



# King County

1200 King County  
Courthouse  
516 Third Avenue  
Seattle, WA 98104

## Meeting Agenda Local Services and Land Use Committee

*Councilmembers:*  
*Reagan Dunn, Chair;*  
*Rhonda Lewis, Vice Chair;*  
*Teresa Mosqueda, Sarah Perry*

*Lead Staff: Jenny Ngo (206-263-2115)*  
*Committee Clerk: Marka Steadman (206-477-0887)*

9:30 AM

Wednesday, March 18, 2026

Hybrid Meeting

Hybrid Meetings: Attend King County Council committee meetings in person in Council Chambers (Room 1001), 516 3rd Avenue in Seattle, or through remote access. Details on how to attend remotely and/or provide comment are listed below.

Pursuant to K.C.C. 1.24.035 A. and F., this meeting is also noticed as a meeting of the Metropolitan King County Council, whose agenda is limited to the committee business. In this meeting only the rules and procedures applicable to committees apply and not those applicable to full council meetings.

**HOW TO PROVIDE PUBLIC COMMENT:** The Local Services and Land Use Committee values community input and looks forward to hearing from you on agenda items.

There are three ways to provide public comment:

1. In person: You may attend the meeting and provide comment in the Council Chambers.
2. By email: You may comment in writing on current agenda items by submitting your email comments to [kcccomitt@kingcounty.gov](mailto:kcccomitt@kingcounty.gov). If your email is received before 8:00 a.m. on the day of the meeting, your email comments will be distributed to the committee members and appropriate staff prior to the meeting.
3. Remote attendance at the meeting by phone or computer (see "Connecting to the Webinar" below).

You are not required to sign up in advance. Comments are limited to current agenda items.

|  |                                                                                                                                                                                                                                                                                                        |  |
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|  | <p>Sign language and interpreter services can be arranged given sufficient notice (206-848-0355).<br/>TTY Number - TTY 711.</p> <p>Council Chambers is equipped with a hearing loop, which provides a wireless signal that is picked up by a hearing aid when it is set to 'T' (Telecoil) setting.</p> |  |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

You have the right to language access services at no cost to you. To request these services, please contact Language Access Coordinator, Tera Chea at 206-477-9259 or email [tera.chea2@kingcounty.gov](mailto:tera.chea2@kingcounty.gov) by 8:00 a.m. three business days prior to the meeting.

#### CONNECTING TO THE WEBINAR

Webinar ID: 840 9948 4774

By computer using the Zoom application at <https://zoom.us/join> and the webinar ID above.

Via phone by calling 1-253-215-8782 and using the webinar ID above.

**HOW TO WATCH/LISTEN TO THE MEETING REMOTELY:** There are several ways to watch or listen in to the meeting:

- 1) Stream online via this link: <http://www.kingcounty.gov/kctv>, or input the link web address into your web browser.
- 2) Watch King County TV on Comcast Channel 22 and 322(HD) and Astound Broadband Channels 22 and 711(HD)
- 3) Listen to the meeting by telephone – See “Connecting to the Webinar” above.

To help us manage the meeting, please use the Livestream or King County TV options listed above, if possible, to watch or listen to the meeting.

1. Call to Order

2. Roll Call

3. Public Comment

4. Approval of Minutes

To show a PDF of the written materials for an agenda item, click on the agenda item below.

