



Agenda Bill

City Council Regular Business Meeting - 21 Sep 2020

Department

Community Development

Staff Contact

Steven Blake, Building Official

Agenda Bill Title

Introduction to Ordinance No. 738, Incorporating Technical Code Amendments

Summary

Washington construction codes are updated every three years by the State Building Code Council and adopted by the State Legislature. In the past, the Burien City Council has adopted the codes and amendments by local ordinance on a regular basis. The Washington State Building Code Act (RCW 19.27) requires all jurisdictions in Washington State begin administering the new 2018 State Building codes effective February 1, 2021. Adoption of this proposed ordinance will update BMC Title 15, Buildings and Construction, as mandated by the State. By adopting these codes, we are permitted to amend the codes within certain parameters. The amendments to the codes, as presented in this ordinance, fall within those parameters.

The proposed changes are primarily administrative. Where the 2018 code section was revised to include changes to the section number, the BMC amendment previously approved by the Burien City Council has been revised to reflect the new numbering. Where the 2018 codes have incorporated a local amendment previously approved by the Burien City Council, the BMC amendment has been deleted. A few definitions have been added for clarification in the proposed code amendments. Some sections have been amended to reflect changes in the state amendments.

Options

1. Adopt Ordinance No. 738, Incorporating Technical Code Amendments
 2. Do not adopt Ordinance No. 738, Incorporating Technical Code Amendments
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Administrative Recommendation

Staff recommend adopting Ordinance No. 738, incorporating technical code amendments.

Suggested Motion

I move to place adoption of this ordinance on the Consent Agenda for the next Regular Business Meeting.

Attachments

CITY OF BURIEN, WASHINGTON

ORDINANCE NO. 738

AN ORDINANCE OF THE CITY OF BURIEN, WASHINGTON, AMENDING BURIEN MUNICIPAL CODE TITLE 15, (BUILDINGS AND CONSTRUCTION CODE) BY AMENDING CHAPTERS 15.05 (CONSTRUCTION ADMINISTRATIVE CODE), 15.10 (CONSTRUCTION CODES), 15.20 (FIRE CODE), 15.40 (BURIEN BUILDING & PROPERTY MAINTENANCE CODE) PROVIDING FOR SEVERABILITY, AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, certain provisions of state law have changed and as a result, portions of the Burien Construction Administration Code, Burien Construction Code, Burien Fire Code and Burien Building and Property Maintenance Code need to be amended or updated; and

WHEREAS, other edits and corrections are required to increase clarity and to remove errors in the BMC; and

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section One. Section 15.05.020, entitled **Definitions**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

“Square footage method” means calculated based on the current Building Valuation Data as published by the International Code Council.

Section Two. Section 15.05.030, entitled **Intent**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The purpose of this code and the construction codes is to establish the minimum requirements to provide a reasonable level of safety, public health, safety, and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide a reasonable level of safety to ~~[fire fighters]~~ firefighters and emergency responders during emergency operations.

Section Three. Section 15.05.045, entitled **International Residential Code – Scope.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The provisions of the International Residential Code for One- and Two-Family Dwellings (IRC) shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of detached one- and two-family dwellings, adult family homes, and multiple single-family dwellings

(townhouses) not more than three stories above grade plane in height with separate means of egress and their accessory structures not more than three stories above *grade plane* in height.

Exceptions:

(a) Live/work units located in *townhouses* complying with the requirements of Section 419 of the International Building Code shall be permitted to be constructed ~~[in accordance with]~~ under the *International Residential Code for One- and Two-Family Dwellings*. Fire suppression required by Section 419.5 of the International Building Code where constructed under the International Residential Code for One- and Two-family Dwellings shall conform to Appendix [Q] U of the International Residential Code.

(b) Owner-occupied lodging houses with one or two guestrooms shall be permitted to be constructed ~~[in accordance with]~~ under the International Residential Code for One- and Two-Family Dwellings.

(c) Owner-occupied lodging homes with three to five guestrooms shall be permitted to be constructed ~~[in accordance with]~~ under the International Residential Code for One- and Two-Family Dwellings ~~[where]~~ equipped with a fire sprinkler system ~~[in accordance with]~~ consistent with Appendix [Q] U.

Section Four. Section 15.05.050, entitled **International Mechanical Code – Scope.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The provisions of the International Mechanical Code (IMC) shall ~~[apply]~~ regulate the alteration, design, inspection, installation, and maintenance of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate those appliances, equipment, mechanical systems, and system components specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be regulated by the *International Fuel Gas Code*. References in this code to Group R shall include Group I-1, Condition 2 assisted living facilities licensed by Washington state under chapter 388-78A WAC and Group I-1, Condition 2 residential treatment facilities licensed by Washington state under chapter 246-337 WAC.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the International Residential Code.

2. The standards for liquefied petroleum gas installations shall be the 2017 Edition of NFPA 58 (Liquefied Petroleum Gas Code) and the 2018 Edition of ANSI Z223.1/NFPA 54 (National Fuel Gas Code).

~~[(a) The International Fuel Gas Code (IFGC) shall apply to all installations utilizing natural gas and gaseous hydrogen except those regulated by the IRC and those utilizing LPG.~~

~~[(b) International Residential Code shall apply to all structures regulated by the IRC except LPG installations.~~

~~(c) NFPA 54 (National Fuel Gas Code) and NFPA 58 (Liquid Petroleum Gas Code) shall apply to all LPG installations for liquefied petroleum gas (LPG) installations.]~~

Section Five. Section 15.05.060, entitled **International Fuel Gas Code – Scope.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

~~The provisions of the International Fuel Gas Code (IFGC) shall apply to the installation of [all materials and equipment utilizing natural gas except those regulated by the International Residential Code.] fuel gas piping systems, fuel gas utilization equipment, gaseous hydrogen systems, and regulated accessories under Section 101.2.1 through 101.2.5.~~

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the International Residential Code.

2. The standards for liquefied petroleum gas installations shall be the 2017 Edition of NFPA 58 (Liquefied Petroleum Gas Code) and the 2018 Edition of ANSI Z223.1/NFPA 54 (National Fuel Gas Code).

Section Six. Section 15.05.065, entitled **International Fire Code – Scope.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The provisions of the International Fire Code (IFC) shall apply to matters affecting or relating to the protection of structures, processes, premises, and safeguards regarding all of the following:

(1) The hazard of fire and explosion arising from the storage, handling, or use of structures, materials, or devices.

(2) Conditions hazardous to life, property, or public welfare in the occupancy of structures or premises.

(3) Fire hazards in the structure or on the premises from occupancy or operation.

(4) Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems.

(5) Conditions affecting the safety of ~~[fire-fighters]~~ firefighters and emergency responders during emergency operations.

Section Seven. Section 15.05.070, entitled **Uniform Plumbing Code – Scope.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The provisions of the Uniform Plumbing Code (UPC) shall apply to the erection, installation, alteration, repair relocation, replacement, addition to, use, or maintenance of plumbing systems, including equipment, appliances, fixtures, fittings, and appurtenances, where connected to a water or sewage system and all aspects of a medical gas system.

Section Eight. Section 15.05.080, entitled **Washington State Energy Code – Scope.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The provisions of the Washington State Energy Code shall apply to all matters governing the design and construction of buildings for energy efficiency.

(1) WAC 51-11R applies to residential buildings and the buildings sites and associated systems and equipment. This code shall be the maximum and minimum energy code for residential construction in each town, city, and county. Residential sleeping units, Group I-1, Condition 2 assisted living facilities licensed by Washington state under chapter 388-78A WAC and Group I-1, Condition 2 residential treatment facilities licensed by Washington state under chapter 246-337 WAC shall utilize the commercial building sections of the energy code regardless of the number of stories of height above grade plane.

(2) WAC 51-11C applies to commercial buildings and the buildings sites and associated systems and equipment. References in this code to Group R shall include Group I-1, Condition 2 assisted living facilities licensed by Washington state under chapter 388-78A WAC and Group I-1, Condition 2 residential treatment facilities licensed by Washington state under Chapter 246-337 WAC. Building areas that contain Group R sleeping units, regardless of the number of stories in height, are required to comply with the commercial sections of the energy code.

EXCEPTION: The provisions of this code do not apply to temporary growing structures used solely for the commercial production of horticultural plants including ornamental plants, flowers, vegetables, and fruits. A temporary growing structure is not considered a building under [for the purposes of] this code. However, the installation of other than listed, portable mechanical equipment or listed, portable lighting fixtures is not allowed.

Section Nine. Section 15.05.082, entitled **International Existing Building Code – Scope.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The provisions of the *International Existing Building Code* shall apply to the *repair, alteration, change of occupancy, addition to and relocation of existing buildings not regulated under the International Residential [e] Code.*

Section Ten. Section 15.05.130, entitled **Requirements not covered by code.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The building official shall determine the [R] requirements necessary for the strength, stability or proper operation of an existing or proposed structure or installation, or for the public safety, health and general welfare, not specifically covered by this code[~~, shall be determined by the building official].~~

Section Eleven. Section 15.05.165, entitled **Duties and power of the building official.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The building official is hereby authorized and directed to enforce the provisions of this code and this title. The building official shall have the authority to render interpretations of this code and this title and to adopt policies and procedures ~~[in order]~~ to clarify the application of its provisions. Such interpretations, policies, and procedures shall ~~[be in compliance]~~ comply with the intent and purpose of this code and this title. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code and this title.

