City of Tukwila

Washington

Cover page to Ordinance 2703
The full text of the ordinance follows this cover page.

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, REPEALING ORDINANCE NOS. 652, 2329, 2330, 2436, 2437, 2505, 2506, 2507, AND 2508, AS CODIFIED IN VARIOUS SECTIONS OF TUKWILA MUNICIPAL CODE (TMC) TITLE 16, "BUILDINGS AND CONSTRUCTION"; REPEALING ORDINANCE NOS. 2650 AND 2672 AS CODIFIED IN TMC CHAPTER 16.16; REENACTING TMC CHAPTER 16.16, "INTERNATIONAL FIRE CODE," TO ADOPT THE 2021 EDITION OF THE INTERNATIONAL FIRE CODE AND UPDATE TUKWILA FIRE CODE REGULATIONS; PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE.

Ordinance 2703 was <u>amended or repealed</u> by the following ordinances.

AMENDED	
Section(s) Amended	Amended by Ord #
6	2706

REPEALED	
Section(s) Repealed	Repealed by Ord #

City of Tukwila

Washington

Ordinance No. 2703

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, REPEALING ORDINANCE NOS. 652, 2329, 2330, 2436, 2437, 2505, 2506, 2507, AND 2508, AS CODIFIED IN VARIOUS SECTIONS OF TUKWILA MUNICIPAL CODE (TMC) TITLE 16, "BUILDINGS AND CONSTRUCTION"; REPEALING ORDINANCE NOS. 2650 AND 2672 AS CODIFIED IN TMC CHAPTER 16.16; REENACTING TMC CHAPTER 16.16, "INTERNATIONAL FIRE CODE," TO ADOPT THE 2021 EDITION OF THE INTERNATIONAL FIRE CODE AND UPDATE TUKWILA FIRE CODE REGULATIONS; PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the City Council desires to protect the health, welfare, and safety of Tukwila residents by keeping current with the most recent International Fire Code regulations; and

WHEREAS, the City Council desires to update and clarify the fire code requirements in Tukwila to ensure life safety codes can be implemented effectively; and

WHEREAS, these updates are intended to better align the City's fire code requirements with the International Fire Code, National Fire Protection Association (NFPA), and the Puget Sound Regional Fire Authority; and

WHEREAS, to achieve this end, the City Council has determined it is in the public's best interest to update its current fire prevention and protection regulations by adopting the 2021 Edition of the International Fire Code and appendices;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, HEREBY ORDAINS AS FOLLOWS:

Section 1. Adoption of Findings of Fact. The City Council hereby adopts the foregoing recitals and incorporates them herein as support for these amendments.

Section 2. Repealer. Ordinance Nos. 652, 2329, 2330, 2436, 2437, 2505, 2506, 2507, and 2508, as codified in various sections of Tukwila Municipal Code (TMC) Title 16,

"Buildings and Construction," are hereby repealed in their entirety, thereby eliminating the following chapters of the TMC:

Chapter 16.20	Emergency Service Elevators
Chapter 16.40	Fire Alarm Systems
Chapter 16.42	Sprinkler Systems
Chapter 16.46	Fire Protection in Mid-Rise Buildings
Chapter 16.48	Fire Protection in High-Rise Buildings

Section 3. Repealer. Ordinance Nos. 2650 and 2672 are hereby repealed in their entirety, thereby eliminating TMC Chapter 16.16, "International Fire Code."

Section 4. TMC Chapter 16.16 Reenacted. TMC Chapter 16.16 is hereby reenacted to read as follows:

CHAPTER 16.16
INTERNATIONAL FIRE CODE

Sections:

Section 5. Certain Subparagraphs Recodified. As a result of updates contained herein, various subparagraphs of "Amendments to the International Fire Code," formerly codified as TMC Section 16.16.040, may be recodified into the following sections, reenacted per Section 4 of this ordinance:

16.16.030 Amendments to the International Fire Code – Chapter 1, "Scope and Administration"

16.16.050 Amendments to the International Fire Code – Chapter 3, "General Requirements"

16.16.060 Amendments to the International Fire Code – Chapter 5, "Fire Service Features"

16.16.090 Amendments to the International Fire Code – Chapter 9, "Fire Protection Systems"

16.16.110 Amendments to the International Fire Code – Chapter 56, "Explosives and Fireworks"

Section 6. TMC Section 16.16.010 is hereby reenacted to read as follows:

16.16.010 Adoption of the International Fire Code

A. In accordance with RCW 19.27, the *International Fire Code*, 2021 Edition, including Appendix B, published by the International Code Council, Inc., together with any additions, deletions, and exceptions currently enacted or as may be amended from time to time by the State of Washington through its Building Code Council pursuant to WAC 51-54A, and as further amended in this ordinance, are hereby adopted by this reference as if fully set forth, subject to the modifications and amendments set forth in TMC Chapter 16.16.

B. One copy of said Fire Code shall be maintained on file with the Puget Sound Regional Fire Authority at the Fire Marshal's Office.

Section 7. TMC Section 16.16.020, previously codified as TMC Section 16.16.060, "Conflicts with Existing Codes and Ordinances," is hereby reenacted to read as follows:

16.16.020 Conflicts with Existing Codes and Ordinances

Whenever any provision of the *International Fire Code* or appendices adopted by this ordinance conflicts with any provision of any other adopted code or ordinance of the City, the provision providing the greater or most effective protection shall govern.

Section 8. TMC Section 16.16.030 is hereby reenacted to read as follows:

16.16.030 Amendments to the International Fire Code – Chapter 1, "Scope and Administration"

A. Section 104 of the *International Fire Code*, entitled "Duties and Powers of the Fire Code Official," is amended by adding the following new subsection 104.1.1:

> **Section 104.1.1 Retained authority – Additional conditions.** The Fire Code Official retains the authority to impose additional conditions where the Official determines it necessary to mitigate identified fire protection impacts and problematic fire protection systems. These conditions may include, by way of example and without limitation, increased setbacks, use of fire-retardant

materials, installation or modification of standpipes, automatic fire sprinkler and fire alarm systems.

B. Section 104 of the *International Fire Code*, entitled "Duties and Powers of the Fire Code Official," is amended by adding the following new subsection 104.13:

Section 104.13 Lot lines and setback lines. Notwithstanding the authority of the Fire Code Official to administer and enforce the fire code, the Fire Code Official shall have no duty to verify or establish lot lines or setback lines. No such duty is created by this Code, and none shall be implied.

C. Section 105 of the *International Fire Code*, entitled "Permits," is amended by substituting subsection 105.2.3 with the following:

Section 105.2.3 Expiration of applications. Expiration of applications shall be in accordance with TMC Section 16.04.250.F.

D. Section 105 of the *International Fire Code*, entitled "Permits," is amended by substituting subsection 105.3.1 with the following:

Section 105.3.1 Expiration. An operational permit shall remain in effect until reissued, renewed or revoked, or for such a period of time as specified in the permit. Construction permit expiration shall be in accordance with TMC Section 16.04.250.E.

E. Section 105 of the *International Fire Code*, entitled "Permits," is amended by substituting subsection 105.5 with the following:

Section 105.5 Required operational permits. The Fire Code Official is authorized to issue operational permits for the operations set forth in Sections 105.5.1 through 105.5.56.

F. Section 105 of the *International Fire Code*, entitled "Permits," is amended by substituting subsection 105.5 with the following:

Section 105.5.32 Mobile food preparation vehicles. A permit is required for mobile preparation vehicles equipped with appliances that produce smoke or grease-laden vapors or utilize LP-gas systems or CNG systems.

Exception: Mobile food preparation vehicles which are not parked, or visiting a location for more than three consecutive calendar days.

G. Section 105 of the *International Fire Code*, entitled "Permits," is amended by adding the following new subsection 105.5.53:

Section 105.5.53 Commercial Kitchens. An operational permit is required for all commercial kitchens with type I hood systems.

Exception: No fee will be required if another operational fire permit in accordance with Section 105.5 is issued for the occupancy.

H. Section 105 of the *International Fire Code*, entitled "Permits," is amended by adding the following new subsection 105.5.54.

Section 105.5.54 Emergency and Standby Power Systems. An Operational Permit is required for emergency or standby power systems required by code and identified in NFPA 110.

I. Section 105 of the *International Fire Code*, entitled "Permits," is amended by adding the following new subsection 105.5.55:

Section 105.5.55 Fire Protection System Contractor. An operational permit is required for all contractors or other entities performing any installation, inspection, service, maintenance, or repair of any fire protection system.

J. Section 105 of the *International Fire Code*, entitled "Permits," is amended by adding the following new subsection 105.5.56.

Section 105.5.56 Commercial Kitchen Hood and Duct Systems Contractor. An operational permit is required for all contractors or other entities performing any inspection or cleaning of commercial kitchen hood and duct systems.

K. Section 105 of the *International Fire Code*, entitled "Permits," is amended by modifying subsection 105.6:

Section 105.6 Required construction permits. The Fire Code Official is authorized to issue construction permits for work as set forth in Sections 105.6.1 through 105.6.26.

L. Section 105 of the *International Fire Code*, entitled "Permits," is amended by adding the following new subsection 105.6.26:

Section 105.6.26 Emergency and Standby Power Systems. A Construction Permit is required for the installation of emergency or standby power systems required by code and identified in NFPA 110.

M. Section 107 of the *International Fire Code*, entitled "Fees," is amended by substituting subsection 107.1 with the following:

Section 107.1 Fees. The Fire Code Official shall collect fees as a condition to issuance or renewal of any permit or certificate.

N. Section 107 of the *International Fire Code*, entitled "Fees," is amended by substituting subsection 107.2 with the following:

Section 107.2 Schedule of Permit Fees. The Fire Code Official shall prepare a resolution establishing a schedule of fees for council consideration, which fees shall include the cost involved in the processing, issuance, and renewal of permits and certificates. Any fee schedule adopted by resolution shall govern the fee amount to be assessed for any permit or certificate.

O. Section 107 of the *International Fire Code*, entitled "Fees," is amended by substituting subsection 107.4 with the following:

Section 107.4 Work commencing before permit issuance. When work for which a permit is required by this code has commenced without a permit, the fees shall be doubled. The payment of such fees shall not relieve any persons from the requirements of this code or from any penalties prescribed by this code.

P. Section 107 of the *International Fire Code*, entitled "Fees," is amended by adding the following new subsection 107.7:

Section 107.7 Termination. Failure to pay for the required renewal within 60 days of the date notice is given shall result in the City's termination of the permit.

Q. Section 109 of the *International Fire Code*, entitled "Maintenance," is amended by substituting subsection 109.3 with the following:

Section 109.3 Recordkeeping. A record of periodic inspections, tests, servicing and other operations and maintenance shall be maintained on the premises or other approved location for not less than 3 years, or a different period of time where specified in this code or referenced standards.

1. Records shall be made available for inspection by the Fire Code Official, and a copy of the records shall be provided to the Fire Code Official upon request. This applies to all life safety systems regulated by the Fire Code that require periodic testing, inspections, and maintenance.