February 18, 2026, meeting **p. 7**

## Briefing

5. [Briefing No. 2026-B0039](#) **p. 10**

Department Director Report

*Leon Richardson, Director, Department of Local Services*



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## Discussion Only

6. [Proposed Ordinance No. 2025-0321](#) **p. 25**

AN ORDINANCE relating to building and construction standards; amending Ordinance 14111, Section 4, as amended, and K.C.C. 16.02.110, Ordinance 14914, Section 9, as amended, and K.C.C. 16.02.150, Ordinance 15802, Section 5, as amended, and K.C.C. 16.02.152, Ordinance 12560, Section 6, as amended, and K.C.C. 16.02.190, Ordinance 12560, Section 10, as amended, and K.C.C. 16.02.240, Ordinance 12560, Section 17, as amended, and K.C.C. 16.02.280, Ordinance 12560, Section 18, as amended, and K.C.C. 16.02.290, Ordinance 12560, Section 22, as amended, and K.C.C. 16.02.340, Ordinance 14914, Section 57, as amended, and K.C.C. 16.02.440, Ordinance 12560, Section 30, as amended, and K.C.C. 16.02.470, Ordinance 12560, Section 36, as amended, and K.C.C. 16.02.540, Ordinance 14914, Section 90, as amended, and K.C.C. 16.03.020, Ordinance 19485, Section 31, and K.C.C. 16.03.280, Ordinance 12560, Section 72, as amended, and K.C.C. 16.04.440, Ordinance 19485, Section 48, as amended, and K.C.C. 16.04.600, Ordinance 12560, Section 72, as amended, and K.C.C. 16.04.620, Ordinance 12560, Section 75, as amended, and K.C.C. 16.04.630, Ordinance 12560, Section 84, as amended, and K.C.C. 16.04.720, Ordinance 12560, Section 85, as amended, and K.C.C. 16.04.730, Ordinance 12560, Section 86, as amended, and K.C.C. 16.04.740, Ordinance 12560, Section 87, as amended, and K.C.C. 16.04.750, Ordinance 12560, Section 88, as amended, and K.C.C. 16.04.760, Ordinance 12560, Section 86, as amended, and K.C.C. 16.04.770, Ordinance 12560, Section 90, as amended, and K.C.C. 16.04.780, Ordinance 12560, Section 92, as amended, and K.C.C. 16.04.800, Ordinance 12560, Section 94, as amended, and K.C.C. 16.04.820, Ordinance 12560, Section 95, as amended, and K.C.C. 16.04.830, Ordinance 12560, Section 96, as amended, and K.C.C. 16.04.840, Ordinance 12560, Section 97, as amended, and K.C.C. 16.04.850, Ordinance 12560, Section 98, as amended, and K.C.C. 16.04.860, Ordinance 14914, Section 272, as amended, and K.C.C. 16.05.040, Ordinance 15802, Section 78, as amended, and K.C.C. 16.05.065, Ordinance 19485, Section 72, and K.C.C. 16.07.040, Ordinance 19485, Section 74, and K.C.C. 16.07.060, Ordinance 19485, Section 78, and K.C.C. 16.07.100, Ordinance 19485, Section 79, and K.C.C. 16.07.110, Ordinance 19485, Section 81, and K.C.C. 16.07.130, Ordinance 19485, Section 82, and K.C.C. 16.07.140, Ordinance 19485, Section 86, and K.C.C. 16.07.180, Ordinance 19485, Section 90, and K.C.C. 16.07.220, Ordinance 19485, Section 99, and K.C.C. 16.07.310, Ordinance 19485, Section 100, and K.C.C. 16.07.320, Ordinance 19485, Section 117, and K.C.C. 16.07.490, Ordinance 8766, Section 6, as amended, and K.C.C. 16.08.050, Ordinance 12560, Section 109, as amended, and K.C.C. 16.14.090, Ordinance 12560, Section 112, as amended, and K.C.C. 16.14.100, Ordinance 12560, Section 110, as amended and K.C.C. 16.14.110, Ordinance 14914, Section 359, as amended, and K.C.C. 16.14.200, Ordinance 14914, Section 360, and K.C.C. 16.14.210, Ordinance 12560, Section 120, and K.C.C. 16.14.220, Ordinance 14914, Section 370, and K.C.C. 16.14.280, Ordinance 14914, Section 370, and K.C.C. 16.14.290, Ordinance 12560, Section 121, as amended, and K.C.C. 16.14.430, Ordinance 14111, Section 131, as amended, and K.C.C. 16.14.450, Ordinance 14111, Section 131, as amended, and K.C.C. 16.14.460, Ordinance 14914, Section 408, and K.C.C. 16.14.490, Ordinance 12560, Section 115, as amended, and K.C.C. 16.14.540, Ordinance 14914, Section 416, and K.C.C. 16.14.550, Ordinance 6746, Section 5, as amended, and K.C.C. 16.32.030, Ordinance 6746, Section 7, as amended, and K.C.C. 16.32.050, Ordinance 6746, Section 10, as amended, and K.C.C. 16.32.080, Ordinance 15802, Section 122, as



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amended, and K.C.C. 16.32.195, Ordinance 15802, Section 124, as amended, and K.C.C. 16.32.215, Ordinance 15802, Section 126, as amended, and K.C.C. 16.32.235, Ordinance 15802, Section 131, as amended, and K.C.C. 16.32.285, Ordinance 19485, Section 146, and K.C.C. 16.32.292, Ordinance 15802, Section 132, as amended, and K.C.C. 16.32.295, Ordinance 15802, Section 133, as amended, and K.C.C. 16.32.306, Ordinance 19485, Section 151, and K.C.C. 16.32.338, Ordinance 19485, Section 153, and K.C.C. 16.32.340, Ordinance 19485, Section 136, and K.C.C. 16.32.341, Ordinance 19485, Section 154, and K.C.C. 16.32.342, Ordinance 19485, Section 155, and K.C.C. 16.32.343, Ordinance 19485, Section 156, and K.C.C. 16.32.344, Ordinance 15802, Section 137, as amended, and K.C.C. 16.32.345, Ordinance 1488, Section 5, as amended, and K.C.C. 16.82.130, Ordinance 9614, Section 103, and K.C.C. 17.04.010, Ordinance 12560, Section 148, as amended, and K.C.C. 17.04.200, Ordinance 2910, Section 6, as amended, and K.C.C. 17.04.210, Ordinance 12560, Section 153, as amended, and K.C.C. 17.04.220, Ordinance 12560, Section 149, as amended, and K.C.C. 17.04.280, Ordinance 12560, Section 156, as amended, and K.C.C. 17.04.290, Ordinance 17837, Section 75, as amended, and K.C.C. 17.04.295, Ordinance 14915, Section 25, as amended, and K.C.C. 17.04.310, Ordinance 14915, Section 26, and K.C.C. 17.04.320, Ordinance 19485, Section 166, as amended, and K.C.C. 17.04.330, Ordinance 19485, Section 178, and K.C.C. 17.04.341, Ordinance 19485, Section 169, and K.C.C. 17.04.375, Ordinance 19485, Section 170, and K.C.C. 17.04.377, Ordinance 12560, Section 165, and K.C.C. 17.04.380, Ordinance 12560, Section 166, as amended, and K.C.C. 17.04.390, Ordinance 14915, Section 45, as amended, and K.C.C. 17.04.400, Ordinance 7980, Section 1, as amended, and K.C.C. 17.04.420, Ordinance 19485, Section 173, and K.C.C. 17.04.425, Ordinance 19485, Section 174, and K.C.C. 17.04.445, Ordinance 19485, Section 175, as amended, and K.C.C. 17.04.447, Ordinance 19485, Section 178, and K.C.C. 17.04.462, Ordinance 19485, Section 180, and K.C.C. 17.04.467, Ordinance 19485, Section 184, and K.C.C. 17.04.476, Ordinance 19485, Section 192, and K.C.C. 17.04.489, Ordinance 12560, Section 171, and K.C.C. 17.04.520, Ordinance 12560, Section 174, as amended, and K.C.C. 17.04.560, Ordinance 19485, Section 196, as amended, and K.C.C. 17.04.563, Ordinance 19485, Section 7, and K.C.C. 17.04.572, Ordinance 19485, Section 198, as amended, and K.C.C. 17.04.574, Ordinance 19485, Section 200, as amended, and K.C.C. 17.04.582, Ordinance 19485, Section 201, as amended, and K.C.C. 17.04.590, Ordinance 5828, Section 4, as amended, and K.C.C. 17.08.030, Ordinance 5828, Section 10, as amended, and K.C.C. 17.08.090, Ordinance 3316, Section 4, as amended, and K.C.C. 17.08.100, Ordinance 14915, Section 125, as amended, and K.C.C. 17.08.140, Ordinance 19276, Section 7, and K.C.C. 17.11.040, Ordinance 19276, Section 9, and K.C.C. 17.11.060, adding new sections to K.C.C. chapter 16.04, adding a new section to K.C.C. chapter 16.05, adding new sections to K.C.C. chapter 16.07, adding new sections to K.C.C. chapter 16.32, adding new sections to K.C.C. chapter 17.04, adding a new chapter to K.C.C. Title 17, repealing Ordinance 14914, Section 10, as amended, and K.C.C. 16.02.160, Ordinance 12560, Section 55, as amended, and K.C.C. 16.02.170, Ordinance 14914, Section 20, and K.C.C. 16.02.230, Ordinance 12560, Section 15, as amended, and K.C.C. 16.02.310, Ordinance 17837, Section 13, and K.C.C. 16.02.316, Ordinance 12560, Section 13, as amended, and K.C.C. 16.02.370, Ordinance 12560, Section 26, as amended, and K.C.C. 16.02.410, Ordinance 12560, Section 30, as amended, and K.C.C. 16.02.470, Ordinance 12560, Section 31, as amended, and K.C.C. 16.02.480, Ordinance 12560, Section 32, as amended, and K.C.C. 16.02.490, Ordinance 12560, Section 33, as amended, and K.C.C. 16.02.500, Ordinance 12560, Section 34, as amended, and K.C.C. 16.02.510, Ordinance 12560, Section 35, as amended, and K.C.C. 16.02.520, Ordinance 12560, Section 37, as amended, and K.C.C. 16.02.530, Ordinance 14914, Section 78, as amended, and K.C.C. 16.02.550, Ordinance 19414, Section 85, as amended, and K.C.C. 16.02.600, Ordinance 19485, Section 29, and K.C.C. 16.03.057, Ordinance 14914, Section