Section Twelve. Section 15.05.245.1(k), entitled **Work exempt from permit.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

(k) Window replacement for IRC structures in Airport Noise Reduction Area 2 or 3, where no alteration of structural members is required, the window U-Values meet the prescriptive requirements of the [~~International Energy Conservation~~] Washington State Energy Code, the window glazing is not required to be safety glass, and minimum dimensions and placement of any required egress window is not reduced.

Section Thirteen. Section 15.05.280, entitled **Time limitation on permit application.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

(1) Permit applications that are received on or after July 1, 2010, for which no permit is issued within 18 months following the date of application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed in accordance with state law.

~~[(2) Permit applications that were received on or before June 30, 2010, for which no permit has been issued shall be permitted to remain active until December 31, 2011. If at that time the permit is not issued, the application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed in accordance with state law. Where the original permit application was received prior to July 1, 2007, the building official is authorized to require plans and other supporting information to be updated to current codes in order for the permit application to remain active in accordance with this section.]~~

~~(2)~~⁽³⁾ Existing and new applications for which no permit has been issued may be canceled for inactivity~~[,]~~ if an applicant fails to respond to the building official's written request for revisions, corrections, actions, or additional information within 90 calendar days of the date of request. The building official may extend the response period beyond 90 calendar days, if within the original 90-day time period the applicant provides and subsequently adheres to an approved schedule with specific target dates for submitting the full revisions, corrections, or other information requested by the building official.

~~(3)~~⁽⁴⁾ The building official may extend the life of an application for an additional 180 calendar days beyond the expiration period established in subsection (1) of this section~~[,]~~ if any of the following conditions exist:

(a) Compliance with the State Environmental Policy Act is in progress;

(b) Any other city review is in progress, provided the applicant has submitted a complete response to city requests for information or corrections;

(c) The building official determines that unique or unusual circumstances exist that warrant additional time for such response, and the building official determines that the review is proceeding [~~in a timely manner~~] promptly toward the final city decision; or

(d) Litigation against the city or applicant is in progress, the outcome of which may affect the validity or the provisions of any permit issued pursuant to such application.

(4[5]) The building official may place a permit application on hold for up to one year[,] if requested to do so in writing by a permit applicant.

(5[6]) Any balance owing for plan review or other review fees shall be paid prior to any approval for an extension of the permit application.

Section Fourteen. Section 15.05.290(2), entitled **Permit expiration**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

(2) [~~Permits issued for applications submitted prior to July 1, 2010, shall be valid for two years from the date of adoption of this code, unless a written request for extension is approved by the building official prior to permit expiration or the permit is renewed in accordance with BMC 15.05.295.~~] Where new codes have been adopted or required to be enforced per Chapter 19.27 RCW since the time of permit issuance, the building official is authorized to require construction documents to be updated to current codes and submitted as a permit revision for review and approval by city staff.

Section Fifteen. Section 15.05.320(1)(g),(h), and (i), entitled **Construction documents, Building**, of the Burien Municipal Code is amended as follows with the remaining portions of this section remaining the same:

(g) Exterior Balconies and Elevated Walking Surfaces. Where balconies or other elevated walking surfaces associated with IBC structures are exposed to water from direct or blowing rain, snow, or irrigation, and the structural framing is protected by an impervious moisture barrier, the construction documents shall include details for all elements of the impervious moisture barrier system. The construction documents shall include manufacturer's installation instructions.

(h[g]) Site Plan. The construction documents submitted with the permit application shall be accompanied by a site plan, showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades, and the proposed finished grades and, as applicable, flood hazard areas, floodways, and design flood elevations. The site plan shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The building official is authorized to waive or modify the requirement for a site plan, when the application for permit is for alteration or repair or when otherwise warranted.

(i[h]) Design Flood Elevations. Where design flood elevations are not specified, they shall be established in accordance with Section 1612.3.1 of the IBC and Chapter 15.55 BMC.

Section Sixteen. Section 15.05.380(l) – (q), entitled **Inspections**, of the Burien Municipal Code is repealed and the following is substituted in lieu thereof:

(l) Weather-Exposed Balcony and Walking Surface Waterproofing. Where balconies or other elevated walking surfaces associated with IBC structures are exposed to water from direct or blowing rain, snow or irrigation, and the structural framing is protected by an impervious

moisture barrier, all elements of the impervious moisture barrier shall not be concealed until inspected and approved.

Exception: Where special inspections are provided by IBC 1705.1.1, Item 3

(m[†]) Exterior Finish and Insulation Systems (EFIS), Lath and Gypsum Board Inspection. EFIS, lath and gypsum board inspections shall be made after backing, lathing or gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.

Exception: Interior gypsum board that is not part of a fire-resistance-rated assembly or a shear assembly and is not located in Aircraft Noise Reduction Zone 1 (35 dB).

(n[‡]) Fire-resistance-rated construction inspections. Where fire-resistance-rated construction is required, an inspection of such construction shall be made after lathing or gypsum board or gypsum panel products are in place, but before any plaster is applied, or before board or panel joints and fasteners are taped and finished.

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

(o[§]) Energy Efficiency Inspection. In addition to the inspections required in Chapter 51-11 WAC, the following inspections are also required:

(i) Envelope.

(A) Wall Insulation. To be made after all wall insulation and air vapor retarder sheet or film materials are in place, but before any wall covering is placed.

(B) Glazing. To be made after glazing materials are installed in the building.

(C) Exterior Roofing Insulation. To be made after the installation of the roof insulation, but before concealment.

(D) Slab/Floor Insulation. To be made after the installation of the slab/floor insulation, but before concealment.

(ii) Mechanical.

(A) Mechanical Equipment Efficiency and Economizer. To be made after all equipment and controls required by the construction codes are installed and prior to the concealment of such equipment or controls.

(B) Mechanical Pipe and Duct Insulation. To be made after all pipe, fire suppression piping, and duct insulation is in place, but before concealment.

(iii) Lighting and Motors.

(A) Lighting Equipment and Controls. To be made after the installation of all lighting equipment and controls required by the construction codes, but before concealment of the lighting equipment.

(B) Motors. To be made after installation of all equipment covered by the construction codes, but before concealment.

(iv) Water Heating Equipment

(A) Water Heater efficiency. To be made after the water heater is on-site, but prior to installation and connection to the water system.

(p[e]) Other inspections. In addition to the specified inspections, the *building official* is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the building department.

(q[p]) Final Inspection. The final inspection shall be made after all work required by the permit is completed. If located in a flood hazard area, documentation of the elevation of the lowest floor as required in IBC Section 1612.5 or IRC Section R322 and Chapter 15.55 BMC shall be submitted to the building official prior to the final inspection.

Section Seventeen. Section 15.05.385(5), entitled **Traffic management systems**, of the Burien Municipal Code is repealed and the following is substituted in lieu thereof:

(5) Jurisdictions with an established electrical inspection authority and WSDOT may perform an electrical inspection on their rights-of-way for each other by interlocal agreement. They may not perform an electrical inspection on other rights-of-way except as allowed in Chapter 19.28 or 39.34 RCW.

Section Eighteen. Section 15.05.385(7)(b), entitled **Traffic management systems**, of the Burien Municipal Code is repealed and the following is substituted in lieu thereof:

(b) The local government jurisdiction must identify, as acceptable, the controller cabinet or system component(s) with an identification plate. The identification plate must be located inside the cabinet and may be attached with an adhesive.

Section Nineteen. Section 15.05.390(3) and (4), entitled **Certificate of occupancy**, of the Burien Municipal Code is repealed and the following is substituted in lieu thereof:

(3) Temporary or Phased Occupancy. The building official is authorized to issue a temporary or phased certificate of occupancy before the completion of the entire work covered by the permit; provided, that such portion or portions shall be occupied safely. The building official is authorized to require in addition to the completion of life safety building components, the completion of any or all accessibility components prior to issuance of a temporary or phased certificate of occupancy. The building official shall set a ~~[time]~~ period during which the temporary or phased certificate of occupancy is valid. The city is authorized to require that a performance bond or other security acceptable to the city be provided with the city in an amount equal to 150 percent of the value of incomplete work as determined by the design

professional. The security shall be rescindable or refundable upon issuance of a final certificate of occupancy for the complete building or structure and a request in writing for the refund. It shall be the duty of the applicant to request a refund within 180 calendar days of the issuance of the certificate of occupancy. Failure to request a refund within the ~~specified time~~ [period] may result in forfeiture of the full amount.