2. The Fire Code Official is authorized to prescribe the form and format of such recordkeeping.

3. The Fire Code Official is authorized to require that certain required records be filed with the Fire Code Official.

4. All test reports must be filed with the Compliance Engine (https://www.TheComplianceEngine.com/) within 14 days of the reportable activity.

R. Section 111 of the *International Fire Code*, entitled "Board of Appeals," is amended by substituting Section 111 with the following:

Section 111 Means of Appeals.

1. Whenever the Fire Code Official disapproves an application or refuses to grant a permit applied for, the applicant may appeal the decision to the City's Hearing Examiner. A written notice of appeal shall be filed with the City Clerk within 14 days of the date of final decision by the Fire Code Official. The notice of appeal must be accompanied by an appeal fee in accordance with the Tukwila Fire Permit Fee Schedule adopted by resolution of the City Council.

2. The Notice of Appeal shall contain the following information:

a. The name of the appealing party.

b. The address and phone number of the appealing party; and if the appealing party is a corporation, association or other group, the address and phone number of a contact person authorized to receive notices on the appealing party's behalf.

c. A statement identifying the decision being appealed and the alleged errors in that decision.

d. The Notice of Appeal shall state specific errors of fact or errors in application of the law in the decision being appealed, the harm suffered or anticipated by the appellant, and the relief sought. The scope of an appeal shall be limited to matters or issues raised in the Notice of Appeal.

3. Upon timely filing of a Notice of Appeal, the Fire Code Official shall set a date for hearing the appeal before the City's Hearing Examiner. Notice of the hearing will be mailed to the applicant.

4. Deference shall be given to the decision being appealed. The standard on review shall be based upon a preponderance of evidence. The Hearing Examiner may affirm, reverse or modify the Fire Code Official, or designee's, decision.

5. The decision of the Hearing Examiner shall be final.

S. Section 112 of the *International Fire Code* entitled "Violations" is amended by substituting subsection 112.4 with the following:

Section 112.4 Violations and Penalties.

1. Any person who violates any of the Fire Code provisions of TMC Chapter 16.16 or the *International Fire Code* or who fails to comply therewith, or who violates or fails to comply with any order made thereunder, or who builds in violation of any detailed statement of specifications or plans submitted and approved thereunder or any certificate or permit issued thereunder and from which no appeal has been taken, or who fails to comply with such an order as affirmed or modified by the Fire Code Official or by a court of competent jurisdiction within the time fixed therein, shall, as deemed applicable by the Fire Code Official, be subject to the enforcement proceedings provided in TMC Chapter 8.45, or shall be guilty of a gross misdemeanor, and upon conviction thereof, shall be punished by a fine in an amount not to exceed $5,000.00, as outlined in IFC Section 112.4, or imprisonment for a term not to exceed one year or by both such fine and imprisonment.

2. The imposition of one penalty for any violation shall not excuse the violation or permit it to continue. Each day or portion thereof during which any violation of the provisions of this section is caused, permitted, or continued shall constitute a separate offense and shall be punishable as such. Application of the penalty specified in this section shall not be held to prevent the enforced removal of prohibited conditions.

3. Fire lane parking violations shall be considered a non-traffic civil infraction subject to the fine listed in the Fire Penalty Bail Schedule, and the vehicle may be impounded.

4. In addition to the imposition of the penalties herein described, the Fire Code Official is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.

5. **Fire Penalty Bail Schedule:**

OFFENSE	BAIL
Non-compliance with orders and notices	$5,000.00
Unlawful removal of a tag	$5,000.00
Unlawful continuance of a hazard	$5,000.00
Non-compliance with a Stop Work Order	$5,000.00
Illegal parking on fire apparatus access roads / Fire Lane	$100.00

Failure to: Clean commercial kitchen hoods	$500.00
Failure to: Maintain fire protection systems	$500.00
Failure to: Conduct a required fire watch	$500.00
Failure to: Maintain commercial cooking extinguishing systems	$500.00
Failure to: Maintain means of egress continuity	$250.00
Failure to: Provide required UL central station monitoring	$500.00

6. **Other Violations.** Bail for all other violations is $250.00 plus court costs. Fines are forfeitable on the first offense and mandatory appearance is required on the second offense.

Section 9. TMC Section 16.16.040 is hereby reenacted to read as follows:

16.16.040 Amendments to the International Fire Code – Chapter 2, "Definitions"

A. Section 202 of the *International Fire Code*, entitled "General Definitions," is amended by adding the following definitions to subsection 202:

Fire Code Official. The fire chief or other designated authority charged with the administration and enforcement of the code, or a duly authorized representative.

Outdoor storage. The on-site storage of materials outdoors, including materials stored in vehicles, which are not in transit.

Problematic fire protection system. A fire protection system that generates repeated preventable alarms.

Section 10. TMC Section 16.16.050 is hereby reenacted to read as follows:

16.16.050 Amendments to the International Fire Code – Chapter 3, "General Requirements"

A. Section 308 of the *International Fire Code* entitled "Open Flames" is amended by substituting subsection 308.1.6.3 with the following:

Section 308.1.6.3 Sky Lanterns. The use of sky lanterns is prohibited.

Section 11. TMC Section 16.16.060 is hereby reenacted to read as follows:

16.16.060 Amendments to the International Fire Code – Chapter 5, "Fire Service Features"

A. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is hereby adopted.

B. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is amended by substituting subsection 503.1.1 with the following:

Section 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.

Exceptions: The Fire Code Official is authorized to increase the distance:

1. Up to 300 feet where the building is equipped throughout with an approved automatic sprinkler system installed.

2. Where 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.

Alternate means may include installation of stairs that extend to the roof, sprinkler system, fire alarm system, standpipes, smoke control system, ready access to fire service elevators and others (sometimes in combination) to mitigate the additional access distance.

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

C. Section 503 of the *International Fire Code* entitled "Additional Access" is amended by substituting subsection 503.1.2 with the following:

Section 503.1.2 Additional Access. The Fire Code Official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

D. Section 503 of the *International Fire Code* entitled "Fire Apparatus Access Roads" is amended by substituting subsection 503.2.1 with the following:

Section 503.2.1. Dimensions. The following minimum dimensions shall apply for fire apparatus access roads:

1. Fire apparatus access roads and fire lanes shall have an unobstructed width of not less than 20 feet (6,096 mm), and an unobstructed vertical clearance of not less than 13 feet 6 inches (4,115 mm).

2. Fire apparatus access road routes shall be approved by the Fire Code Official.

3. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet for 20 feet on both sides of the hydrant operating nut, as shown in D103.1 and shall be marked as a fire lane per Section 503.3.

Exception: When the fire apparatus access road is serving no more than 2 single family houses and all are equipped with approved automatic sprinkler system, the Fire Code Official may approve a reduced width, but the reduction shall not be less than 16 feet wide.

E. Section 503 of the *International Fire Code* entitled "Fire Apparatus Access Roads" is amended by substituting subsection 503.2.3 with the following:

Section 503.2.3. Surface. Fire apparatus access roads shall be constructed with a surface of asphalt or concrete or other permanent material approved by the Fire Code Official, capable of supporting the imposed load of fire apparatus weighing at least 85,000 lbs (38,555 kg).

F. Section 503 of the *International Fire Code* entitled "Fire Apparatus Access Roads" is amended by substituting subsection 503.2.4 with the following:

Section 503.2.4. Turning Radius. All fire apparatus access roads shall have a 30-foot minimum inside turning radius (curb radius) and a 50-foot minimum outside turning radius, unless otherwise approved by the Fire Code Official. The radius is measured from the travel lane edge (curb).

G. Section 503 of the *International Fire Code* is amended by substituting subsection 503.2.5 with the following:

Section 503.2.5. Dead-Ends. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with a turnaround that is approved by the Fire Code Official.

Exception: The Fire Code Official is authorized to increase the length up to 300 feet for dead-end access roads when all of the following apply:

1. The road is serving no more than 4 single-family homes that are equipped throughout with an approved automatic fire sprinkler system.

2. The road shall have an unobstructed width of not less than 20 feet, and an unobstructed vertical clearance of not less than 13 feet 6 inches.

3. Where the vertical distance between the grade plane and the highest point of the roof eave is no more than 30 feet for any of the structures served by the fire access road.

H. Section 503 of the *International Fire Code* entitled "Fire Apparatus Access Roads" is amended by substituting subsection 503.2.6 with the following:

Section 503.2.6. Bridges and Elevated Surfaces. Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge or elevated surface shall be constructed and maintained in accordance with specifications established by the Fire Code Official and the City's Public Works Director, or their designees; at a minimum, however, the bridge or elevated surface shall be constructed and maintained in accordance with AASHTO Standard Specifications for Highway Bridges.

1. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of an 85,000 lb. fire apparatus, the total imposed load to be determined by the Fire Code Official.

2. Vehicle load limits shall be posted at both entrances to bridges when required by the Fire Code Official.

3. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces that are not designed for that use, approved barriers or approved signs, or both, shall be installed and maintained, if required by the Fire Code Official.

I. Section 503 of the *International Fire Code* entitled "Fire Apparatus Access Roads" is amended by substituting subsection 503.2.7 with the following:

Section 503.2.7. Grade. Fire apparatus access roads shall comply with the following:

1. Fire apparatus access roads shall not exceed 15 percent longitudinal and/or 6 percent laterally in grade.

2. Driveway approach and departure angles for fire apparatus access shall not exceed 10 percent for the first 75 feet when measured from the right of way, unless otherwise approved by the Fire Code Official.

J. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is amended by substituting subsection 503.3 with the following:

Section 503.3 Marking. Fire apparatus access roads shall be marked whenever necessary to maintain the unobstructed minimum required width of roadways. Subject to the Fire Code Official's prior written approval, marked fire apparatus access roads, or "fire lanes," may be established or relocated at the time of plan review, pre-construction site inspection, and/or post construction site inspection as well as any time during the life of the occupancy. Only those fire apparatus access roads established by the fire code official can utilize red marking paint and the term "fire lane." Fire lanes shall be marked as directed by the Fire Code Official.

Section 503.3.1 Type 1. Type 1 marking shall be installed to identify fire lanes on hammerhead turnarounds, commercial and multi-family developments or as directed by the Fire Code Official.

Section 503.3.2 Type 2. Type 2 marking shall be installed to identify fire lanes in one- and two-family dwelling developments, or as directed by the Fire Code Official.

Section 503.3.3 Type 3. Type 3 marking shall be installed to address situations where neither Type 1 or 2 marking is effective as determined by the Fire Code Official.

Specific areas designated by the Fire Code Official shall be marked with diagonal striping across the width of the fire lane. Diagonal marking shall be used in conjunction with painted curbs and/or edge striping and shall run at an angle of 30 to 60 degrees from one side to the other. These diagonal lines shall be in red traffic paint, parallel with each other, at least 6 inches in width, and 24 inches apart. Lettering shall occur as with Type 1 marking.

K. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is amended by substituting subsection 503.5 with the following:

Section 503.2 Required gates or barricades. The Fire Code Official is authorized to require the installation and maintenance of gates or other approved barricades across fire apparatus access roads, trails, or other accessways, not including public streets, alleys, or highways. Installations shall meet the following:

1. Electric gate operators, where provided, shall be listed in accordance with UL 325.

2. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F 2200 and must be equipped with "Click 2 Enter" or similar equipment that is approved by the Fire Code Official, that allows for operations of the gate by Fire and Police personnel via their vehicle mobile radio, on a dedicated radio frequency, with a hold-open for a specified amount of time.

3. Gates over the fire access road that are intended for automatic operation shall be designed to operate during a loss of power or fail in the open position.

4. Gates shall be at a minimum as wide as the required access road width.

5. If manually operated, a Knox padlock is required if the gate is locked.

6. Installations must be set back 40 feet from roadway edge of pavement.

Exception: Automated gates meeting the requirements of item 2 of this subsection.

L. Section 503 of the International Fire Code entitled "Fire Apparatus Access Roads" is amended by substituting subsection 503.6 with the following:

Section 503.6 Security Gates, Bollards, And Other Obstructions. The installation of security gates, bollards or other obstructions across a fire apparatus access road shall be reviewed and approved by the Fire Code Official. Where installed, they shall have an approved means of emergency operation. The installation of security gates, bollards, and other obstructions shall be in accordance with 503.5. The security gates, bollards or other obstruction and the emergency operation shall be maintained operational at all times. The use of directional-limiting devices (tire spikes) is prohibited.

M. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is amended by adding the following new subsection 503.7:

Section 503.7 Establishment of fire lanes. Fire lanes in conformance with this code shall be established by the Fire Code Official and shall be in accordance with 503.7.1 through 503.7.8.

Section 503.7.1 Obstruction of fire lanes prohibited. The obstruction of a designated fire lane by a parked vehicle or any other object is prohibited and shall constitute a traffic hazard as defined in State law and an immediate hazard to life and property.

Section 503.7.2 Existing fire lane signs and markings. The following signs and markings shall be provided:

1. Signs (minimum nine-inch by 16-inch) may be allowed to remain until there is a need for replacement and at that time the sign shall meet the requirements of subsection 503.3.2.

2. Markings may be allowed to remain until there is a need for repainting and at that time the provisions outlined in 503.3 shall be complied with.

Section 503.7.3 Maintenance. Fire lane markings shall be maintained at the expense of the property owner(s) as often as needed to clearly identify the designated area as being a fire lane.

Section 503.7.4 Towing notification. At each entrance to any property where fire lanes have been designated, signs shall be posted in a clearly conspicuous location and shall clearly state that vehicles parked in fire lanes may be impounded, and the name, telephone number, and address of the towing firm where the vehicle may be redeemed.

Section 503.7.5 Responsible property owner. The owner, manager, or person in charge of any property upon which designated fire lanes have been established shall prevent the parking of vehicles or placement of other obstructions in such fire lanes.

Section 503.7.6 Violation – Penalty. Penalties of this section shall be in accordance with Section 112.4.

Section 503.7.7 Impoundment. Any vehicle or object obstructing a designated fire lane is declared a traffic hazard and may be abated without prior notification to its owner by impoundment pursuant to the applicable State law in accordance with Section 112.4. The owner or operator shall be responsible for all towing and impound charges.

N. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is amended by adding the following new subsection 503.8:

Section 503.8 Commercial and Industrial Developments. Fire apparatus access roads serving commercial and industrial developments shall be in accordance with Sections 503.8.1 through 503.8.3.

Section 503.8.1 Buildings or facilities exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet or three stories in height shall have at least two means of fire apparatus access for each structure.

Section 503.8.2 Buildings or facilities exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet shall be provided with two separate and approved fire apparatus access roads.

Exception: Buildings or facilities having a gross building area of up to 124,000 square feet that have a single approved fire apparatus access road when all buildings or facilities are equipped throughout with approved automatic sprinkler systems.

Section 503.8.3 Remoteness. Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses or as approved by the Fire Code Official and the fire chief.

O. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is amended by adding the following new subsection 503.9:

Section 503.9 Aerial fire apparatus roads. The fire apparatus access roads that accommodate aerial fire apparatus shall be in accordance with Sections 503.9.1 through 503.9.4.

Section 503.9.1 Where required. Buildings, or facilities, or portions of buildings thereof exceeding 30 feet in height above the lowest level of fire department vehicle access shall be provided with approved fire apparatus access roads that are capable of accommodating fire department aerial apparatus. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.

Section 503.9.2 Width. Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of any building or portion of building more than 30 feet in height.

Section 503.9.3 Proximity to building or facility. At least one of the required access routes meeting this condition shall be positioned parallel to one entire side of the building or facility. The location of the parallel access route shall be approved.

Section 503.9.4 Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial apparatus access road and the building or facility. Other obstructions shall be permitted to be placed with the approval of the Fire Code Official.

P. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is amended by adding the following new subsection 503.10:

Section 503.10 Multi-family residential developments. The fire apparatus access roads serving multi-family residential developments shall be in accordance with Sections 503.10.1 through 503.10.3.

Section 503.10.1 Projects having from 100 through 200 dwelling units. Projects having from 100 through 200 dwelling units shall be provided with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.

Section 503.10.2 Projects having more than 200 dwelling units. Projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.

Section 503.10.3 Remoteness. Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses or as approved by the Fire Code Official and the fire chief.

Q. Section 503 of the *International Fire Code*, entitled "Fire Apparatus Access Roads," is amended by adding the following new subsection 503.11:

Section 503.11 One- and Two-family residential developments. The fire apparatus access roads serving one- and two-family residential developments shall be in accordance with Section 503.11.1 and 503.11.2.

Section 503.11.1 Projects having more than 30 dwelling units. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.

Exceptions:

1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.1.3 of the *International Fire Code*, access from two directions shall not be required.

2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will, within a reasonable time, connect with future development, as determined by the Fire Code Official.

Section 503.11.2 Remoteness. Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses or as approved by the Fire Code Official and the fire chief.

R. Section 503 of the *International Fire Code*, entitled, "Fire Apparatus Access Roads," is amended by adding the following new subsection 503.12:

Section 503.12 Underground structures. Installation of underground structures under or within 10 feet of fire apparatus access roads shall be designed using approved load criteria that shall accommodate the loading of fire department aerial apparatus unless otherwise approved.

S. Section 504 of the *International Fire Code*, entitled "Access to Building Openings and Roofs," is amended by adding the following new subsection 504.4:

Section 504.4 Buildings With Interior Courtyards. New buildings with enclosed interior courtyards shall have a straight/direct access corridor and/or stairway from the exterior to the courtyard at a location acceptable to the Fire Code Official. If a stairway is used it shall comply with *International Fire Code* Section 1011 and a corridor shall comply with *International Fire Code* Section 1020. The access shall have a minimum width of 5 feet and be large enough to carry a 35-foot-long sectional ladder (minimum folded length 20 feet) directly from the exterior to the courtyard without obstructions. The access door shall be marked at the street as "Direct Fire Access to Courtyard".

T. Section 506 of the *International Fire Code*, entitled "Key Boxes," is amended by substituting subsection 506.1 with the following:

Section 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 firefighting purposes, the fire code official is authorized to require a key box/vault to be installed. The key box shall be a Knox KLS product listed in accordance with UL 1037 and shall contain keys to gain necessary access. The location, key box and key requirements shall be in accordance with the Rapid Entry System Policy of the Puget Sound Regional Fire Authority.

U. Section 506 of the *International Fire Code*, entitled "Key Boxes," is amended by adding new subsection 506.3 with the following:

Section 506.3 Compliance. Compliance with this chapter shall be in accordance with the following:

1. Newly constructed buildings not yet occupied or buildings currently under construction and all buildings applying for a certificate of occupancy shall comply prior to occupancy, permit final, or approval of any certificate.

2. Existing buildings without existing key boxes shall comply within 180 days of notification.

3. Existing buildings, gates, or barriers with non-compliant key boxes or locks installed shall comply within 1 year of notification.

V. Section 507 of the *International Fire Code,* entitled "Fire Protection Water Supplies," is amended by substituting subsection 507.5. with the following:

Section 507.5 Fire Hydrant systems. Fire hydrant systems shall comply with Section 507.5.1 through 5.6.8 and Tukwila Municipal Code Chapter 14.24.

W. Section 507 of the *International Fire Code*, entitled "Fire Protection Water Supplies," is amended by substituting subsection 507.5.6 with the following:

Section 507.5.6 Physical protection. Where fire hydrants are subject to impact by a motor vehicle, guard posts shall be designed and installed in accordance with TMC Section 14.20.030.

X. Section 507 of the *International Fire Code*, entitled "Fire Protection Water Supplies," is amended by adding a new subsection 507.5.7 as follows:

Section 507.5.7 Fire hydrant. Fire hydrants shall be designed and installed in accordance with the local water purveyor's design and construction standards.

Y. Section 507 of the *International Fire Code*, entitled "Fire Protection Water Supplies," is amended by adding a new subsection 507.5.8 as follows:

Section 507.5.8 Backflow prevention. All private fire systems shall be isolated by an approved method in accordance with the local water purveyor.

Z. Section 507 of the *International Fire Code*, entitled "Fire Protection Water Supplies," is amended by adding a new subsection 507.6 as follows:

Section 507.6 Capacity for residential areas. All hydrants installed in single family residential areas shall be capable of delivering 1,500 gpm fire-flow over and above average maximum demands at the farthest point of the installation.

AA. Section 507 of the *International Fire Code*, entitled "Fire Protection Water Supplies," is amended by adding a new subsection 507.7 as follows:

Section 507.7 Spacing. The spacing of hydrants shall be in accordance with Sections 507.7.1 through 507.7.5.

Section 507.7.1 Single family. The maximum fire hydrant spacing serving single family residential areas shall be 600 feet as measured along the fire apparatus access road.

Section 507.7.2 Commercial, industrial and multi-family. The maximum fire hydrant spacing serving commercial, industrial, multi-family or other areas shall be 300 feet as measured along the fire apparatus access road.

Section 507.7.3 Medians. Where streets are provided with median dividers which cannot be crossed by firefighters pulling hose lines, hydrants shall be provided on each side of the street and be arranged on an alternating basis, providing, on each side of the street, no more than the maximum spacing.

Section 507.7.4 Arterials. Where arterial streets are provided with four or more traffic lanes hydrants shall be provided on each side of the street and be arranged on an alternating basis, providing, on each side of the street, no more than the maximum spacing.

Section 507.7.5 Transportation. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at a spacing not to exceed 1,000 feet to provide for transportation hazards.