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133, as amended, and K.C.C. 16.04.260, Ordinance 12560, Section 44, as amended, and K.C.C. 16.04.270, Ordinance 14914, Section 141, as amended, and K.C.C. 16.04.290, Ordinance 12560, Section 47, as amended, and K.C.C. 16.04.310, Ordinance 14111, Section 55, as amended, and K.C.C. 16.04.330, Ordinance 15802, Section 23, as amended, and K.C.C. 16.04.344, Ordinance 15802, Section 24, and K.C.C. 16.04.346, Ordinance 15802, Section 25, and K.C.C. 16.04.348, Ordinance 14914, Section 155, as amended, and K.C.C. 16.04.360, Ordinance 15802, Section 34, and K.C.C. 16.04.475, Ordinance 12560, Section 54, as amended, and K.C.C. 16.04.490, Ordinance 11923, Section 2, as amended, and K.C.C. 16.04.890, Ordinance 11923, Section 3, as amended, and K.C.C. 16.04.900, Ordinance 19485, Section 5, and K.C.C. 16.04.930, Ordinance 12380, Section 2, as amended, and K.C.C. 16.04.940, Ordinance 12380, Section 3, as amended, and K.C.C. 16.04.950, Ordinance 12380, Section 4, as amended, and K.C.C. 16.04.960, Ordinance 12380, Section 5, as amended, and K.C.C. 16.04.970, Ordinance 7853, Section 1, as amended, and K.C.C. 16.04.980, Ordinance 14914, Section 276, as amended, and K.C.C. 16.05.080, Ordinance 19485, Section 73, and K.C.C. 16.07.050, Ordinance 19485, Section 75, and K.C.C. 16.07.070, Ordinance 19485, Section 76, and K.C.C. 16.07.080, Ordinance 19485, Section 76, and K.C.C. 16.07.090, Ordinance 19485, Section 80, and K.C.C. 16.07.120, Ordinance 19485, Section 81, and K.C.C. 16.07.130, Ordinance 19485, Section 83, and K.C.C. 16.07.150, Ordinance 19485, Section 84, and K.C.C. 16.07.160, Ordinance 19485, Section 85, and K.C.C. 16.07.170, Ordinance 19485, Section 86, and K.C.C. 16.07.180, Ordinance 19485, Section 87, and K.C.C. 16.07.190, Ordinance 19485, Section 88, and K.C.C. 16.07.200, Ordinance 19485, Section 89, and K.C.C. 16.07.210, Ordinance 19485, Section 91, and K.C.C. 16.07.230, Ordinance 19485, Section 92, and K.C.C. 16.07.240, Ordinance 19485, Section 93, and K.C.C. 16.07.250, Ordinance 19485, Section 94, and K.C.C. 16.07.260, Ordinance 19485, Section 95, and K.C.C. 16.07.270, Ordinance 19485, Section 96, and K.C.C. 16.07.280, Ordinance 19485, Section 98, and K.C.C. 16.07.300, Ordinance 19485, Section 101, and K.C.C. 16.07.330, Ordinance 19485, Section 102, and K.C.C. 16.07.340, Ordinance 19485, Section 103, and K.C.C. 16.07.350, Ordinance 19485, Section 104, and K.C.C. 16.07.360, Ordinance 19485, Section 105, and K.C.C. 16.07.370, Ordinance 19485, Section 106, and K.C.C. 16.07.380, Ordinance 19485, Section 108, and K.C.C. 16.07.400, Ordinance 19485, Section 109, and K.C.C. 16.07.410, Ordinance 19485, Section 110, and K.C.C. 16.07.420, Ordinance 19485, Section 111, and K.C.C. 16.07.430, Ordinance 19485, Section 112, and K.C.C. 16.07.440, Ordinance 19485, Section 113, and K.C.C. 16.07.450, Ordinance 19485, Section 115, and K.C.C. 16.07.470, Ordinance 19485, Section 116, and K.C.C. 16.07.480, Ordinance 19485, Section 118, and K.C.C. 16.07.500, Ordinance 19485, Section 119, and K.C.C. 16.07.510, Ordinance 19485, Section 120, and K.C.C. 16.07.520, Ordinance 19485, Section 121, and K.C.C. 16.07.530, Ordinance 19485, Section 122, and K.C.C. 16.07.540, Ordinance 19485, Section 123, and K.C.C. 16.07.550, Ordinance 14111, Section 73, and K.C.C. 16.10.010, Ordinance 12560, Section 58, as amended, and K.C.C. 16.10.020, Ordinance 12560, Section 59, as amended, and K.C.C. 16.10.030, Ordinance 12560, Section 60, and as amended, K.C.C. 16.10.040, Ordinance 12560, Section 61, as amended, and K.C.C. 16.10.050, Ordinance 12560, Section 62, as amended, and K.C.C. 16.10.060, Ordinance 12560, Section 63, as amended, and K.C.C. 16.10.070, Ordinance 12560, Section 64, as amended, and K.C.C. 16.10.080, Ordinance 15802, Section 99, and K.C.C. 16.10.100, Ordinance 15802, Section 100, and K.C.C. 16.10.110, Ordinance 15802, Section 101, as amended, and K.C.C. 16.10.120, Ordinance 12560, Section 127, as amended, and K.C.C. 16.14.020, Ordinance 14914, Section 337, and K.C.C. 16.14.040, Ordinance 14914, Section 338, and K.C.C. 16.14.050, Ordinance 14914, Section 339, and K.C.C. 16.14.060, Ordinance 14914, Section 352, and K.C.C. 16.14.140, Ordinance 14914, Section 353, and K.C.C. 16.14.150, Ordinance 14914, Section 367, as amended, and K.C.C. 16.14.250, Ordinance 14914, Section 407, and K.C.C. 16.14.480,