(4) Revocation. The building official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or ~~[on the basis]~~ based on [of] incorrect information supplied by the owner or owner's representatives, or where it is determined that the building or structure or portion thereof ~~[is in violation of]~~ violates any ordinance or regulation or any of the provisions of this code. This section shall be applied, implemented, and interpreted consistent with the statutes and court decisions of the state of Washington.

Section Twenty. Section 15.05.400, entitled **Appeals**, of the Burien Municipal Code is repealed and the following is substituted in lieu thereof:

(1) General. Appeals of final orders, decisions, or determinations made by the building official relative to the application and interpretation of this title and the adopted codes may be appealed by the permit applicant, property owner or his/her agent to the hearing examiner, pursuant to Chapters 2.15 and 2.20 BMC, within 30 calendar days of the issuance of the final order, decision or determination.

(2) Limitations on Authority. An application for appeal shall be based on a claim that the true intent of this title or the rules adopted thereunder have been ~~[incorrectly]~~ interpreted incorrectly, the provisions of this title do not fully apply or an equally good or better form of construction is proposed. The hearing examiner shall have no authority to waive the requirements of this title.

(3) Participation in the Appeal. Only those parties who have appealed the building official's final order, decision or determination may participate in the appeal in either or both of the following ways:

(a) By submitting written comments or testimony to the hearing examiner prior to commencement of the hearing; or

(b) By appearing in person, or through a representative at the hearing. The hearing examiner may reasonably limit the extent of oral testimony or oral argument to facilitate the orderly and timely conduct of the hearing.

(4) Decision on the Appeal. The hearing examiner shall consider all information and material within the scope of the appeal submitted by persons entitled to participate in the appeal. Based on the hearing examiner's findings and conclusions, the hearing examiner may affirm, reverse, or modify the order, decision, or determination being appealed. The hearing examiner's decision on the appeal shall be issued within 90 calendar days from the date the original appeal period closed, unless all parties to an appeal have agreed to an extended [time] period. Within four business days after it is issued, the hearing examiner's decision shall be mailed to the applicant and to each person who has requested notice of the decision. The hearing examiner's final

decision shall be the final decision of the city on the appeal and shall be conclusive unless proceedings for review of the decision are properly commenced in superior court within the ~~[time]~~ period specified by state law.

(5) Judicial Review. Any judicial appeal of the hearing examiner's decision shall be reviewed in King County ~~[s]~~ Superior ~~[e]~~ Court pursuant to Chapter 36.70C RCW, the Land Use Petition Act ("LUPA"). The land use petition must be filed within 21 calendar days of the issuance of the hearing examiner's decision.

Section Twenty-One. Section 15.05.415, entitled **Stop-work order**, of the Burien Municipal Code is repealed and the following is substituted in lieu thereof:

15.05.415 Stop-work order.

(1) Authority. Whenever the building official finds any work being performed in a manner either contrary to the provisions of this code, the construction codes, or other pertinent laws or ordinances that are violated during ~~[the course of]~~ work authorized by the permit, the building official is authorized to issue a stop-work order. Issuance of a notice of violation, infraction, or notice and order is not a condition precedent to the issuance of the stop-work order.

(2) Issuance. The stop-work order shall be in writing and shall be given to the owner of the property involved, or to the owner's authorized agent, or ~~[to]~~ the person doing the work and posted in plain ~~[site]~~ sight on the premises, structure, fixture, or system as applicable. Upon issuance of a stop-work order, the cited work shall immediately cease. The stop-work order shall state the reason for the order and the conditions under which the cited work will be permitted to resume.

(3) Effect.

(a) The building official is authorized to assess a special investigation fee for the issuance of a stop-work order, when work has started without the issuance of a permit. The special investigation fee shall be determined in accordance with BMC 15.05.375(5), Work Commencing before Permit Issuance.

(b) A stop-work order represents a determination that a code violation has occurred and that any work or activity that is causing or contributing to the violation on the property where the violation has occurred or is occurring must cease.

(c) A stop-work order requires the immediate cessation of the specified work or activity on the named property. Work or activity may not resume unless specifically authorized by the building official or designee.

(d) A stop-work order may be appealed to the city hearing examiner according to the procedures prescribed by BMC 15.05.400, Appeals.

(e) Failure to appeal the stop-work order within the applicable time limits shall render the stop-work order a final determination that a code violation occurred, and that work was properly ordered to cease.

(f) Failure to comply with the terms of a stop-work order is declared to be unlawful and subject to enforcement as provided in BMC 1.15.110.

Section Twenty-Two. Section 15.05.420(2), entitled **Unsafe structures and equipment**, of the Burien Municipal Code is repealed and the following is substituted in lieu thereof:

(2) Evacuation. Where conditions exist that are deemed hazardous to life and property, the building official is authorized to abate summarily such hazardous conditions that ~~[are in violation of]~~ violate the codes. The building official shall be authorized to order the immediate evacuation of any unsafe occupied building when such a building has hazardous conditions that present an imminent danger to building occupants. Persons so notified shall immediately leave the structure or premises and shall not enter or re-enter until authorized to do so by the building official.

Section Twenty-Three. Section 15.10.060, entitled **International Building Code adopted.**, of the Burien Municipal Code, the first paragraph, is amended as follows, with the remaining portions of this section remaining the same:

The ~~[2015]~~ 2018 Edition of the International Building Code (IBC), as published by the International Code Council, Inc., and as adopted by the State Building Code Council in Chapter 51-50 WAC, and including Appendix Chapter E (Accessibility), ICC A117.1-2009 (Accessible Standards), Appendix Chapter H (Signs), ~~[and]~~ Appendix Chapter J (Grading) and Appendix O (Solar Readiness) excluding Chapter 1, Administration, is hereby adopted by reference, together with the amendments set forth in this section. The Construction Administrative Code, as set forth in Chapter 15.05 BMC, shall be used in place of IBC Chapter 1, Administration.

Section Twenty-Four. Section 15.10.060(5) – (30), entitled **International Building Code adopted.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

(5) Amend IBC Section 202, Definitions, to read as follows:

SUBSTANTIALLY ALTERED, means any *repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the assessed value of the structure per King County Assessor before the improvement or repair is started.*

(6[5]) Add new stand-alone section as follows:

Design Criteria shall be as follows:

GROUND AND ROOF SNOW LOAD: 25 PSF

SEISMIC DESIGN CATEGORY: D

WIND SPEED: Risk category I: 100 mph; Risk category II: 110 mph; Risk category III and IV: 115 MPH

WIND EXPOSURE: Site Specific. See IBC Section 1609.4

SOIL BEARING: Site specific. See IBC Chapter 18
WEATHERING: Moderate
FROST LINE DEPTH: 12 inches
TERMITE: Slight to moderate
DECAY: Slight to moderate
WINTER DESIGN TEMPERATURE: 24°F
SUMMER DESIGN TEMPERATURE: 83°F
ICE SHIELD UNDERLAYMENT REQUIRED: No
FLOOD HAZARDS: See BMC 15.55
AIR FREEZING INDEX: 148°F- days
MEAN ANNUAL TEMPERATURE: 51.4°F.

(7[6]) Amend IBC Section 403.4.8.1, Equipment Room, to read as follows:

403.4.8.1 Equipment room. If the standby system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, and shall be in a separate room from the normal power source including transformers and distribution equipment. Power distribution from the emergency source to the emergency transfer switch shall be by an independent route from the normal power source. System supervision with manual start and transfer features shall be provided at the fire command center. Fuel-fired standby power generator sets and associated fuel storage, including optional landlord- or tenant-owned generator sets, located more than 75 feet above the lowest level of Fire Department vehicle access, require the approval of the fire code official.

(8[7]) Add new IBC Section 403.4.8.1.1, Penetrations, to read as follows:

403.4.8.1.1 Penetrations. Penetrations into and openings through a room containing a standby power system are prohibited except for required exit doors, equipment and ductwork necessary for heating, cooling or ventilation, sprinkler branch line piping, or electrical raceway serving the standby power system or being served by the standby power system. Such penetrations shall be protected in accordance with Section 714.

Exception: Metallic piping with no joints or openings where it passes through the standby power system room.

(9[8]) Amend IBC Section 403.4.8.3, Standby power loads, to read as follows:

403.4.8.3 Standby power loads. The following are classified as standby power loads:

1. Power and lighting for the fire command center required by Section 403.4.6;
2. Ventilation and automatic fire detection equipment for smoke proof enclosures;
3. Elevators;

4. Where elevators are provided in a high-rise building[s] for accessible means of egress, fire service access or occupant self-evacuation, the standby power system shall also comply with IBC Section 1009.4, 3007 or 3008 as applicable;

5. Smoke control systems; and

6. Sump pumps required by ASME A17.1 serving pit drains at the bottom of elevator hoistways of fire service access or occupant evacuation elevators.

(~~10~~[9]) Add new IBC Section 403.7, Smoke control, and amend to read as follows:

403.7 Smoke control. A smoke control system meeting the requirements of Section 909 shall be provided in buildings having floors more than 75 feet above the lowest level of fire department vehicle access.