BB. Section 507 of the *International Fire Code*, entitled "Fire Protection Water Supplies," is amended by adding a new subsection 507.8 as follows:

Section 507.8 Required hydrants. The number of hydrants required for a building shall be based on the calculated fire-flow. The first hydrant will be calculated for up to 1,500 gpm. An additional hydrant will be required for every additional 1,000 gpm, or fraction thereof. The required hydrants shall be within 600 feet of the building as measured along the fire apparatus access roads serving the building.

CC. Section 507 of the *International Fire Code*, entitled "Fire Protection Water Supplies," is amended by adding a new subsection 507.9 as follows:

Section 507.9 Notification. The owner of property on which private hydrants are located and the public agencies that own or control public hydrants must provide the fire code official with the following written service notifications in accordance with 507.9.1 and 507.9.2:

Section 507.9.1 In-service notification. The Fire Code Official shall be notified when any newly installed hydrant or main is placed into service.

Section 507.9.2 Out-of-service notification. Where any hydrant is out of service or has not yet been placed in service, the hydrant shall be identified as being out of service and shall be appropriately marked as out of service, by a method approved by the Fire Code Official.

DD. Section 507 of the *International Fire Code*, entitled "Fire Protection Water Supplies," is amended by adding a new subsection 507.10 as follows:

Section 507.10 Building permit requirements. No building permit shall be issued until all plans required by this section have been submitted and approved in accordance with the provisions of this section.

No construction beyond the foundation shall be allowed until all hydrants and mains required by this section are in place and approved.

EE. Section 510 of the *International Fire Code* entitled "Emergency Responder Radio Coverage" is amended by substituting Section 510 with the following language:

Section 510.1 Emergency Responder Radio Coverage (New Buildings). Approved radio coverage for emergency responders shall be provided within buildings that meet any one of the following conditions:

1. The building is five stories or more above grade plane (as defined by the International Building Code, Section 202); or

2. The total building area is 50,000 square feet or more; or

3. The total basement area is 10,000 square feet or more; or

4. There are floors used for human occupancy more than 30 feet below the finished floor of the lowest level of exit discharge; or

5. Buildings or structures where the Fire or Police Chief determines that in-building radio coverage is critical because of its unique design, location, use or occupancy.

The radio coverage system shall be installed in accordance with Section 510 of this code and with the provisions of NFPA 1221 (current edition).

Exceptions:

1. Buildings and areas of buildings that have minimum radio coverage signal strength levels of the King County Regional 800 MHz Radio System within the building in accordance with Section 510.4.1 without the use of a radio coverage system.

2. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the Fire Code Official shall have the authority to accept an automatically activated emergency responder radio coverage system.

3. One- and two-family dwellings and townhouses.

When determining if the minimum signal strength referenced in Section 510.4.1.1 exists at a subject building, the signal strength shall be measured at any point on the exterior of the building up to the highest point on the roof.

Section 510.2 Emergency Responder Radio Coverage (Existing Buildings).

Existing buildings shall be provided with approved radio coverage for emergency responders when:

1. Whenever an existing wired communications system cannot be repaired or is being replaced.

2. When a building undergoing substantial alteration meets any one of the conditions listed in Section 510.1. For purposes of this section, a substantial alteration shall be defined as an alteration that costs 50 percent or more of the current assessed value of the structure and impacts more than 50 percent of the gross floor area.

3. When buildings, classes of buildings or specific occupancies do not have the minimum radio coverage signal strength as identified in Section 510.4.1 and the Fire or Police Chief determines that the lack of minimum signal strength poses an undue risk to emergency responders that cannot be reasonably mitigated by other means.

Section 510.3 Permit Required. A Construction Permit for the installation of or modification to emergency responder radio coverage systems and related equipment is required as specified in Section 105.7.6. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

Prior coordination and approval from the Public Safety Radio System Operator is required before installation of an Emergency Responder Radio System. Until PSERN is the single operator of the county wide system (projected date Q4 2022 / Q1 2023), such approval is required from EPSCA, King County, Seattle or ValleyCom depending on the location of the installation. To be forward compatible, designers and contractors should be aware of PSERN's requirements for Distributed Antenna Systems which can be found on their website (https://PSERN.org).

Section 510.4 Technical Requirements. Systems, components and equipment required to provide the emergency responder radio coverage system shall comply with Sections 510.4.1 through 510.4.2.8.

Section 510.4.1 Emergency responder communication enhancement system signal strength. The building shall be considered to have acceptable emergency responder communications enhancement system coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in Sections 510.4.1.1 through 510.4.1.3.

Exception: Critical areas, such as the fire command center(s), the fire pump room(s), interior exit stairways, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations, and other areas required by the Fire Code Official, shall be provided with 99 percent floor area radio coverage.

Section 510.4.1.1 Minimum signal strength into the building. The minimum inbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the Fire Code Official. The inbound signal level shall be a minimum of -95 dBm in 95 percent of the coverage area and 99 percent in critical areas and sufficient to provide not less than a Delivered Audio Quality (DAQ) of 3.0 or an equivalent Signal-to-Interference-Plus-Noise Ratio (SINR) applicable to the technology for either analog or digital signals.

Section 510.4.1.2 Minimum signal strength out of the building. The minimum outbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the Fire Code Official. The outbound signal level shall be sufficient to provide not less than a DAQ of 3.0 or an equivalent SINR applicable to the technology for either analog or digital signals. A minimum signal strength of -95 dBm shall be received by the King County Regional 800 MHz Radio System when transmitted from within the building.

Section 510.4.1.3 System performance. Signal strength shall be sufficient to meet the requirements of the applications being utilized by public safety for emergency operations through the coverage area as specified by the radio system manager in Section 510.4.2.2.

Section 510.4.2 System design. The emergency responder radio coverage system shall be designed in accordance with Sections 510.4.2.1 through 510.4.2.8 and NFPA 1221 (2019).

Section 510.4.2.1 Amplification systems and components. Buildings and structures that cannot support the required level of radio coverage shall be equipped with systems and components to enhance the public safety radio signals and achieve the required level of radio coverage specified in Sections 510.4.1 through 510.4.1.3. Public safety communications enhancement systems utilizing radio-frequency-emitting devices and cabling shall be allowed by the Public Safety Radio System Operator. Prior to installation, all RF-emitting devices shall have the certification of the radio licensing authority and be suitable for public safety use.

Section 510.4.2.2 Technical criteria. The Public Safety Radio System Operator shall provide the various frequencies required, the location of radio sites, the effective radiated power of radio sites, the maximum propagation delay in microseconds, the applications being used and other supporting technical information necessary for system design upon request by the building owner or owner's representative.

Section 510.4.2.3 Power supply sources. Emergency responder radio coverage systems shall be provided with dedicated standby batteries or provided with 2-hour standby batteries and connected to the facility generator power system in accordance with Section 1203. The standby power supply shall be capable of operating the emergency responder radio coverage system at 100 percent system capacity for a duration of not less than 12 hours.

Section 510.4.2.4 Signal booster requirements. If used, signal boosters shall meet the following requirements:

1. All signal booster components shall be contained in a National Electrical Manufacturer's Association (NEMA) 4, IP66-type waterproof cabinet or equivalent.

Exception: Listed battery systems that are contained in integrated battery cabinets.

2. Battery systems used for the emergency power source shall be contained in a NEMA 3R or higher-rated cabinet, IP65-type waterproof cabinet or equivalent.

3. Equipment shall have FCC or other radio licensing authority certification and be suitable for public safety use prior to installation.

4. Where a donor antenna exists, isolation shall be maintained between the donor antenna and all inside antennas to not less than 20dB greater than the system gain under all operating conditions.

5. Bi-Directional Amplifiers (BDAs) used in emergency responder radio coverage systems shall be fitted with anti-oscillation circuitry and per-channel AGC.

6. The installation of amplification systems or systems that operate on or provide the means to cause interference on any emergency responder radio coverage networks shall be coordinated and approved by the Public Safety Radio System Operator.

7. Unless otherwise approved by the Public Safety Radio System Operator, only channelized signal boosters shall be permitted.

Exception: Broadband BDAs may be utilized when specifically authorized in writing by the Public Safety Radio System Operator.

BDAs must also comply with PSERN's detailed requirements, which include channelized, minimum of 28 channels, supporting analog, P25 Phase I (FDMA), and P25 Phase II (TDMA). Information regarding PSERN requirements can be found via their website (https://PSERN.org).

Section 510.4.2.5 System monitoring. The emergency responder radio enhancement system shall include automatic supervisory and trouble signals that are monitored by a supervisory service and are annunciated by the fire alarm system in accordance with NFPA 72. The following conditions shall be separately annunciated by the fire alarm system, or, if the status of each of the following conditions is individually displayed on a dedicated panel on the radio enhancement system, a single automatic supervisory signal may be annunciated on the fire alarm system indicating deficiencies of the radio enhancement system:

1. Loss of normal AC power supply.
2. System battery charger(s) failure.
3. Malfunction of the donor antenna(s).
4. Failure of active RF-emitting device(s).
5. Low-battery capacity at 70 percent reduction of operating capacity.
6. Active system component malfunction.
7. Malfunction of the communications link between the fire alarm system and the emergency responder radio enhancement system.

Section 510.4.2.6 Additional frequencies and change of frequencies. The emergency responder radio coverage system shall be capable of modification or expansion in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC or other radio licensing authority.

Section 510.4.2.7 Design documents. The Fire Code Official shall have the authority to require "as-built" design documents and specifications for emergency responder communications coverage systems. The documents shall be in a format acceptable to the Fire Code Official.

Section 510.4.2.8 Radio communication antenna density. Systems shall be engineered to minimize the near-far effect. Radio enhancement system designs shall include sufficient antenna density to address reduced gain conditions.

Exceptions:

1. Class A narrow band signal booster devices with independent AGC/ALC circuits per channel.

2. Systems where all portable devices within the same band use active power control.

Section 510.5 Installation requirements. The installation of the public safety radio coverage system shall be in accordance with NFPA 1221 and Sections 510.5.1 through 510.5.7.

Section 510.5.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC or other radio licensing authority shall not be installed without prior coordination and approval of the Public Safety Radio System Operator.

Section 510.5.2 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include both of the following:

1. A valid FCC-issued general radio telephone operator's license.

2. Certification of in-building system training issued by an approved organization or approved school, or a certificate issued by the manufacturer of the equipment being installed.

Section 510.5.3 Acceptance test procedure. Where an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building is in accordance with Section 510.4.1. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of 20 approximately equal test areas, with a maximum test area size of 6,400 square feet. Where the floor area exceeds 128,000 square feet, the floor shall be divided into as many approximately equal test areas as needed, such that no test area exceeds the maximum square footage allowed for a test area.

2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for each of the test grids. A diagram of this testing shall be created for each floor where coverage is provided, indicating the testing grid used for the test in Section 510.5.3(1), and including signal strengths and frequencies for each test area. Indicate all critical areas.

3. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the Fire Code Official. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets shall be tested and recorded in the grid square diagram required by Section 510.5.3(2): each grid square on each floor; between each critical area and a radio outside the building; between each critical area and the fire command center or fire alarm control panel; between each landing in each stairwell and the fire command center or fire alarm control panel.