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**Sponsors:** Perry

*Jenny Ngo, Council staff*  
*Jake Tracy, Council staff*

## Other Business

## Adjournment



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# King County

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## Meeting Minutes Local Services and Land Use Committee

**Councilmembers:**  
*Reagan Dunn, Chair;*  
*Rhonda Lewis, Vice Chair;*  
*Teresa Mosqueda, Sarah Perry*

**Lead Staff:** *Jenny Ngo (206-263-2115)*  
**Committee Clerk:** *Marka Steadman (206-477-0887)*

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9:30 AM

Wednesday, February 18, 2026

Hybrid Meeting

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### DRAFT MINUTES

1. **Call to Order**

*Chair Dunn called the meeting to order at 9:03 a.m.*

2. **Roll Call**

**Present:** 3 - Dunn, Lewis and Perry

**Excused:** 1 - Mosqueda

3. **Approval of Minutes**

*Vice Chair Lewis moved approval of the January 21, 2026, meeting minutes. There being no objections, the minutes were approved.*

4. **Public Comment**

*There were no individuals wishing to provide public comment.*

### Consent

5. **[Proposed Ordinance No. 2025-0265](#)**

AN ORDINANCE authorizing the execution of a franchise agreement with the Snoqualmie Valley School District, for use of certain King County road rights-of-way in unincorporated King County for the construction, operation, and maintenance of wireline telecommunications transmission facilities.

**A motion was made by Lewis that this Ordinance be Recommended Do Pass Consent. The motion carried by the following vote:**

**Yes:** 3 - Dunn, Lewis and Perry

**Excused:** 1 - Mosqueda

6. [Proposed Ordinance No. 2026-0015](#)

AN ORDINANCE revising the corporate boundary of the city of Enumclaw to include the unincorporated portion of McHugh Avenue right-of-way as provided for in RCW 35A.21.210.

**A motion was made by Lewis that this Ordinance be Recommended Do Pass Consent. The motion carried by the following vote:**

**Yes:** 3 - Dunn, Lewis and Perry

**Excused:** 1 - Mosqueda

## Briefing

7. [Briefing No. 2026-B0025](#)

Local Services and Land Use (LSLU) Committee 2026 Work Plan

*Erin Auzins, Council staff, briefed the committee.*

**This matter was Presented**

## Discussion and Possible Action

8. [Proposed Ordinance No. 2026-0014](#)

AN ORDINANCE authorizing the executive to enter into a housing cooperation agreement with the Housing Authority of the County of King to facilitate the development of low-income housing in accordance with chapter 35.83 RCW.