(~~11~~[10]) Amend IBC Section 405.8, Standby power, as follows: Add the following sentence to the end of the paragraph:

405.8 Standby power. A standby power system complying with Chapter 27 shall be provided standby power loads specified in Section 405.8.1. An emergency power system complying with Section 2702 shall be provided for the emergency power loads specified in Section 405.8.2. Fuel-fired emergency generator sets and associated fuel storage, including optional generator sets, located more than 30 feet below the lowest level of exit discharge require the approval of the fire code official.

(~~12~~[11]) Amend IBC Table 508.4, Required Separation of Occupancies (Hours), as follows:

Add footnote reference superscript “[f]g” to R Occupancy Classification row and column headings. Add footnote “[f]g” to read: See Section 419 for Live/Work Unit separations.

(~~13~~[12]) IBC section 901.7, Fire Areas, is amended to include a second paragraph as follows:

901.7 Fire areas. Where buildings, or portions thereof, are divided into fire areas so as not to exceed the limits established for requiring a fire protection system in accordance with this chapter, such fire areas shall be separated by fire walls constructed in accordance with Section 706 of the International Building Code, fire barriers constructed in accordance with Section 707 of the International Building Code or horizontal assemblies constructed in accordance with Section 711 of the International Building Code, or both, having a fire-resistance rating of not less than that determined in accordance with Section 707.3.10 of the International Building Code.

For the purpose of this section, fire barriers shall not be used to reduce the calculation of floor areas in this chapter for newly constructed buildings with a gross floor area of 5,000 square feet or greater and existing buildings undergoing a modification or change of use with a cumulative work area of 5,000 square feet or greater.

(~~14~~[13]) Amend IBC Section 903.2, Automatic sprinkler systems, to read as follows:

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12,

WAC 51-50-903 and in all new and substantially altered buildings with a gross work area of 5,000 square feet or greater, regardless of type or use.

Exceptions: Spaces or areas in telecommunications buildings 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 or not less than 2-hour horizontal assemblies constructed in accordance with Section 711, or both.

(~~15~~[14]) Amend IBC Section 907.1.3, Equipment, as follows: Add the following sentence to the end of the paragraph:

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 the approved supervising station.

(~~16~~[15]) Add new IBC Section [~~907.2.24~~] 907.1.4, System Installation, to read as follows:

[~~907.2.24~~] 907.1.4 System installation. Fire alarm systems shall be installed and maintained in accordance with this code by persons under the direct supervision of individuals that have factory training and certification on the system being installed. Plans submitted for Fire Alarm System permits shall be prepared under the supervision of individuals possessing a NICET (National Institute for Certification in Engineering Technologies) Level III certification in Fire Alarm Systems or shall be licensed by the State of Washington as a Professional Fire Protection or Electrical Engineer or certified by the State of Washington. Plans shall identify certification and/or licensing information.

(~~17~~[16]) Add new IBC Section 911.1.2.1, Penetrations, to read as follows:

911.1.2.1 Penetrations. Penetrations into and openings through a fire command center are prohibited except for required exit doors, equipment and ductwork necessary for heating, cooling or ventilation, sprinkler branch line piping, electrical raceway for fire department communication and control, and electrical raceways serving the fire command center or being controlled from the fire command center. Such penetrations shall be protected in accordance with Section [~~713~~] 714.

Exception: Metallic piping with no joints or openings.

(~~18~~[17]) Amend IBC Section [~~1503.4~~] 1502.1, Roof drainage, to revise reference to the Uniform Plumbing Code and add new Section [~~1503.4.4~~] 1502.5, Discharge and Disposal, to read as follows:

[P] [~~1503.4~~] 1502.1 Roof drainage. Design and installation of roof drainage systems shall comply with IBC Section 1503 and Chapter 11 of the Uniform Plumbing Code.

[~~1503.4.4~~] 1502.5 Discharge and Disposal. Roof top drainage shall be disposed of by one of the following methods:

1. Tight line to a storm water system (private or public).
2. Tight line to a roof-runoff infiltration system.
3. Concrete splash blocks.

~~[1503.4.4.1]~~ 1502.5.1 Tight line. A tight line with direct discharge to an abutting property or the right-of-way is prohibited unless specifically approved by the building official on the construction plans/permit.

~~[1503.4.4.2]~~ 1502.5.2 Review Required. In all cases the method selected shall be subject to review and approval by the building official and/or the city Public Works Department, with consideration given to site, soil types, slope condition and the nature of the development.

~~[1503.4.4.3]~~ 1502.5.3 Standards. All drainage systems both public and private shall be designed in accordance with storm water standards adopted by the city of Burien.

~~[1503.4.4.4]~~ 1502.5.4 "Green Roof technology". "Green roof" technology may be approved by the building official provided that any drainage coming off of the roof is collected and disposed of pursuant to Sec ~~[1503.4.4.1]~~ 1502.5.1.

(19~~[18]~~) Amend IBC Section 1608.1, General, to read as follows:

1608.1 General. Design snow loads shall be not less than 25 PSF uniform roof snow load, nor less than that determined by IBC Section 1607.

(20~~[19]~~) Amend IBC Section 1612.3, Establishment of flood hazard areas, to read as follows:

1612.3 Establishment of flood hazard areas. To establish flood hazard areas, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for King County" dated ~~[September 2007]~~ February 2013, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

(21~~[20]~~) Amend IBC Section 1705.16, Exterior insulation and finish systems (EIFS), to read as follows:

1705.16 Exterior insulation and finish systems (EIFS). Special inspections shall be required for all EIFS applications. All exterior insulation finish systems (EIFS) shall be certified by the manufacturer as having been installed per the manufacturer's installation recommendations or other agency approved by the building official. The manufacturer's certification shall serve as the special inspection requirement when approved by the building official.

Exception: Special inspections shall not be required for EIFS applications installed over masonry or concrete walls.

~~[1705.16.1 Water resistive barrier coating. A water resistive barrier coating complying with ASTM E 2570 requires special inspection of the water resistive barrier coating when installed over a sheathing substrate.]~~

(~~22~~[21]) Amend IBC Section 2701.1, Scope, to read as follows:

2701.1 Scope. This chapter governs the electrical components, equipment and systems used in buildings and structures covered by this code. Electrical components, equipment and systems shall be designed and constructed in accordance with the provisions of the Burien Electrical Code as adopted in BMC 15.10.140.

(~~23~~[22]) Add new IBC Section [~~2702.1.6~~] 2702.1.9, Location, to read as follows:

~~[2702.1.6]~~ 2702.1.9 Location. Location of stationary generators, fuel piping, and storage tanks are subject to the approval of the building official and/or fire code official.

(~~24~~[23]) Amend IBC Section 3303, Demolition standards, to read as follows:

3303.1 Purpose. The purpose of this section is to establish standards by which demolition of existing structures is to be conducted. The proposed standards are intended to ensure that the public health, safety and welfare are protected when structures are removed. If demolition is proposed along with an application for a construction permit or reuse of a property, sections 3303.5 and 3303.11 do not apply. Following demolition of any structure the property shall be altered to a condition that will not create an attractive nuisance or be unsightly to neighboring properties, public streets and pedestrian facilities. This purpose statement shall be preeminent.

3303.2 Construction Documents. Construction documents and a schedule for demolition must be submitted when required by the Building Official. Where such information is required, no work shall be done until such construction documents or schedule, or both, are approved.

3303.3 Permit Required. A demolition permit is required for any structure to be removed. The demolition permit may be conditioned as necessary to mitigate adverse impacts associated with demolition activities and the aesthetic condition of the vacant site following demolition. All demolition work shall be completed within 30 days from commencement of demolition activity provided that site restoration work shall be completed as provided in section 3303.11.

3303.4 Nuisances. The activity shall not create or exacerbate a nuisance as defined by BMC 8.45.020.

3303.5 Foundation Removal and Surface Restoration. All foundations and/or related materials shall be removed from the site. Unless otherwise approved by the city, all man-made or processed surfaces including but not limited to driveways, asphalt, patios or sidewalks shall be removed, except in the public right-of-way.

3303.6 Pedestrian protection. The work of demolishing any building shall not be commenced until pedestrian protection is in place as required by this chapter.

3303.7 Means of egress. A party wall balcony or horizontal exit shall not be destroyed unless and until a substitute means of egress has been provided and approved.

3303.8 Vacant Lot. Where a structure has been demolished or removed, the vacant lot shall be filled and maintained to the existing grade or in accordance with the ordinances of the jurisdiction having authority. This requirement may be waived if grading would require the alteration of a critical area and/or its buffer. It may also be waived if grading activity could result in soil instability.

3303.9 Erosion Control. All areas that have been disturbed by demolition activity shall be stabilized to prevent erosion. Erosion control measures shall comply with adopted best management practices and shall be in place prior to and during any demolition activity.

3303.10 Water Accumulation. Provisions shall be made to prevent the accumulation of water or damage to any foundations on the premises or the adjoining property.