4. Failure of more than 5 percent of the test areas on any floor shall result in failure of the test.

Exception: Critical areas shall be provided with 99 percent floor area coverage.

5. In the event that two of the test areas fail the test, in order to be more statistically accurate, the floor shall be permitted to be divided into 40 equal test areas. Failure of not more than two nonadjacent test areas shall not result in failure of the test. If the system fails the 40-area test, the system shall be altered to meet the 95 percent coverage requirement.

6. A test location approximately in the center of each test area shall be selected for the test, with the radio enabled to verify two-way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire test area. Failure in the selected test location shall be considered to be a failure of that test area. Additional test locations shall not be permitted.

7. The gain values of all amplifiers shall be measured, and the test measurement results shall be kept on file with the building owner so that the measurements can be verified during annual tests. In the event that the measurement results become lost, the building owner shall be required to rerun the acceptance test to reestablish the gain values.

8. As part of the installation, a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at the time of installation and at subsequent annual inspections.

9. Systems incorporating Class B signal booster devices or Class B broadband fiber remote devices shall be tested using two portable radios simultaneously conducting subjective voice quality checks. One portable radio shall be positioned not greater than 10 feet (3048 mm) from the indoor antenna. The second portable radio shall be positioned at a distance that represents the farthest distance from any indoor antenna. With both portable radios simultaneously keyed up on different frequencies within the same band, subjective audio testing shall be conducted and comply with DAQ levels as specified in Sections 510.4.1.1 and 510.4.1.2.

10. Documentation maintained on premises. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall place a copy of the following records in the DAS enclosure or the building engineer's office. The records shall be available to the Fire Code Official and maintained by the building owner for the life of the system:

a. A certification letter stating that the emergency responder radio coverage system has been installed and tested in accordance with this code, and that the system is complete and fully functional.

b. The grid square diagram created as part of testing in Sections 510.5.3(2) and 510.5.3(3).

c. Data sheets and/or manufacturer specifications for the emergency responder radio coverage system equipment; back up battery; and charging system (if utilized).

d. A diagram showing device locations and wiring schematic.

e. A copy of the electrical permit.

11. Acceptance test reporting to Fire Code Official. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall submit to the Fire Code Official an acceptance test report that includes items (10a-10e).

Section 510.5.4 FCC compliance. The emergency responder radio coverage system installation and components shall comply with all applicable federal regulations including, but not limited to, FCC 47 CFR Part 90.219.

Section 510.5.5 Mounting of the donor antenna(s). To maintain proper alignment with the system designed donor site, donor antennas shall be permanently affixed on the highest possible position on the building or where approved by the Fire Code Official. A clearly visible sign shall be placed near the antenna stating, "movement or repositioning of this antenna is prohibited without approval from the Fire Code Official or designee." The antenna installation shall be in accordance with the applicable requirements in the International Building Code for weather protection of the building envelope.

Section 510.5.6 Wiring. The backbone, antenna distribution, radiating, or any fiber-optic cables shall be rated as plenum cables. The backbone cables shall be connected to the antenna distribution, radiating, or copper cables using hybrid coupler devices of a value determined by the overall design. Backbone cables shall be routed through an enclosure that matches the building's required fire-resistance rating for shafts or interior exit stairways. The connection between the backbone cable and the antenna cables shall be made within an enclosure that matches the building's fire-resistance rating for shafts or interior exit stairways, and passage of the antenna distribution cable in and out of the enclosure shall be protected as a penetration per the International Building Code.

Section 510.5.7 Identification Signs. Emergency responder radio coverage systems shall be identified by an approved sign located on or near the Fire Alarm Control Panel or other approved location stating "This building is equipped with an

Emergency Responder Radio Coverage System. Control Equipment located in room".

A sign stating "Emergency Responder Radio Coverage System Equipment" shall be placed on or adjacent to the door of the room containing the main system components.

Section 510.6 Maintenance. The emergency responder radio coverage system shall be maintained operational at all times in accordance with Sections 510.6.1 through 510.6.7.

Section 510.6.1 Testing and proof of compliance. The owner of the building or owner's authorized agent shall have the emergency responder radio coverage system inspected and tested annually or where structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following items (1) through (7):

1. In-building coverage test as required by the Fire Code Official as described in Section 510.5.3, "Acceptance test procedure," or 510.6.1.1, "Alternative in-building coverage test".

Exception: Group R Occupancy annual testing is not required within dwelling units.

2. Signal boosters shall be tested to verify that the gain/output level is the same as it was upon initial installation and acceptance or set to optimize the performance of the system.

3. Backup batteries and power supplies shall be tested under load of a period of 1 hour to verify they will properly operate during an actual power outage. If within the 1-hour test period the battery exhibits symptoms of failure, the test shall be extended for additional 1-hour periods until the integrity of the battery can be determined.

4. If a fire alarm system is present in the building, a test shall be conducted to verify that the fire alarm system is properly supervising the emergency responder communication system as required in Section 510.4.2.5. The test is performed by simulating alarms to the fire alarm control panel. The certifications in Section 510.5.2 are sufficient for the personnel performing this testing.

5. Other active components shall be checked to verify operation within the manufacturer's specifications.

6. At the conclusion of the testing, a report that shall verify compliance with Section 510.6.1 shall be submitted to the Fire Code Official by way of the department's third-party compliance vendor.

7. At the conclusion of testing, a record of the inspection and maintenance along with an updated grid diagram of each floor showing tested strengths in each grid square and each critical area shall be added to the documentation maintained on the premises in accordance with Section 510.5.3.

Section 510.6.1.1 Alternative In-building coverage test. When the comprehensive test documentation required by Section 510.5.3 is available, or the

most recent full five-year test results are available if the system is older than six years, the in-building coverage test required by the Fire Code Official in Section 510.6.1(1), may be conducted as follows:

1. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the Fire Code Official. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets in the following locations shall be tested: between the fire command center or fire alarm control panel and a location outside the building; between the fire alarm control panel and each landing in each stairwell.

2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for:

(a) Three grid areas per floor. The three grid areas to be tested on each floor are the three grid areas with poorest performance in the acceptance test or the most recent annual test, whichever is more recent; and

(b) Each of the critical areas identified in acceptance test documentation required by Section 510.5.3, or as modified by the Fire Code Official, and

(c) One grid square per serving antenna.

3. The test area boundaries shall not deviate from the areas established at the time of the acceptance test, or as modified by the Fire Code Official. The building shall be considered to have acceptable emergency responder radio coverage when the required signal strength requirements in Sections 510.4.1.1 and 510.4.1.2 are located in 95 percent of all areas on each floor of the building and 99 percent in Critical Areas, and any non-functional serving antenna are repaired to function within normal ranges. If the documentation of the acceptance test or most recent previous annual test results are not available or acceptable to the Fire Code Official, the radio coverage verification testing described in 510.5.3 shall be conducted.

The alternative in-building coverage test provides an alternative testing protocol for the in-building coverage test in subsection (1) of Section 510.6.1. There is no change or alternative to annual testing requirements enumerated in subsections (2) – (7) of Section 510.6.1, which must be performed at the time of each annual test.

Section 510.6.2 Additional frequencies. The building owner shall modify or expand the emergency responder radio coverage system at his or her expense in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC or other radio licensing authority Public Safety Radio System Operator or FCC license holder. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this section.

Section 510.6.3 Nonpublic safety system. Where other nonpublic safety amplification systems installed in buildings reduce the performance or cause interference with the emergency responder communications coverage system, the nonpublic safety amplification system shall be corrected or removed.

Section 510.6.4 Field testing. The Fire Code Official or designee shall have the right to enter onto the property at any reasonable time to conduct field testing to verify the required level of radio coverage or to disable a system that due to malfunction or poor maintenance has the potential to impact the emergency responder radio system in the region.

Section 12. TMC Section 16.16.070 is hereby established to read as follows:

16.16.070 Amendments to the International Fire Code – Chapter 6, "Building Services and Systems"

A. Section 607 of the *International Fire Code*, entitled "Commercial Cooking Equipment and Systems," is amended by adding the following subsections to section 606.2:

Section 606.2.2 Permit Required. Permits shall be required as set forth in Section 105.6.

Section 606.2.3 Approved drawing. The stamped and approved cook line drawing shall be displayed adjacent to the suppression system pull station prior to the final inspection. The approved drawing shall be maintained and available for inspection.

Section 13. TMC Section 16.16.080 is hereby established to read as follows:

16.16.080 Amendments to the International Fire Code – Chapter 7, "Fire and Smoke Prevention Systems"

A. Section 705 of the *International Fire Code*, entitled "Door and Window Openings," is amended by substituting 705.2.3 with the following:

Section 705.2.3 Hold-open devices and closers. Hold-open devices and automatic door closures, where provided, shall be maintained. During the period that such device is out of service for repairs, the door it operates shall remain in the closed position.

The Fire Code Official is authorized to require the installation of hold-open devices of existing door installations where there has been documented use of door closure impairment devices.

Section 14. TMC Section 16.16.090 is hereby established to read as follows:

16.16.090 Amendments to the International Fire Code – Chapter 9, "Fire Protection Systems"

A. Section 901 of the *International Fire Code*, entitled "General," is amended by substituting subsection 901.1 with the following:

> **Section 901.1 Scope and application.** The provisions of this chapter shall apply to all occupancies and buildings, shall specify where fire protection systems are required, and shall apply to the design, installation, inspection, operation, testing, and maintenance of all fire protection systems; however, nothing contained in this chapter shall diminish or reduce the requirements of any duly adopted building codes, including state and local amendments, or other city ordinances, resolutions, or regulations. In the event of any conflict in requirements among these codes, ordinances, resolutions, or regulations, the more stringent provision shall apply.

B. Section 901 of the International Fire Code entitled "General" is amended by adding the following new subsection 901.7.7:

> **Section 901.7.7 Fire Watch for Impaired Fire Protection Systems.** In the event of failure of the emergency responder radio system, fire alarm system, fire sprinkler system or any other required fire protection system; or an excessive number of accidental alarm activations, the Fire Code Official is authorized to require the building owner or occupant to provide standby personnel as set forth in the *International Fire Code* until the system is restored, repaired or replaced.

C. Section 901 of the *International Fire Code*, entitled "General," is amended by adding the following new subsection 901.11:

> **Section 901.11 Emergency contacts.** It shall be the responsibility of the owner of any monitored fire protection system to provide and maintain a minimum of three emergency contacts that are capable of responding to the system location with their monitoring company.

D. Section 902 of the *International Fire Code*, entitled "Definitions," is amended by adding the following to the list in subsection 902.1:

> **PROBLEMATIC FIRE PROTECTION SYSTEM**

E. Section 903 of the *International Fire Code*, entitled "Automatic Sprinkler Systems," is amended by substituting subsection 903.2 with the following:

> **Section 903.2 Where required.** Approved automatic fire sprinkler systems shall be installed as follows:
>
> 1. In all buildings without adequate fire flow.
>
> *Exception:* Miscellaneous Group U Occupancies.
>
> 2. All new buildings and structures regulated by the International Building Code requiring 2,000 gallons per minute or more fire flow, or with a gross floor area of 10,000 or more square feet (929 m2), or where this code provides a more restrictive floor/fire area requirement, and shall be provided in all locations or where described by this code.