*Erin Auzins, Council staff, briefed the committee and answered questions from the members. Ty Peterson, Commercial Product Line Manager, Permitting Division, Department of Local Services, answered questions from the members.*

*This matter was expedited to the February 24, 2026, Council agenda.*

**A motion was made by Lewis that this Ordinance be Recommended Do Pass. The motion carried by the following vote:**

**Yes:** 3 - Dunn, Lewis and Perry

**Excused:** 1 - Mosqueda



## Other Business

*There was no further business to come before the committee.*

## Adjournment

*The meeting was adjourned at 9:58 a.m.*

Approved this \_\_\_\_\_ day of \_\_\_\_\_

\_\_\_\_\_  
Clerk's Signature

# DLS Director's Report

## Leon Richardson, Director

Local Services and Land Use Committee  
March 18, 2026



**King County**

**Department of Local Services**

***We're here for you.***

LSLU Meeting Materials

# We are the City Hall for unincorporated King County



250,000 residents



44,000 businesses



1,700 square miles  
7 community service areas

# DLS updates for today

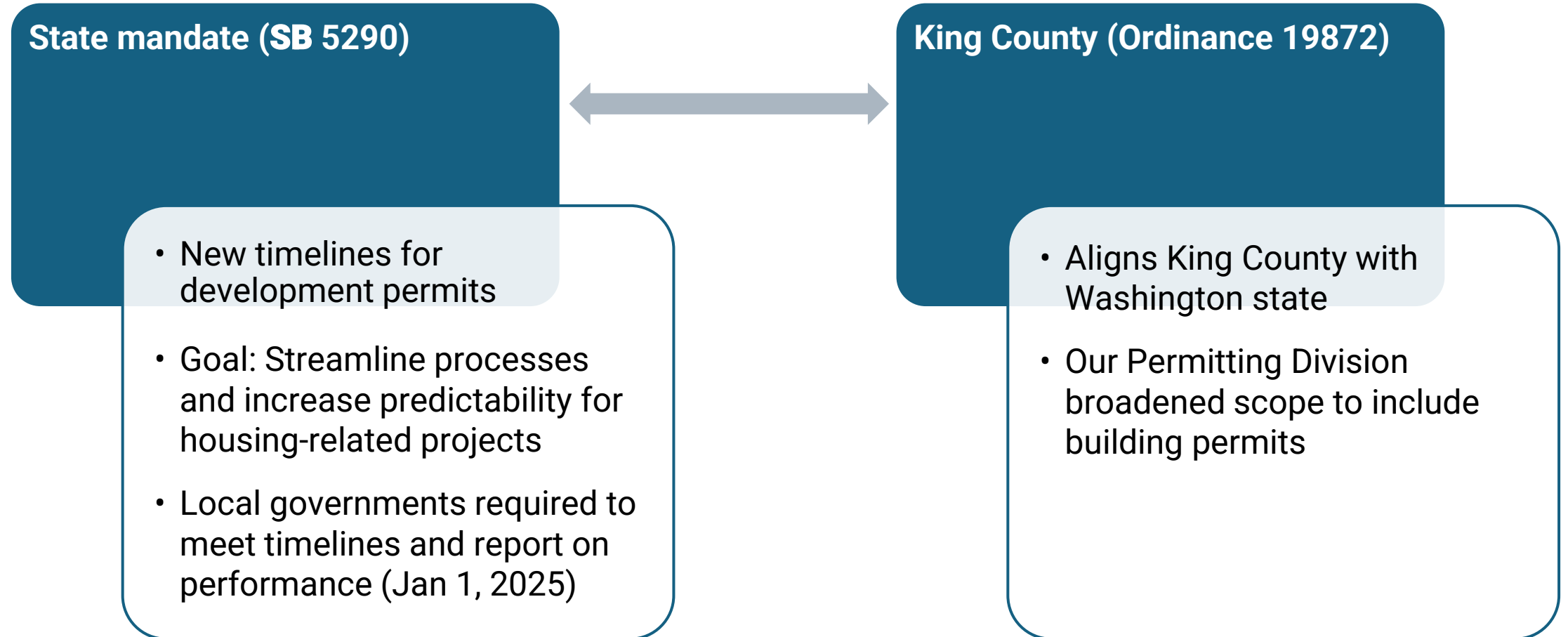
- Permitting updates
  - 2025 Permit Review Performance Report (transmitted to Council, Nov. 21, 2025)
  - System and customer improvements
- 2025 storm response and recovery
- Road Services updates
- Community programs and initiatives