3303.11 Site Restoration Required. Restoration of properties shall be completed within 4 months of the issuance of a demolition permit. The city may require a financial guarantee to ensure proper installation, establishment and maintenance of a restoration plan. Areas of a site that have been disturbed shall be re-vegetated with an approved hydro-seed mixture.

3303.12 Utility Connections. All service utilities shall be properly capped or terminated at property lines or at the service connection in the right-of-way unless otherwise approved by the Building Official. Utilities Removal and/or decommissioning of utilities shall be completed in accordance with all applicable laws and procedures including but not limited to the IFC, IBC, WAC and RCW.

3303.13 Fire safety during demolition. Fire safety during demolition shall comply with the applicable requirements of this code and the applicable provisions of Chapter [56] 33 of the International Fire Code.

(~~25~~[24]) IBC Section H104, Identification, is deleted.

(~~26~~[25]) Amend IBC Section J103, Permits Required, by replacing Section J103.2, Exemptions, as follows:

J103.2 Exemptions. A grading permit shall not be required for the following:

1. Grading that disturbs less than 7,000 square feet of land in an isolated, self-contained area, provided there is no danger to the public, and that such grading will not adversely affect adjoining properties.
2. Excavation for construction of a structure permitted under this code.
3. Cemetery graves.
4. Refuse disposal sites controlled by other regulations.
5. Excavations for wells or trenches for utilities.

6. Mining, quarrying, excavating, process or stockpiling rock, sand, gravel, aggregate or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil on adjoining properties.

7. Exploratory excavations performed under the direction of a registered design professional.

8. An excavation below existing finished grade for basements and footings of an existing building, retaining wall or other structure, for which the structure is authorized by a valid building permit.

9. An excavation of less than 50 cubic yards of material, which is less than two feet in depth and which does not create a cut slope of a ratio steeper than two horizontals to one vertical.

10. A fill of less than 50 cubic yards of material, which is less than one foot in depth and placed on natural terrain with a slope flatter than five horizontal to one vertical.

Exemption from the permit requirements of this appendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

(~~27~~[~~26~~]) Amend IBC Section J104, Permit Application and Submittals, by replacing Section 104.1 with the following:

J104.1 Submittal requirements. In addition to submittals required by the provisions of Section 15.05.315 BMC, the applicant shall submit the following:

1. Statement estimating quantities of excavation and fill.
2. Statement of the area of land to be disturbed in square feet.
3. Temporary erosion and sediment control plan.
4. For sites subject to a drainage review in accordance with Chapter 13.10 BMC, drainage plans and documentation consistent with Chapter 13.10 BMC.

(~~28~~[~~27~~]) Amend IBC Section J109, Drainage and Terracing, by replacing Section J109.1 with the following:

J109.1 General. Drainage facilities and terracing shall be provided where the ground slope is steeper than 3 horizontal to 1 vertical (33 percent) as follows:

1. For site that are subject to a drainage review in accordance with Chapter 13.10 BMC, drainage shall be provided in accordance with the provision of that Chapter and terracing shall be provided in accordance with the requirements of this Section.
2. Other sites shall provide drainage and terracing in accordance with the requirements of this section unless otherwise recommended by a registered design professional.

(~~29~~[~~28~~]) Replace Section J110, Erosion Control, with the following:

Section J110, EROSION CONTROL AND SEASONAL LIMITATION

J110.1 General. The transport of sediment from the site to drainage facilities, water resources, and adjacent properties and rights-of-way shall be prevented to the maximum extent practicable as follows:

1. For sites that are subject to a drainage review in accordance with BMC 13.10, erosion and sediment controls shall be applied as specified by the temporary erosion and sediment control measures and performance criteria and implementation requirements in accordance with 13.10 BMC.

2. For other sites, the faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall be permitted to consist of effective planting. Erosion control shall be installed as soon as practicable and prior to calling for final inspection. Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.

J110.2 Seasonal limitation. From October 1 through April 30, which is the seasonal limitation period, clearing and grading shall only be permitted if shown to the satisfaction of the code official that runoff leaving the construction site will comply with the erosion and sediment control measures and performance criteria and implementation requirements in 13.10 BMC and the Surface Water Design Manual through a combination of the following:

1. Site conditions including vegetative coverage, slope, soil type and proximity to receiving waters;
2. Proposed limitations on activities and the extent of disturbed areas; and
3. Proposed erosion and sedimentation control measures.

Exceptions:

1. If, during the course of construction activity or soil disturbance during the seasonal limitation period, silt-laden runoff violating standards of Chapter 13.10 BMC leaves the construction site, or if clearing and grading limits or erosion and sediment control measures shown in the approved plan are not maintained, the code official shall revoke the permit or shall issue a stop work order in accordance with Chapter 15.05 BMC.

2. The following activities are exempt from the seasonal limitations of this section:

- 2.1 Maintenance and necessary repair of erosion and sediment control facilities;

- 2.2 Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in removal of the vegetative cover to the soil;

- 2.3 Activities where there is one hundred percent infiltration of surface water runoff within the site in approved and installed erosion and sedimentation control facilities;

- 2.4 Typical landscaping activities of existing single family residences that do not require a permit;

2.5 Response to emergencies that threaten the public health, safety or welfare, consistent with Section 15.60.090 BMC.

(30[29]) Add a new IBC Section J112, Site Soil Protection and Restoration, as follows:

J112.1 Soil protection. The duff layer and native topsoil shall be retained in an undisturbed state to the maximum extent practicable. Any duff layer or topsoil removed during grading shall be stockpiled on-site in a designated, controlled area not adjacent to public resources and critical areas. The material shall be reapplied to other portions of the site where feasible.

J112.2 Soil restoration. The soil moisture holding capacity of disturbed soils shall be restored as follows:

1. Areas that have been cleared and graded shall have the soil moisture holding capacity restored to that of the original undisturbed soil native to the site to the maximum extent practicable. The soil in any area that has been compacted or that has had some or all of the duff layer or underlying topsoil removed shall be amended to mitigate for lost moisture-holding capacity as follows:

1.1 The amendment shall take place between May 1 and October 1;

1.2 The topsoil layer shall be a minimum of eight inches thick, unless the applicant demonstrates that a different thickness will provide conditions equivalent to the soil moisture-holding capacity native to the site;

1.3 The topsoil layer shall have an organic matter content of between five to ten percent dry weight and a pH suitable for the proposed landscape plants;

1.4 When feasible, subsoils below the topsoil layer should be scarified at least four inches with some incorporation of the upper material to avoid stratified layers; and

1.5 Compost used to achieve the required soil organic matter content must meet the definition of "composted materials" in WAC 173-350-220.

Exception.

This section does not apply to areas that at project completion are covered by an impervious surface, incorporated into a drainage facility or engineered as structural fill or slope.

Section Twenty-Five. Section 15.10.070, entitled **International Residential Code adopted.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The [2015] 2018 Edition of the International Residential Code, as published by the International Code Council, Inc., and as adopted by the State Building Code Council in Chapter 51-51 WAC, including Appendix F, Radon Control Methods, Appendix J, Existing Buildings and Structures, Appendix Q, Tiny Homes [WAC 51-51-60105] – Appendix [Chapter Q] U, Dwelling Unit Fire Sprinkler Systems, [WAC 51-51-60106 –] Appendix U [W] Solar-ready Provisions, [WAC 51-51-

~~60107—~~] Appendix V, Fire Sprinklers, and excluding Chapters 1, 11, 25 through 43, is hereby adopted by reference, together with the amendments set forth in this section. The Construction Administrative Code, as set forth in Chapter 15.05 BMC, shall be used in place of IRC Chapter 1, Administration.

(1) Energy Code requirements are regulated by Chapter 51-11R WAC as adopted and amended in BMC 15.10.130.

(2) Plumbing Code requirements are regulated by Chapter 51-56 WAC (UPC) as adopted and amended in BMC 15.10.120.

(3) Electrical Code requirements are regulated by Burien Electrical Code (WCEC) as adopted in BMC 15.10.140.

(4) Except where required by the International Fire Code for Fire Department access, fire hydrant distance or fire flow, an automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system.

(5) Amend IRC Table R301.2, Climatic and geographic design criteria, to include local design values as follows:

R301.2 Climatic and Geographic design criteria. Buildings shall be constructed in accordance with the provisions of this code as limited by the provisions of this section. Additional criteria shall be established by the local jurisdiction and set forth in Table R301.2 (1). Design values for Table R-301.2(1) shall be as follows:

GROUND AND ROOF SNOW LOAD: 25 PSF
WIND SPEED: 110 mph
TOPOGRAPHIC EFFECTS: No
SEISMIC DESIGN CATEGORY: D2
WEATHERING: Moderate
FROST LINE DEPTH: 12 inches
TERMITE: Slight to moderate
DECAY: Slight to moderate
WINTER DESIGN TEMPERATURE: 24°F.
SUMMER DESIGN TEMPERATURE: 83°F.
ICE SHIELD UNDERLAYMENT REQUIRED: No
FLOOD HAZARDS: See BMC 15.55
AIR FREEZING INDEX: 148°F.- days
MEAN ANNUAL TEMPERATURE: 51.4°F.
SOIL BEARING (Assumed): 1500 PSF

(6)~~[Amend IRC Appendix V, Fire Sprinklers, to read as follows:~~

~~AS107.1 Fire sprinklers. An approved automatic fire sprinkler system shall be installed in new one-family and two-family dwellings and townhouses in accordance with Appendix P.~~

~~EXCEPTION: One family and two family dwellings and their attached accessory structures with a gross floor area less than 3600 square feet.]~~

Appendix Chapter W, Solar Readiness.

