRED DOLLARS ($500.00), unless the violation relates to fire safety, zoning or public health and sanitation, in which case the fine amount shall not exceed TWO THOUSAND AND NO/100 DOLLARS ($2,000.00). A violation of any provision of this Ordinance shall constitute a separate violation for each calendar day in which it occurs. The penal provisions imposed under this Ordinance shall not preclude Sherman from filing suit to enjoin the violation. Sherman retains all legal rights and remedies available to it pursuant to local, state and federal law.

SECTION 6: Severability. Should any section, subsection, sentence, clause or phrase of this Ordinance be declared unconstitutional and/or invalid by a court of competent jurisdiction, it is expressly provided that any and all remaining portions of this Ordinance shall remain in full force and effect. The City Council hereby declares that it would have passed this Ordinance, and each section, subsection, clause or phrase thereof, regardless of whether any one or more sections, subsections, sentences, clauses or phrases is declared unconstitutional and/or invalid.

SECTION 7: Repealing/Savings. The Code of Ordinances shall remain in full force and effect, save and except as amended by this or any other Ordinance. All provisions of any

ordinance in conflict with this Ordinance are hereby repealed to the extent they are in conflict, but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent a prosecution from being commenced for any violation if occurring prior to the repeal of the ordinance. Any remaining portions of said ordinances shall remain in full force and effect.

SECTION 8: Open Meeting. The meeting at which this Ordinance was introduced and passed was open to the public, and public notice of the time, place and purpose of said meeting was given all as required by law.

SECTION 9: Effective Date; Publication. All provisions of this Ordinance shall become effective from and after its adoption and publication as required by law. The City Clerk is directed to publish the caption of this Ordinance as required by law.

[*The remainder of this page intentionally left blank*.]

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF SHERMAN, TEXAS, on this 1st day of June 2026.

Signed by:
94D5858B75EE44B...
Shawn Teamann, Mayor

ATTESTED AND CORRECTLY RECORDED:

Signed by:
AE86650F66B740C...
Teri Fine, City Clerk

APPROVED AS TO FORM:

Signed by:
E376C30465C34B5...
Abernathy, Roeder, Boyd & Hullett, P.C.
Ryan D. Pittman, City Attorneys