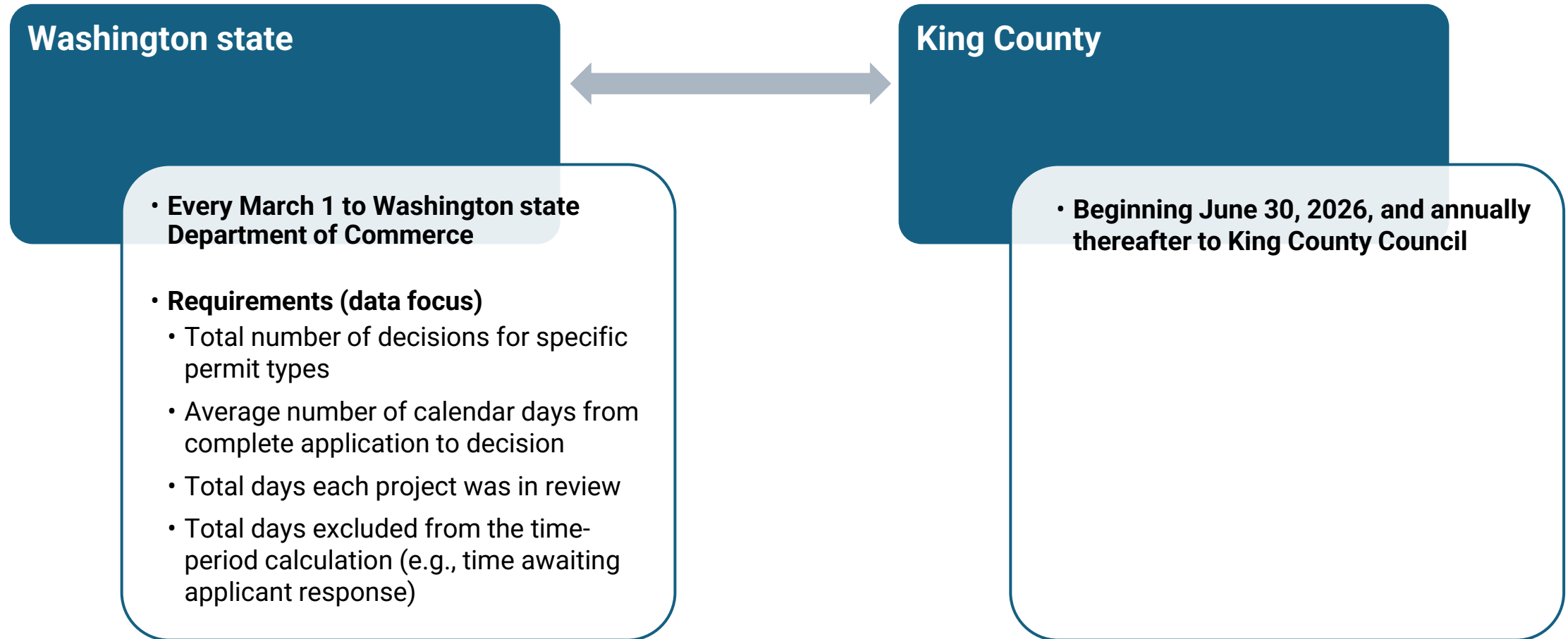
**King County**

Department of Local Services  
LSLU Meeting Materials

# Permitting: Streamlining processes



# State and county reporting requirements



# We are meeting requirements

## What we've done

- Continued work to modernize systems through online permitting options and updated software
- Restructured teams to manage capacity, improve intake screening and technical review, and monitor performance
- Customer how-to video series

## Results

- More than 90% compliance rate with SB 5290 project review timelines
- Increased predictability: Applicants have a better estimate for decision timelines
- Enhanced initial screening; only complete applications advance
  - Accountability: New timelines minimize internal bottlenecks
  - Transparency: Anticipate publishing timeline data on [kingcounty.gov](http://kingcounty.gov) this year



# Permitting: What's next

- Annual performance report and legislation due to King County Council on 6/30
- Discussion on potential changes to enhance efficiency, resolve inconsistencies, and align KCC with State law
- Continued efforts to modernize technical systems and to expand customer support

# 2025 storm response and recovery

- We are deeply appreciative of our teams
- Road Services monitored conditions, closed 56 hazardous roads and inspected 125 bridges, and repaired miles of roadway and bridges damaged by flooding, debris or landslides
- Roads crews also completed multiple urgent repairs day and night – with additional repairs ongoing – to stabilize flood protection facilities and safeguard nearby communities
- Communications and outreach teams maintained clear and timely communications with impacted residents and communities
- Teams staffed Emergency Operations Center 24/7