Compliance with Appendix W, Solar Readiness, is not mandatory. Projects complying with the provisions of this chapter shall be given a designation on the certificate of occupancy as Solar Ready per 2018 WAC 51-51-0102.

Section Twenty-Six. Section 15.10.080, entitled **International Mechanical Code adopted.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The [2015] 2018 Edition of the International Mechanical Code (IMC), as published by the International Code Council, Inc., and as adopted by the State Building Code Council in Chapter 51-52 WAC, excluding Chapter 1, Administration, is hereby adopted by reference together with the amendments set forth in this section. The Construction Administrative Code, as set forth in Chapter 15.05 BMC, shall be used in place of IMC Chapter 1, Administration.

Section Twenty-Seven. Section 15.10.090, entitled **National Fuel Gas Code (NFPA 54) adopted.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The [2015] 2018 Edition of ANSI Z223.1/NFPA 54, National Fuel Gas Code (NFGC), as published by National Fire Protection Association (NFPA) and as adopted by the State Building Code Council in Chapter 51-52 WAC, is hereby adopted by reference. The Construction Administrative Code, as set forth in Chapter 15.05 BMC, shall be used for the administration of the National Fuel Gas Code.

Section Twenty-Eight. Section 15.10.100, entitled **Liquefied Petroleum Gas Code (NFPA 58) adopted.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The [2014] 2017 Edition of NFPA 58, Liquefied Petroleum Gas Code (LPGC), as published by National Fire Protection Association (NFPA) and as adopted by the State Building Code Council in Chapter 51-52 WAC, is hereby adopted by reference. The Construction Administrative Code, as set forth in Chapter 15.05 BMC, shall be used for the administration of the Liquefied Petroleum Gas Code.

Section Twenty-Nine. Section 15.10.110, entitled **International Fuel Gas Code adopted.**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

The [2015] 2018 Edition of the International Fuel Gas Code (IFGC), as published by the International Code Council, Inc., and as adopted by the State Building Code Council in Chapter 51-52 WAC, excluding Chapter 1 "Administration," is hereby adopted by reference together with the amendments set forth in this section. The Construction Administrative Code, as set forth in Chapter 15.05 BMC, shall be used in place of IFGC Chapter 1, Administration.

[(1) Amend IFGC Section 614.4, Exhaust installation, to read as follows:

~~614.4 Exhaust installation. Exhaust ducts for clothes dryers shall terminate on the outside of the building and shall be equipped with a back draft damper. Dryer exhaust ducts may terminate at approved exterior louvers with not less than 1/2" openings in any direction. Screens shall not be installed at the duct termination. Ducts shall not be connected or installed with sheet metal screws or other fasteners that will obstruct the flow. Clothes dryer exhaust ducts shall not be connected to a vent connector, vent or chimney. Clothes dryer exhaust ducts shall not extend into or through ducts or plenums.]~~

Section Thirty. Section 15.10.120, entitled **Uniform Plumbing Code adopted.**, of the Burien Municipal Code, the first paragraph only, is amended as follows, with the remaining portions of this section remaining the same:

The ~~[2015]~~ 2018 Edition of the Uniform Plumbing Code (UPC), as published by the International Association of Plumbing and Mechanical Officials and as adopted and amended by the State Building Code Council in Chapter 51-56 WAC, including Appendix A – Recommended Rules for Sizing the Water Supply System; Appendix B – Explanatory Notes on Combination Waste and Vent Systems; Appendix I – Installation Standards, and, in addition, Appendix C, Alternate Plumbing Systems, excluding Sections C303.3, C304.0 through C601.9 of Appendix C, is hereby adopted by reference together with the additions, deletions, exceptions, and amendments set forth in this section. The Construction Administrative Code, as set forth in Chapter 15.05 BMC, shall be used in place of UPC Chapter 1, Administration; Chapters 12 and 14 of the Uniform Plumbing Code are not adopted; and, those requirements of the Uniform Plumbing Code relating to venting and combustion air of fuel-fired appliances as found in Chapter 5 and those portions of the code addressing building sewers as identified in Chapter 51-56 WAC are not adopted.

Section Thirty-One. Section 15.10.140(1), entitled **Washington Cities Electrical Code adopted.**, of the Burien Municipal Code, is amended as follows, with the remaining portions of this section remaining the same:

The most current edition of the Washington Cities Electrical Code (WCEC), Part One (Adoption) and part Three (National Electrical code amendments), as published by the Washington Association of Building Officials, is hereby adopted by reference and shall be known as the Burien Electrical Code. This includes Annex A, B and C of the National Electrical Code; Commercial Building Telecommunications Cabling Standard (ANSI/TIA-568-C series, February 2009); Commercial Building Standard for Telecommunications Pathway and Spaces (TIA-569-B, October 2004); Commercial Building Grounding and Bonding Requirements for Telecommunications (ANSI/TIA-607-B, August 2011); Residential Telecommunications Cable Standard (ANSI/TIA/EIA 570-B-2004); and the National Electrical Safety Code (NESC C2-~~[2012]~~ 2017 excluding Appendixes A and B)

Section Thirty-Two. Section 15.10.150, entitled **International Existing Building Code.**, of the Burien Municipal Code, the first paragraph only, is amended as follows, with the remaining portions of this section remaining the same:

The ~~[2015]~~ 2018 International Existing Building Code (IEBC) is as published by the International Code Council, Inc., and as adopted by the State Building Code Council in Chapter 51-50-48000

WAC, including Appendix A, Guidelines for the Seismic retrofit of Existing Buildings [~~Appendix N, Solar Readiness,~~] and excluding Chapter 1, Administration, is hereby adopted by reference together with the amendments set forth in this section. The Construction Administrative Code, as set forth in Chapter 15.05 BMC, shall be used in place of IEBC Chapter 1, Administration.

Section Thirty-Three. Section 15.20.020, entitled **Adoption of International Fire Code.**, of the Burien Municipal Code, is amended as follows, with the remaining portions of this section remaining the same:

The 2018 [2015] Edition of the International Fire Code (IFC) as published by the International Code Council, Inc., and as adopted by the State Building Code Council in Chapter 51-54A WAC, and including Appendix B (Fire-Flow Requirements for Buildings), Appendix C (Fire Hydrant Locations and Distribution), Appendix D (Fire Apparatus Access Roads), Appendix H (Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) Instructions), and Appendix M (High-Rise Buildings—Retroactive Automatic Sprinkler Requirement) is hereby adopted by reference, together with the amendments, additions, deletions, and exceptions as set forth in this chapter.

Section Thirty-Four. Section 15.20.050, entitled **Section 109 amended – Board of appeals.**, of the Burien Municipal Code, is amended as follows, with the remaining portions of this section remaining the same:

15.20.050 Section [108] 109 amended – Board of appeals.

[4] IFC Section [108] 109, Board of Appeals, is not adopted and is replaced as follows:

Section [108] 109 - Means of appeal

[108.1] 109.1 General. Appeals shall be heard by the Hearing Examiner pursuant to BMC 15.05.400.

Section Thirty-Five. Section 15.20.060, entitled **Section 110 amended – Violations.**, of the Burien Municipal Code, is amended as follows, with the remaining portions of this section remaining the same:

15.20.060 Section [109] 110 amended – Violations.

(1) IFC Section [109.1] 110.1, Unlawful acts, is amended to read as follows:

Section [109.1] 110.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, extend, repair, move, remove, demolish or utilize any building, occupancy, premises, structure, property, equipment, or system regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code. Signs, tags or seals posted or affixed by the code official shall not be mutilated, destroyed or tampered with or removed without authorization from the code official.

(2) IFC Section [109.2] 110.3, Notice of violation, is amended to read as follows:

Section [109.2] 110.3 Violation enforcement. Violations shall be enforced as prescribed in BMC 15.05.410.

(3) IFC Section [109.3] 110.4, Violation penalties, is amended to read as follows:

Section ~~[109-3]~~ 110.4 Violation penalties. Violation penalties shall be as prescribed in BMC 15.05.410.

Section Thirty-Six. Section 15.20.070, entitled **Section 112 amended – Stop-work order.**, of the Burien Municipal Code, is amended as follows, with the remaining portions of this section remaining the same:

15.20.070 Section ~~[111]~~ 112 amended – Stop-work order.

(1) IFC Section ~~[111.4]~~ 112.4 Failure to comply, is amended to read as follows:

~~[111.4]~~ 112.4 Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to the effects and penalties in BMC 15.05.415(3).