Exception: Spaces or areas in telecommunications structures used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries, and standby engines, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1 hour fire barriers constructed in accordance with Section 707 of the International Building Code or not less than 2 hour horizontal assemblies constructed in accordance with Section 712 of the International Building Code, or both.

3. Where this code requires the installation of an automatic sprinkler system to protect an occupancy within an otherwise non-sprinklered building, then automatic sprinkler protection will be required throughout the entire building.

4. When the required fire apparatus access roadway grade is 12 percent or greater.

F. Section 903 of the *International Fire Code*, entitled "Automatic Sprinkler Systems," is amended by adding the following new subsection 903.2.9.5:

Section 903.2.9.5 Speculative use warehouses. Where the occupant, tenant, or use of the building or storage commodity has not been determined or it is otherwise a speculative use warehouse or building, the automatic sprinkler system shall be designed and installed to protect not less than Class IV non-encapsulated commodities on wood pallets, with no solid, slatted, or wire mesh shelving, and with aisles that are 8 feet or more in width and up to 20 feet in height.

G. Section 903 of the *International Fire Code,* entitled "Automatic Sprinkler Systems," is amended by substituting subsection 903.3 as follows:

Section 903.3 Installation Requirements. Automatic sprinkler systems shall be designed and installed in accordance with Sections 903.3.1 through 903.3.9.

H. Section 903 of the *International Fire Code*, entitled "Automatic Sprinkler Systems," is amended by adding a new subsection 903.3.9 as follows:

Section 903.3.9 Check valve. All automatic sprinkler system risers shall be equipped with a check valve.

I. Section 903 of the *International Fire Code*, entitled "Automatic Sprinkler Systems," is amended by adding a new subsection 903.7 as follows:

Section 903.7 Riser room access. All risers shall be located in a dedicated room with an exterior door, and with lighting and heat for the room.

J. Section 907 of the *International Fire Code*, entitled "Fire Alarm and Detection Systems," is amended by substituting subsection 907.1.3 with the following:

Section 907.1.3 Equipment. Systems and their components shall be listed and approved for the purpose for which they are installed. All new alarm systems shall be addressable. Each device shall have its own address and shall annunciate individual addresses at a UL Central Station.

K. Section 907 of the *International Fire Code*, entitled "Fire Alarm and Detection Systems," is amended by substituting subsection 907.6.3 with the following:

Section 907.6.3 Initiating device identification. The fire alarm system shall identify the specific initiating device address, location, device type, floor level where applicable and status including indication of normal, alarm, trouble and supervisory status, as appropriate.

Exception: Special initiating devices that do not support individual device identification.

L. Section 907 of the *International Fire Code*, entitled "Fire Alarm and Detection Systems," is amended by adding a new subsection 907.12 as follows:

Section 907.12 Latched alarms. All signals shall be automatically "latched" at the fire alarm control unit until their operated devices are returned to normal condition, and the control unit is manually reset.

M. Section 907 of the *International Fire Code*, entitled "Fire Alarm and Detection Systems," is amended by adding a new subsection 907.13 as follows:

Section 907.13 Resetting. All fire alarm control units shall be reset only by an approved person.

Section 907.13.1 Reset code. The reset code for the fire alarm control unit or keypad shall be 1-2-3-4-5. The reset code shall not be changed without approval of the Fire Code Official.

N. Section 907 of the *International Fire Code*, entitled "Fire Alarm and Detection Systems," is amended by adding a new subsection 907.14 as follows:

Section 907.14 Fire alarm control unit location. All fire alarm control units shall be located in the riser room designed and installed in accordance with Section 903.7, or an approved location.

O. Section 912 of the *International Fire Code*, entitled "Fire Department Connections," is amended by substituting 912.5 with the following:

Section 912.5 Signs. Fire department connections shall be clearly identified in an approved manner.

All fire department connections shall have an approved sign attached below the Siamese clapper. The sign shall specify the type of water-based fire protection system, the structure, and the building areas served.

Section 15. TMC Section 16.16.100 is hereby established to read as follows:

16.16.100 Amendments to the International Fire Code – Chapter 11, "Construction Requirements for Existing Buildings"

A. Section 1103 of the *International Fire Code*, entitled "Fire Safety Requirements for Existing Buildings," is amended by adding a new subsection 1103.5.6 as follows:

Section 1103.5.6 Substantial Alterations. The provisions of this chapter shall apply to substantial alterations to existing buildings regardless of use when a substantial alteration occurs in a structure equaling 10,000 or greater square feet. For purposes of this section, a substantial alteration shall be defined as an

alteration that costs 50 percent or more of the current assessed value of the structure and impacts more than 50% of the gross floor area.

B. Section 1103 of the International Fire Code, entitled "Fire Safety Requirements for Existing Buildings," is amended by adding substituting 1103.7 as follows:

Section 1103.7 Fire alarm systems. An approved fire alarm system shall be installed in existing buildings and structures in accordance with Sections 1103.7.1 through 1103.7.7 and provide occupant notification in accordance with Section 907.5 unless other requirements are provided by other sections of this code.

C. Section 1103 of the *International Fire Code*, entitled "Fire Safety Requirements for Existing Buildings," is amended by adding a new subsection 1103.7.7 as follows:

Section 1103.7.7 Fire alarm control unit replacement. If an existing fire alarm control unit is replaced with identical equipment that has the same part number it shall be considered maintenance.

Section 16. TMC Section 16.16.110 is hereby established to read as follows:

16.16.110 Amendments to the International Fire Code – Chapter 56, "Explosives and Fireworks"

A. Section 5601 of the International Fire Code entitled "General" is amended by substituting the following subsection 5601.1.3:

Section 5601.1.3 Fireworks. No person, firm or corporation shall manufacture, sell, or store fireworks in the City of Tukwila, except for a person granted a permit for a temporary fireworks stand or public display of fireworks, shall be allowed to buy, possess, and store fireworks according to the permit granted.

Section 5601.1.3.1 Fireworks Discharge Prohibited. No person shall ignite or discharge any fireworks at any time.

Exceptions:

a. Displays authorized by permit issued by the City pursuant to RCW 70.77.260(2) now enacted or as hereafter amended.

b. Use by a group or individual for religious or other specific purposes on an approved date at an approved location pursuant to a permit issued pursuant to RCW 70.77.311(2)(c) now enacted or as hereafter amended and as required by Tukwila Municipal Code.

c. Use of trick and novelty devices as defined in WAC 212-17-030, as amended, and as hereafter amended and use of agricultural and wildlife fireworks as defined in WAC 212-17-045 now enacted or as hereafter amended.

d. Legal consumer fireworks, as defined by RCW 70.77.136 now enacted or as hereafter amended, are small devices designed to produce: (1) visible effects by combustion and which must comply with the construction, chemical composition, and labeling regulations of the United States Consumer Product Safety Commission; and (2) audible effects such as a whistling device, ground

device containing 50 milligrams or less of explosive materials—provided that devices that are aerial, airborne, discharged, launched, or explode are prohibited.

Section 5601.1.3.2 Limitation on Use of Legal Consumer Fireworks.

a. It is unlawful for any person under the age of 16 years to possess, use, discharge, or transport any fireworks unless under immediate supervision of an adult (18 years old or older). It is unlawful for any person or entity to sell or give fireworks to anyone under the age of 16 years unless that person is under the immediate supervision of an adult (18 years old or older).

b. It is unlawful for any person to smoke within 25 feet of any building or stand in which fireworks are sold at retail or stored after hours.

c. It is unlawful for any person to discharge any fireworks, or to permit the discharge of fireworks, within 300 feet of any structure, combustible material, or person, or any building or stand in which fireworks are sold at retail or stored after hours.

d. It is unlawful at any time to throw or toss any fireworks at any person, animal, vehicle, thing or object.

e. It is unlawful to have in possession or to use, fire, or discharge any fireworks in any public park within the City, including vehicle parking areas within or adjacent to a park.

f. During periods of extreme fire danger, the Fire Code Official may prohibit the discharge of all fireworks including those described in section 5601.1.3.1.d.

g. Legal consumer fireworks may only be used or discharged within the City on the following days and times as provided in RCW 70.77.395:

From 12:00 noon to 11:00 p.m. on June 28th of each year;

From 9:00 a.m. to 11:00 p.m. on each day from June 29th through July 3rd of each year;

From 9:00 a.m. to 12:00 midnight on July 4th of each year;

From 9:00 a.m. to 11:00 p.m. on July 5th of each year; and

From 6:00 p.m. on December 31st until 1:00 a.m. on January 1st of the subsequent year.

B. Section 5601 of the International Fire Code entitled "General" is amended by substituting the following subsection 5601.2.2:

Section 5601.2.2 Sale and Retail Display Retail sales of fireworks shall be permitted only from within a temporary fireworks stand, and the sale from any other building or structure is prohibited. Temporary stands shall be subject to the following conditions:

a. It is unlawful for any person, firm or corporation to engage in the retail sale of any fireworks within the city limits of Tukwila without first obtaining a City business license.

b. Applications for temporary fireworks stand permits shall be made to the Fire Code Official, and must be accompanied by the appropriate application fee in accordance with the fee schedule adopted by resolution of the City Council and RCW 70.77.555. Pursuant to this chapter, applications may be filed only during the period between April 15 and June 1st of the year for which the permit is sought.

c. Any issued permit shall be used only by the designated permittee and shall be nontransferable.

d. The maximum number of permits issued by the City in any year shall not exceed four. Applications shall be reviewed on a first-come, first served basis.

e. A temporary fireworks stand permit shall be issued only upon compliance with the following terms and conditions:

(1) The applicant shall have a valid and subsisting Washington State fireworks license issued by the Washington State Patrol authorizing the holder thereof to engage in the fireworks business.

(2) The applicant shall provide proof of a liability insurance policy with coverage of not less than $50,000; and $500,000 for bodily injury liability for each person and occurrence, respectively; and not less than $50,000 for property damage liability for each occurrence, or such policy as may comply with, or exceed, the requirements of RCW 70.77.270.

(3) The applicant shall provide an inventory list of resale items in accordance with the provisions of section 5601.1.3.1.d.

f. Temporary fireworks stands shall be erected under the supervision of the Fire Code Official and shall conform to the following minimum standards:

(1) Temporary fireworks stands shall not be located:

Within 100 feet of any gasoline stations, oil storage tanks, or premises where flammable liquids are kept or stored;

Closer than 20 feet to buildings, combustibles, parking, storage, public roads, motor vehicle traffic, or generators;

Within 25 feet of any property line;

Within 100 feet of tents, other fireworks stands, fuel dispensing devices, retail propane dispensing stations, flammable liquid storage, and combustible storage; and

Within 300 feet of bulk fuel storage.