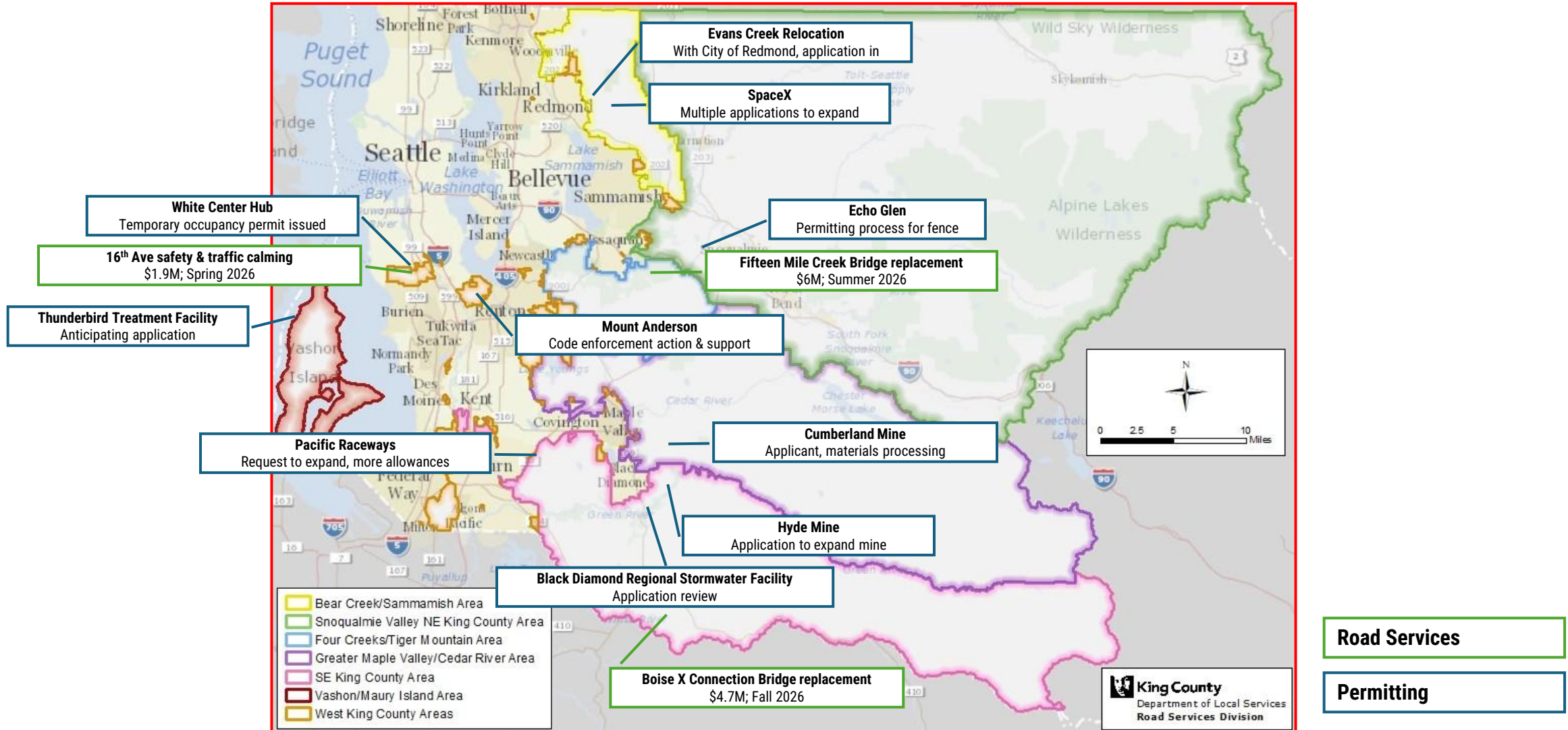
## Coming up next

- More than 20 repair projects @ >\$12 million
- Expedited permitting as needed
- Communications to unincorporated areas about federal, state, and local assistance
- Incorporating lessons learned for future readiness planning

# Road Services: What's next

- White Center 16<sup>th</sup> Ave. pedestrian safety and traffic calming wrap-up
- Continued flood recovery
  - Baring Bridge replacement bridge installation this Spring
- Summer and Fall bridge replacements – Fifteen Mile Creek Bridge, BoiseX
- Sustainable funding
- Summer/fall road surfacing