Section Thirty-Seven. Section 15.20.080, entitled **Section 106 amended – Fees.**, of the Burien Municipal Code, is amended as follows, with the remaining portions of this section remaining the same:

15.20.080 Section ~~[113]~~ 106 amended – Fees.

(1) IFC Section ~~[113.2]~~ 106.2, Schedule of permit fees, is amended to read as follows:

~~[113.2]~~ 106.2 Schedule of permit fees. A fee for each permit shall be paid as required in accordance with the city's contract with King County Fire District #2 and BMC 15.05.375(2). Plan Review fees shall be in accordance with BMC 15.05.375(3). Permit Valuations shall be determined in accordance with BMC 15.05.375(4).

(2) IFC Section ~~[113.3]~~ 106.3, Work commencing before permit issuance, is amended to read as follows:

~~[113.3]~~ 106.3 Work commencing before permit issuance. Any person who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall be subject to the penalties and requirements of BMC 15.05.375(5).

(3) IFC Section ~~[113.5]~~ 106.5, Refunds, is amended to read as follows:

~~[113.5]~~ 106.5 Refunds. Refunds may be authorized by the building official in accordance with BMC 15.05.375(7).

Section Thirty-Eight. Section 15.20.085, entitled **Section 202 amended – General Definitions.**, of the Burien Municipal Code, is amended as follows, with the remaining portions of this section remaining the same:

(1) IFC Section 202, Definitions, is amended by addition of the following:

SUBSTANTIALLY ALTERED, Any *repair*, reconstruction, rehabilitation, *alteration*, *addition* or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the assessed value of the structure per King County Assessor before the improvement or repair is started.

Section Thirty-Nine. Section 15.20.100, entitled **Section 314.1 amended – Indoor displays – Vehicles.**, of the Burien Municipal Code, is repealed.

Section Forty. Section 15.20.110, entitled **Section 503 amended – Fire apparatus access roads.**, of the Burien Municipal Code, is amended by striking what is currently numbered as subsection (2), and making what was subsection (3), the new subsection (2), with the remaining portions remaining the same.

(1) IFC Section 503, Fire Apparatus access roads is adopted along with the following amendments.

(2) [~~IFC Section 503.2.2, Specifications, as written in the IFC is adopted without amendment, except IFC Section 503.2.2, Authority, is amended to read as follows:~~

~~503.2.2 Authority. The fire code official shall have the authority to allow a decrease in minimum access widths or require an increase in minimum access widths where they are inadequate for fire or rescue operations or where necessary to meet the public safety objectives of the jurisdiction.]~~

[(3)] IFC Section 503.3, Marking, is amended to read as follows:

Section Forty-One. Section 15.20.130, entitled **Section 507 amended – Fire protection water supplies**, of the Burien Municipal Code, is amended as follows and by the addition of subsection (4).

15.20.130 Section 507 amended – Fire protection water supplies.

(1) IFC Section 507.2, Type of water supply, is amended to read as follows:

507.2 Type of water supply. The type of water supply shall be approved by the building official, fire chief, and the water purveyor. Existing substandard water supply mains and/or hydrant installations, which serve new constructions, alterations, or additions shall be upgraded as required by the Fire Code Official. Fire hydrants and their supplying mains shall be installed to the standard of the water purveyor and shall be dedicated along with repair easements, where needed, to the purveyor. This section shall not apply to conditions existing prior to the effective date of this chapter.

(4) IFC Section 507.5.1.1 Hydrant for standpipe systems is amended to read as follows:

507.5.1.1 Hydrant for standpipe and sprinkler systems. Buildings equipped with a standpipe system installed in accordance with Section 905 and/or a sprinkler system installed in accordance with Section 903 shall have a fire hydrant within 50 feet (30 480 mm) of the fire department connections, if present.

Exception:

The distance shall be permitted to exceed 50 feet (30 480 mm) where *approved* by the *fire code official*.

Section Forty-Two. The Burien Municipal Code is amended by the addition of Section 15.20.145, entitled **Section 510 amended -Emergency responder radio coverage.**

510.1 Emergency responder radio coverage in new buildings. Approved radio coverage for emergency responders shall be provided within buildings meeting any of the following conditions:

1. High rise buildings;
2. The total building area is 50,000 square feet or more;
3. The total basement area is 10,000 square feet or more;
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 Sections 510.4 through 510.5.5 of this code and with the provisions of NFPA 1221 (2019). This section shall not require improvement of the existing public safety communication systems.

Point of Information

When determining if the minimum signal strength referenced 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.

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.

510.2 Emergency responder radio coverage in existing buildings.

Existing buildings shall be provided with approved radio coverage for emergency responders as required in Chapter 11.

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.

Point of Information

Prior coordination and approval from the Public Safety Radio System Operator is required before installation of an Emergency Responder Radio System. Until 2022, such approval is required from EPSCA, King County, Seattle or ValleyCom depending on the location of the installation. In 2022 PSERN will be the single operator of a county wide system.

In order to be forward compatible, designers and contractors should be aware of PSERN's requirements for Distributed Antenna Systems which can be found via <https://psern.org/requirements/>

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.

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.

[W] 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 -95dBm in 95% of the coverage area and 99% 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.

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.

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.

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).

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.

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.

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.

[W] 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 gains 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 BDA's may be utilized when specifically authorized in writing by the Public Safety Radio System Operator.

Point of Information

BDA's must also comply with PSERN's (www.psern.org/requirements) detailed requirements, which include channelized, minimum of 28 channels, supporting analog, P25 Phase I (FDMA), and P25 Phase II (TDMA).

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.

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.

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.

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.

[W] 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.

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.

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.

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% 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 a report of the acceptance test by way of the department's third-party vendor.

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.

WS 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." The antenna installation shall be in accordance with the applicable requirements in the International Building Code for weather protection of the building envelope.

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.

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.

510.6 Maintenance.

The emergency responder radio coverage system shall be maintained operational at all times in accordance with Sections 510.6.1 through 510.6.47.

[W] 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 that 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, which shall verify compliance with Section 510.6.1, shall be submitted to the fire code official by way of the department's third-party 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.

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 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.

Point of Information

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.

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 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.

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.

510.6.4 Field testing.

Agency personnel 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 Forty-Three. Section 15.20.160, entitled **Section 1203.2.10.1 amended – Emergency and standby power systems – High rise buildings.**, is amended as follows, with the remaining portions of this section remaining the same.

(1) IFC Section [~~604.2.149~~] 1203.2.10, High-rise buildings, is amended to include new subsection [~~604.2.9.1~~] 1203.2.10.1 Penetrations, as follows:

[~~604.2.9.1~~] **1203.2.10.1** Penetrations. Penetrations into and openings through a room containing a standby power system are prohibited except for required exit doors, equipment and ductwork necessary for heating, cooling or ventilation, sprinkler branch line piping, or electrical raceway serving the standby power system or being controlled by the standby power system. Such penetrations shall be protected in accordance with Section 714 of the International Building Code.

Exception: Metallic piping with no joints or openings where it passes through the standby power system room.

Section Forty-Four. Section 15.20.190(2), entitled **Section 907 amended – Fire alarm and detection systems.**, is amended as follows, with the remaining portions of this section remaining the same.

IFC Section 907.1[2], System installation, is amended by addition of the following section:

907.1.4[2-24] System installation. Fire alarm systems shall be installed and maintained in accordance with this code by persons under the direct supervision of individuals that have factory training and certification on the system being installed. Plans submitted for Fire Alarm System permits shall be prepared under the supervision of individuals possessing a NICET (National Institute for Certification in Engineering Technologies) Level III certification in Fire Alarm Systems; or shall be licensed by the State of Washington as a Professional Fire Protection or Electrical Engineer or certified by the State of Washington. Plans shall identify certification and/or licensing information.

Section Forty-Five. Section 15.20.200(2), entitled **Section 5704.2 amended – Flammable and combustible liquids – Storage.**, is amended as follows, with the remaining portions of this section remaining the same.

(2) IFC Section 5704.2.11.1[2], Locations, is amended to read as follows:

5704.2.11.1[2] Location. Flammable and combustible liquid storage tanks located underground, either outside or under buildings, shall be in accordance with all of the following:

1. Tanks shall be located with respect to existing foundations and supports such that the loads carried by the latter cannot be transmitted to the tank.
2. The distance from any part of a tank storing liquids to the nearest wall of a basement, pit, cellar, or lot line shall not be less than 3 feet (914 mm).
3. A minimum distance of 1 foot (305 mm), shell to shell, shall be maintained between underground tanks.
4. Tank location shall be in accordance with the limitations of Chapter 19.40 BMC - "Critical areas."