(2) Each temporary fireworks stand shall have at least two exits that shall be unobstructed at all times and located as far from each other as possible. Parking for customers shall be located at least 20 feet away from the stand.

(3) Each temporary fireworks stand shall have fire extinguishers in a readily accessible place and approved by the Fire Code Official as to location within the stand, number and type. No smoking shall be permitted in or near a fireworks stand, and signs reading "NO SMOKING WITHIN 25 FEET" shall be prominently displayed on the fireworks stand.

(4) Each stand shall be operated by adults (18 years old or older) only. No fireworks shall be left unattended in a stand.

(5) All weeds and combustible materials shall be cleared from the location of the stand to at least a distance of 20 feet.

(6) All unsold fireworks, cartons and other rubbish shall be removed from the location and from the City by 12:00 noon on July 6 each year. The fireworks stand shall be dismantled and removed from the location by 12:00 noon on July 10 each year.

(7) Fireworks shall not be discharged within 300 feet of a fireworks stand. Signs reading "NO FIREWORKS DISCHARGE WITHIN 300 FEET" shall be in letters at least two inches high, with a principal stroke of not less than one-half inch on contrasting background, and such signs shall be conspicuously posted on all four sides of the stand.

(8) Fireworks retailers shall not knowingly sell fireworks to persons under the age of 16 and shall require proof of age by means of display of a driver's license or photo identification card issued by a public or private school, state, federal or foreign government showing a photograph and date of birth.

(9) Retail sales of legal consumer fireworks shall only be allowed within the City on the following days and times as provided in RCW 70.77.395 as now enacted or hereafter amended:

From 12:00 noon to 11:00 p.m. on June 28th of each year;

From 9:00 a.m. to 11:00 p.m. on each day from June 29th through July 4th of each year;

From 9:00 a.m. to 9:00 p.m. on July 5th of each year,

From 12:00 noon to 11:00 p.m. on each day from December 27th through December 31st of each year.

(10) If the fireworks stand is proposed for placement on leased property, the applicant shall provide an affidavit from the property owner that the use is acceptable.

(11) Additional signage required by the Fire Code Official shall be prominently displayed on the fireworks stand.

4. Any person who violates any portion of this ordinance shall have their fireworks subject to seizure by the Tukwila Police Chief, or designee, as provided for in RCW 70.77.435 and shall be guilty of a civil violation and penalty as provided in TMC Chapter 8.45.

5. Any person who uses or discharges fireworks in a reckless manner that creates a substantial risk of death or serious physical injury to another person or damage to the property of another is guilty of a gross misdemeanor and shall be punishable by a maximum penalty of 364 days in jail and/or a $5,000 fine. Upon conviction, the sentencing court may order restitution for any property damage or loss caused by the offense.

C. Section 5608 of the International Fire Code entitled "Fireworks Display" is amended by substituting 5608.3 with the following:

Section 5608.3 Pyrotechnic Display Requirements. All fireworks displays shall conform to the following minimum standards and conditions:

1. All fireworks displays must be planned, organized, and discharged by a state-licensed pyrotechnician.

2. All pyrotechnic displays must comply with applicable requirements set forth in the WAC and RCW's, the *International Fire Code*, applicable NFPA codes, and as required by the Tukwila Municipal Code.

3. A Pyrotechnic Display Permit (explosives operational fire permit) must be submitted at least 45 days prior to the desired display date. Approval by the Fire Code Official is required prior to any display of pyrotechnics or the setup of the pyrotechnic display.

4. The fee for a Pyrotechnic Display Permit shall be in accordance with the Tukwila Fire Permit Fee Schedule adopted by resolution of the City Council.

5. At the discretion of the Fire Chief that such requirement is necessary to preserve the public health, safety and welfare, the Pyrotechnic Display Permit may require that Fire Department apparatus and fire personnel be on site from 30 minutes prior to the start until 30 minutes after the conclusion of the display. All compensation/costs for fire personnel and apparatus will be paid by the applicant in accordance with the fee schedule adopted by resolution of the City Council and amended from time to time.

6. Permits granted shall be in effect for the specified event, date and time. Permit applications shall specify if a pyrotechnic display is needed for a multi-day event (example: pyrotechnics for professional sports season, concert, or other multi-day event).

7. An approved Pyrotechnic Display Permit shall not be transferable.

8. The Chief of Police and the Fire Code Official are both directed to administer and enforce the provisions of this chapter. Upon request by the Chief of Police or the Fire Code Official, all other City departments and divisions are authorized to assist them in enforcing this chapter.

9. An approved Pyrotechnic Display Permit may be immediately revoked at any time deemed necessary by the Fire Code Official due to any noncompliance or weather conditions such as extremely low humidity or wind factor. The display may also be canceled by accidental ignition of combustible or flammable material in the vicinity due to fall debris from the display.

10. For displays other than the 4th of July, the permit application must also include a public notification plan for affected residents or businesses. This may include newspaper, radio, and/or television announcements; door to door distribution of written announcements; reader boards and/or other methods or media. The public notification plan is subject to approval by the Fire Chief or designee. Costs associated with public notification to affected residents shall be borne by the permit applicant.

Section 17. TMC Section 16.16.120 is hereby established to read as follows:

16.16.120 Amendments to the International Fire Code – Chapter 80, "Referenced Standards"

A. Section NFPA of the *International Fire Code*, entitled "Referenced Standards," is amended by modifying the standard reference number dates of publication as follows:

13-22	Installation of Sprinkler Systems
13D-22	Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes
13R-22	Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
20-22	Installation of Stationary Pumps for Fire Protection
24-22	Installation of Private Fire Service Mains and Their Appurtenances
72-22	National Fire Alarm and Signaling Code
110-22	Emergency and Standby Power Systems
111-22	Stored Electrical Energy Emergency and Standby Power Systems
1225-22	Standard for Emergency Services Communications

Section 18. TMC Section 16.16.130 is hereby established to read as follows:

16.16.130 Amendments to the International Fire Code – Appendix B, "Fire-Flow Requirements for Buildings"

A. Section B103 of the *International Fire Code*, entitled "Modifications," is amended by substituting subsection B103.2 with the following:

Section B103.2 Increases. The fire chief is authorized to increase the fire-flow requirements where exposures could be impacted by fire. An increase shall not be more than twice that required for the building under consideration.

Exception: For one- and two-family residences when either of the following conditions apply:

1. The building and exposure are equipped with the 1-hour fire resistant rated exterior walls tested in accordance with ASTM E 119 or UL 263 with exposure on the exterior side and projections with 1-hour underside protection, fire blocking installed from the wall top plate to the underside of the roof sheathing and no gable vent openings.

2. The walls are a distance greater than 11' to the nearest exposure or lot line; or face an unbuildable lot, tract or buffer. The distance shall be measured at right angles from the face of the wall.

B. Section B105 of the *International Fire Code*, entitled "Fire-Flow Requirements for Buildings," is amended by substituting section B105 with the following:

Section B105.1 One- and two-family dwellings. Fire-flow requirements for one- and two-family dwellings shall be in accordance with Sections B105.1.1 through B105.1.2.

Section B105.1.1 Buildings less than 3,600 square feet. The minimum fire-flow and flow duration requirements for buildings less than 3,600 square feet shall be 1,000 gallons per minute for 1 hour.

Exception: A reduction in required fire-flow of 50 percent, as approved, is allowed when the building is equipped with an approved automatic sprinkler system.

Section B105.1.2 Buildings greater than 3,600 square feet or more. The minimum fire-flow and flow duration requirements for buildings that are 3,600 square feet or larger shall not be less than that specified in Table B105.1(2).

Exception: A reduction of fire-flow and flow duration to 1,000 gallons per minute for 1 hour, as approved, is allowed when the building is equipped with the following:

1. An approved automatic sprinkler system.

Section B105.2 Buildings other than one- and two-family dwellings. The minimum fire-flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.1(2).

Exception: A reduction in required fire-flow of 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system. The resulting fire-flow shall not be less than 1,500 gallons per minute for the prescribed duration as specified in Table B105.1(2).

Section B105.2.1 Tents and Membrane structures. No fire flow is required for tents and membrane structures.

Section B105.2.2 Accessory residential Group U buildings. Accessory residential Group U buildings shall comply with the requirements of B105.1.

Section B105.3 Water supply for buildings equipped with an automatic sprinkler system. For buildings equipped with an automatic sprinkler system, the water supply shall be capable of providing the greater of:

1. The automatic sprinkler system demand, including hose stream allowance.

2. The required fire flow.

C. Section B105 of the *International Fire Code*, entitled "Fire-Flow Requirements for Buildings," is amended by deleting the following tables from section B105:

Table B105.1(1). Required Fire-Flow for One- and two-family dwellings, Group R-3 and R-4 Buildings and Townhouses.

Table B105.2. Required Fire-Flow for Buildings Other than One- and two-family dwellings, Group R-3 and R-4 Buildings and Townhouses.

D. Section B105 of the *International Fire Code*, entitled "Fire-Flow Requirements for Buildings," is amended by adding new subsection B105.4 as follows:

Section B105.4 Alternative Fire Flow Mitigation. For development projects, where it has been determined not feasible to extend the water main by the local water purveyor, the following alternative fire flow mitigations are approved for use in accordance with Sections B105.4.1 through B105.4.2

Section B105.4.1 One- and two-family dwellings. Fire flow will not be required for one- and two-family dwellings if all of the following mitigations are met;

1. The fire-flow calculation area is less than 3600 square feet.
2. The construction type of the dwelling is Type VA.
3. The dwelling is equipped with an automatic fire sprinkler system installed in accordance with Section 903.3.1.3 with a water supply of no less than 30 minutes.
4. The dwelling has a fire separation distance of no less than 150 feet on all sides.

Section B105.4.2 Buildings other than one- and two-family dwellings. Fire flow will not be required for buildings other than one- and two-family dwellings if all of the following mitigations are met;

1. The fire-flow calculation area is less than 3600 square feet.
2. The construction type of the building is not Type VB.
3. The building is equipped with an automatic fire sprinkler system installed in accordance with Section 903.3.1.1 with a water supply of no less than 30 minutes.
4. The building has a fire separation distance of no less than 150 feet on all sides.

Section 19. Corrections by City Clerk or Code Reviser Authorized. Upon approval of the City Attorney, the City Clerk and the code reviser are authorized to make necessary corrections to this ordinance, including the correction of scrivener's errors; references to other local, state or federal laws, codes, rules, or regulations; or ordinance numbering and section/subsection numbering.

Section 20. Severability. If any section, subsection, paragraph, sentence, clause or phrase of this ordinance or its application to any person or situation should be held to be invalid or unconstitutional for any reason by a court of competent jurisdiction, such

invalidity or unconstitutionality shall not affect the validity or constitutionality of the remaining portions of this ordinance or its application to any other person or situation.

Section 21. Effective Date. This ordinance or a summary thereof shall be published in the official newspaper of the City, and shall take effect and be in full force on July 1, 2023, after passage and publication as provided by law.

PASSED BY THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, at a Regular Meeting thereof this 1st day of May, 2023.

ATTEST/AUTHENTICATED:

eSigned via SeamlessDocs.com
Christy O'Flaherty
Key: 62b95548-cc1a-461d-b51a-7db077ea3591

Christy O'Flaherty, MMC
City Clerk

Cynthia Delostrinos Johnson
Mayor Pro Tempore

APPROVED AS TO FORM BY:

eSigned via SeamlessDocs.com
Kari L. Sand
Key: cb588912-480a-4b7d-a29d-3fed8198EEE

Office of the City Attorney

Filed with the City Clerk: 4-25-23
Passed by the City Council: 5-1-23
Published: 5-4-23
Effective Date: Per Section 21
Ordinance Number: 2703

City of Tukwila Public Notice of Ordinance Adoption for Ordinance 2702-2703.

On May 1, 2023 the City Council of the City of Tukwila, Washington, adopted the following ordinance, the main points of which are summarized by title as follows:

Ordinance 2702: AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, AMENDING ORDINANCE NOS. 2171 §1 (PART), 2648 §2, §3, AND §4, AND 2673 §1, AS CODIFIED AT MULTIPLE SECTIONS OF TUKWILA MUNICIPAL CODE CHAPTER 16.04, "BUILDINGS AND CONSTRUCTION," TO ADOPT UPDATED STATE BUILDING CODES; PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE.

Ordinance 2703: AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, REPEALING ORDINANCE NOS. 652, 2329, 2330, 2436, 2437, 2505, 2506, 2507, AND 2508, AS CODIFIED IN VARIOUS SECTIONS OF TUKWILA MUNICIPAL CODE (TMC) TITLE 16, "BUILDINGS AND CONSTRUCTION"; REPEALING ORDINANCE NOS. 2650 AND 2672 AS CODIFIED IN TMC CHAPTER 16.16; REENACTING TMC CHAPTER 16.16, "INTERNATIONAL FIRE CODE," TO ADOPT THE 2021 EDITION OF THE INTERNATIONAL FIRE CODE AND UPDATE TUKWILA FIRE CODE REGULATIONS; PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE.

The full text of this ordinance will be provided upon request.

Christy O'Flaherty, MMC, City Clerk

Published Seattle Times: May 4, 2023

Andy Youn

From: Kari Sand
Sent: Monday, July 17, 2023 7:45 PM
To: Andy Youn
Cc: Christy O'Flaherty
Subject: Re: Scrivener's Error - Ordinance 2703

Hi, Andy and Christy--

You explained the issue very clearly, and I agree that the name of chapter 16.42 TMC should be corrected in Ordinance No. 2703 as a scrivener's error. Your attention to detail is always appreciated.

Thank you,
Kari

Kari L. Sand | Attorney

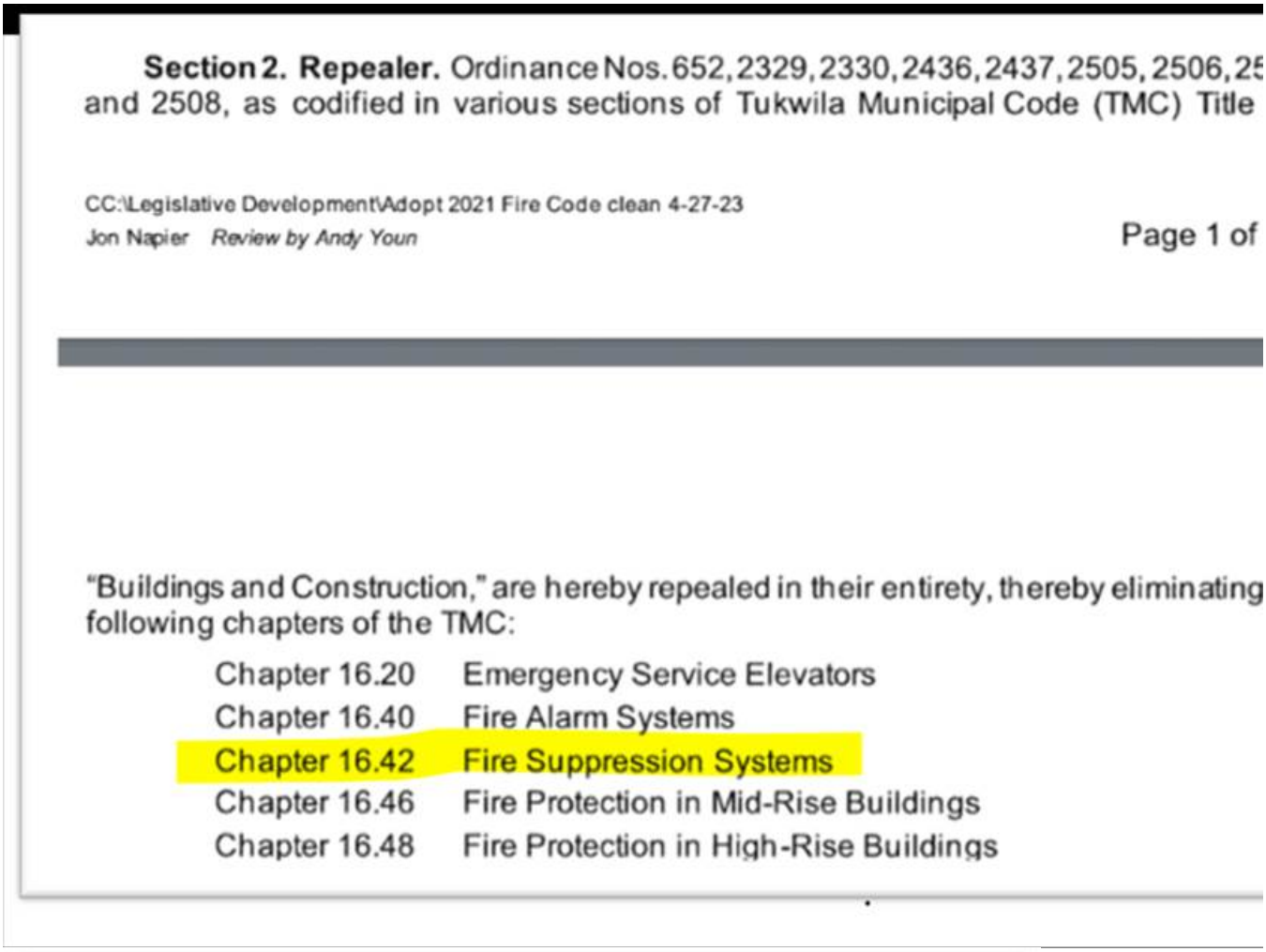
Ogden Murphy Wallace, PLLC
901 Fifth Avenue, Suite 3500 | Seattle, WA 98164
Direct: 206.447.2250 | Fax: 206.447.0215
ksand@omwlaw.com | www.omwlaw.com

From: Andy Youn <Andy.Youn@TukwilaWA.gov>
Sent: Monday, July 17, 2023 4:09 PM
To: Kari Sand <Kari.Sand@TukwilaWA.gov>
Cc: Christy O'Flaherty <Christy.OFlaherty@TukwilaWA.gov>
Subject: Scrivener's Error - Ordinance 2703

Hi Kari,

Section 2 of Ordinance No. 2703, to adopt the 2021 Edition of the International Fire Code, repealed several ordinances and chapters of the TMC per the below image.

Chapter 16.42 is currently cited in Ord. No. 2703 as “Fire Suppression Systems.” In actuality, the chapter name should be “Chapter 16.42 - Fire Sprinkler Systems.”



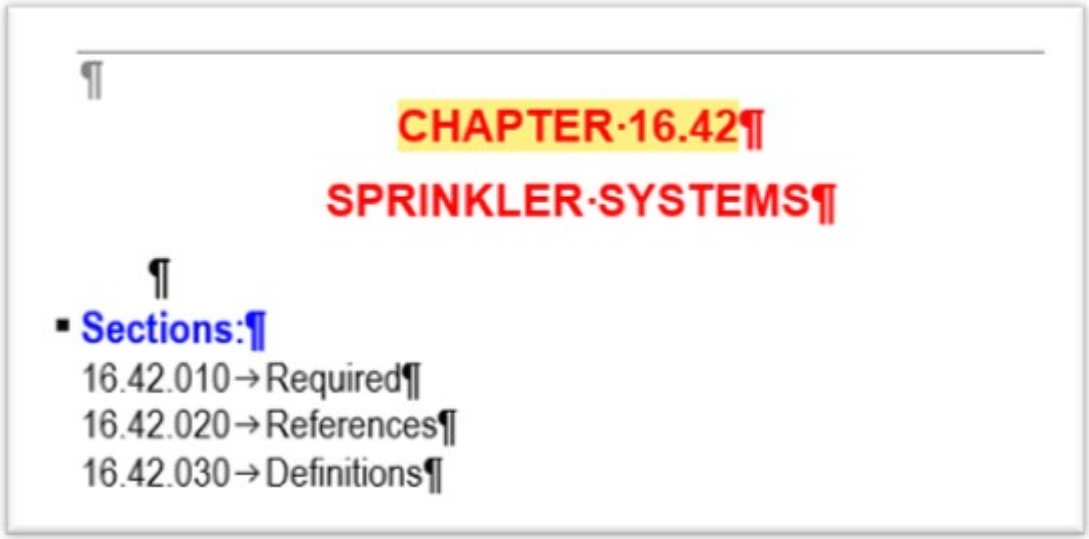
Section 2. Repealer. Ordinance Nos. 652, 2329, 2330, 2436, 2437, 2505, 2506, 25 and 2508, as codified in various sections of Tukwila Municipal Code (TMC) Title

CC:\Legislative Development\Adopt 2021 Fire Code clean 4-27-23
Jon Napier *Review by Andy Youn*

Page 1 of

"Buildings and Construction," are hereby repealed in their entirety, thereby eliminating following chapters of the TMC:

Chapter 16.20	Emergency Service Elevators
Chapter 16.40	Fire Alarm Systems
Chapter 16.42	Fire Suppression Systems
Chapter 16.46	Fire Protection in Mid-Rise Buildings
Chapter 16.48	Fire Protection in High-Rise Buildings



¶

CHAPTER·16.42¶

SPRINKLER·SYSTEMS¶

¶

- **Sections:¶**

16.42.010→Required¶
16.42.020→References¶
16.42.030→Definitions¶

It looks like the Fire Marshal who drafted the ordinance used an interchangeable term when drafting this chapter and it was not caught in subsequent reviews.

While the chapter was repealed in Ord. 2703, the incorrect chapter title still shows on Ord. 2703 and I'd like to close any open loops.

Please advise if we are able to correct the name of Chapter 16.42 referenced in Ord. 2703 as a Scrivener's Error.

Thank you!

Andy Youn
Deputy City Clerk

Records Governance | City Clerk's Office
City of Tukwila