Section Forty-Six. The Burien Municipal Code is amended by the addition of Section 15.20.245, entitled **15.20.245 Chapter 80 Referenced Standards.**

NFPA 1221-19: Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems 510.1, 510.4.2, 510.5

Section Forty-Seven. The Burien Municipal Code is amended by the addition of Section 15.20.250, entitled **Appendix B, Section B105.2 – Fire-flow requirements for buildings.**

Buildings other than one- and two-family dwellings, Group R-3 and R-4 buildings and townhouses. The minimum fire-flow and flow duration for buildings other than one- and two-family *dwellings*, Group R-3 and R-4 buildings and townhouses shall be as specified in Tables B105.2 and B105.1 (2).

Exception: A reduction in required fire-flow of up to 75 percent, as *approved*, is allowed when the building is provided with an *approved automatic sprinkler system* installed in accordance

with Section 903.3.1.1 or 903.3.1.2. The resulting fire-flow shall not be less than specified in footnotes a and b of Table B105.2 for the prescribed duration as specified in Table B105.1(2).

Section Forty-Eight. Section 15.40.185(6), entitled **Definitions**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

“Labeled” means equipment, materials or products to which have been affixed a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory, ~~[inspection]~~ approved agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the above-labeled items and whose labeling indicates either that the equipment, material or product meets identified standards or has been tested and found suitable for a specified purpose.

“Public way” means any street, alley or similar parcel of land that: [essentially unobstructed from the ground to the sky,] is open to the outside air; leads to a street; [which is] has been deeded, dedicated or otherwise permanently appropriated to the public for public use; and has a clear width and height of no less than 10 feet.

Section Forty-Nine. Section 15.40.255(7), entitled **Occupancy limitations**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

~~(a) [A unit occupied by not more than two occupants shall have a clear floor area of not less than 220 square feet (20.4 m²). A unit occupied by three occupants shall have a clear floor area of not less than 320 square feet (29.7 m²).] The unit shall have a living room of not less than 190 square feet of floor area. These required areas shall be exclusive of the areas required by subsections (7)(b) and (c) of this section.~~

~~[(d) The maximum number of occupants shall be three.]~~

Section Fifty. Section 15.40.295(4)(5), entitled **Fire safety requirements**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

(4) Fire-Resistance Ratings

~~(a) Fire-Resistance-Rated Assemblies. [The required fire-resistance rating of fire-resistance-rated walls, fire-stops, shaft enclosures, partitions and floors shall be maintained.] The maintenance of the materials, systems, and assemblies used for structural fire resistance and fire-resistance-rated construction separation of adjacent spaces to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings shall be under the International Fire Code as adopted in Chapter 15.20 BMC.~~

~~(b) Opening Protectives. [Required opening protectives shall be maintained in an operative condition. All fire and smokestop doors shall be maintained in operable condition. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable.] Opening protectives shall be maintained in an operative condition consistent with NFPA 80. The application of field-applied labels associated with the maintenance of opening protectives shall follow the requirements of the approved third-party certification organization accredited for listing the opening protective. Fire doors and smoke barrier doors shall not be blocked or~~

obstructed, or otherwise made inoperable. Fusible links shall be replaced whenever fused or damaged. Fire door assemblies shall not be modified.

(5) Fire Protection Systems

(a) [General. All systems, devices and equipment to detect a fire, actuate an alarm, or suppress all times in accordance with the International Fire Code as adopted in Chapter 15.20 BMC.] Inspection, testing, and maintenance. Fire detection, alarm and extinguishing systems, mechanical smoke exhaust systems, and smoke and heat vents shall be maintained consistent with the International Fire Code as adopted in Chapter 15.20 BMC in an operative condition at all times and shall be replaced or repaired where defective.

(c) Smoke Alarms. Single- or multiple-station smoke alarms shall be installed and maintained consistent with the International Fire Code as adopted in Chapter 15.20 BMC. Smoke alarms that do not function shall be replaced. Smoke alarms installed in one and two-family dwellings shall be replaced not more than 10 years from the date of manufacture marked on the unit or shall be replaced if the date of manufacture cannot be determined.

(d) Carbon Monoxide Alarms. Carbon monoxide alarms shall be installed and maintained under the International Fire Code as adopted in Chapter 15.20 BMC. Alarms in dwellings covered by the International Residential Code as adopted by 15.10 BMC shall comply with the provisions of that code.

Section Fifty-One. Section 15.40.300, entitled **Referenced standards**, of the Burien Municipal Code is amended as follows, with the remaining portions of this section remaining the same:

This section lists the standards that are referenced in this chapter. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in BMC 15.40.060.

ASME

American Society of Mechanical Engineers

Three Park Avenue

New York, NY 10016-5990

Standard reference number: A17.1/CSA B44-~~[2007]~~ 2016

Title: Safety Code for Elevators and Escalators

Referenced in BMC 15.40.290

ASTM

ASTM International

100 Barr Harbor Drive

West Conshohocken, PA 19428-2959

Standard reference number: F1346—91 [~~(2003)~~] (2010)

Title: Performance Specifications for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs

Referenced in BMC 15.40.215

NFPA

National Fire Protection Association

1 Batterymarch Park

Quincy, MA 02269

Standard reference number: [~~25—08 Inspection~~] 25-17

Title: Testing and Maintenance of Water-based Fire Protection Systems

Referenced in BMC 15.40.295

Standard reference number: 80—16

Title: Standard for Fire Doors and Other Opening Protectives

Referenced in BMC 15.40.295

Section Fifty-Two. Severability. Should any section, paragraph, sentence, clause or phrase of this ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this ordinance be pre-empted by federal or state law or regulation, such decision or pre-emption shall not affect the validity of the remaining portions of this ordinance or its application to other persons or circumstances.

Section Fifty-Three. For purposes of this ordinance, additions are underlined, and deletions are stricken and in brackets.

Section Fifty-Four. Effective Date. This ordinance shall be published in Burien’s official newspaper and shall take effect and be in full force five (5) (February 1, 2021) calendar days after publication.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF BURIEN, WASHINGTON, AT A REGULAR BUSINESS MEETING THEREOF THIS ____ DAY OF _____, 2020.

CITY OF BURIEN

Jimmy Matta, Mayor

ATTEST/AUTHENTICATED:

Megan Gregor, CMC, City Clerk

Approved as to legal form:

Garmon Newsom II, City Attorney

Filed with the City Clerk: [Insert anticipated date of passage here]

Passed by the City Council: [Insert anticipated date of passage here]

Ordinance No.: 738

Date of Publication: [Insert date of Friday following anticipated date of passage here]

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Memorandum

To: Burien City Council
From: Steven Blake, Building Official
CC: Brian Wilson, City Manager and Susan McLain, Community Development Director
Date: September 21, 2020
Subject: BMC Title 15 – Building and Construction Amendments

Purpose

Washington construction codes are updated every three years by the State Building Code Council and adopted by the State Legislature. The Burien City Council adopts the codes and amendments by local ordinance after they are updated by the State. The Washington State Building Code Act (RCW 19.27) requires all jurisdictions in Washington State to begin administering the new 2018 State Building codes effective February 1, 2021. Adoption of the proposed ordinance will update BMC Title 15, Buildings and Construction, as mandated by the State.

Ordinance 738 accomplishes the following:

- Updates the *Burien Electrical Code* to adopt the most current edition of the Washington Cities Electrical Code and National Electrical code;
- Updates Title 15 of the BMC to adopt the 2018 editions of the State *building, plumbing, mechanical, fuel gas, fire, and energy codes*;
- Updates the *Construction Administrative* provisions to be consistent with changes in the 2018 administrative code provisions;
- Updates to the *Burien Building and Property Maintenance Code* to reflect changes in the International Property Maintenance Code; and
- Updates City amendments to be consistent with changes in the 2018 codes.

Administrative Amendments to State Code: In adopting the codes, we are permitted to amend State provisions within certain parameters. The proposed administrative amendments to the codes as presented in this ordinance include:

- New numbering to reflect the 2018 changes;
- Deletion of code sections previously adopted by Burien and subsequently adopted by the State;

- Amended definitions to clarify proposed code amendments; and
- Amendments to existing Burien sections to reflect changes in the state amendments.
- Amend Appendix V to require fire sprinklers in all new single family residences.

Highlights of State Code Amendments

The State Building Code Council undertakes a process of discussion and deliberation between representatives of government jurisdictions, industry representatives, members of the public and other interested parties. At the end of this process, the Council presents a package of amendments to the State legislature for additional deliberation and approval. Highlights of the most recent package of amendments include the following:

- Emergency responder radio coverage required for fire fighters;
- Heat Detectors are now required in attached garages of all new single family residences;
- All smoke detectors are required to be interconnected in existing areas and may use wireless technology;
- New section for Energy Storage Systems;
- New additions to the provisions for occupied roofs
- New provisions for Tiny Houses 400 square feet and less; and
- Additional energy efficiency requirements are increasing for additions and new construction.

Next Steps

If the proposed Ordinance 738 is found to be acceptable to City Council, staff recommends placing the ordinance on the October 5, 2020 consent agenda for council approval.