# Major projects for Roads and Permitting



# Community connections

Expanded Community Service Liaison  
program, including more office hours



Clem Benton



Bong StoDomingo



Mason Thompson

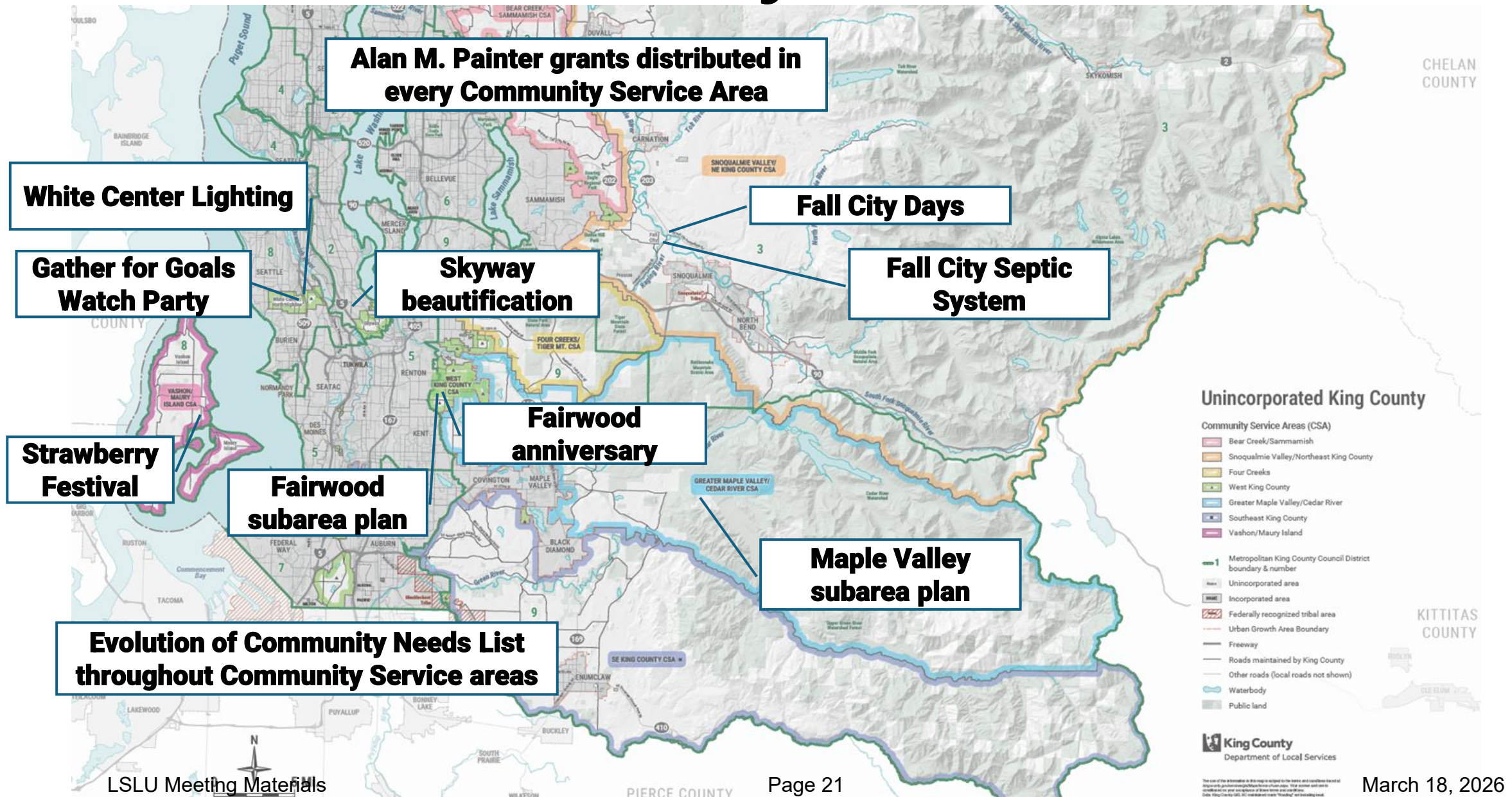


**King County**  
Department of Local Services

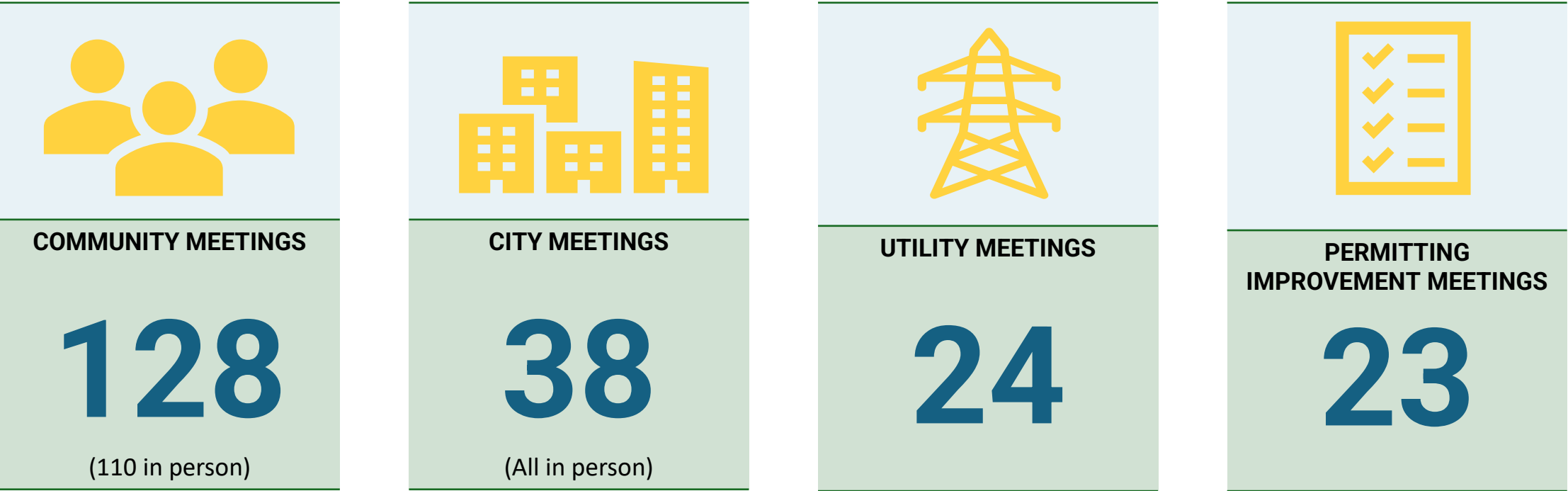
*We're here for you.*



# In communities near you



# Leadership in the community



**2026 Connections** ➔ **Tribes / School Districts / Fire Districts / Hospitals / Chambers of Commerce**



# We're here for you

## All inquiries (general or specific)

[AskLocalServices@kingcounty.gov](mailto:AskLocalServices@kingcounty.gov)

206-477-3800

## Permitting (specific inquiries)

[PermitQuestions@kingcounty.gov](mailto:PermitQuestions@kingcounty.gov)

206-296-6600

## Road Services (specific inquiries)

[maint.roads@kingcounty.gov](mailto:maint.roads@kingcounty.gov)

24/7 Road Helpline:  
206-477-8100 or 1-800-527-6237  
(Emergencies: 911)

### Examples

- General questions or inquiries
- Question for leaders
- Questions about County services
- Sharing information about community events or activities
- Grant programs
- Long-term planning efforts
- Economic Development
- Minimum wage questions

### Examples

- Questions about specific property
- Zoning
- Accessory dwelling unit
- Permits
- Subdivisions
- Tree removal
- Critical Areas

### Examples

- Pothole repair
- Down traffic signs
- Guardrail repair
- Traffic calming
- Illegal dumping
- Paving requests
- Traffic signal not working

# Q and A

## ***Thank you!***



## King County

### Metropolitan King County Council Local Services and Land Use Committee

#### STAFF REPORT

|                      |           |              |                         |
|----------------------|-----------|--------------|-------------------------|
| <b>Agenda Item:</b>  | 6         | <b>Name:</b> | Jenny Ngo<br>Jake Tracy |
| <b>Proposed No.:</b> | 2025-0321 | <b>Date:</b> | March 18, 2026          |

#### SUBJECT

Proposed Ordinance (PO) 2025-0321 would make changes to the building, energy, and fire codes in King County Code (K.C.C.) Titles 16 and 17 for unincorporated areas.

#### SUMMARY

The County enacts and enforces regulations for buildings and construction-related activities in unincorporated King County through building, energy, and fire codes in K.C.C. Titles 16 and 17. Model codes are published by the International Code Council (ICC) and modified through Washington state-specific amendments every three years. King County adopts these model codes and makes further amendments to meet locally specific needs. The Council adopted the 2018 version of the model codes, along with locally specific changes, in 2022.

PO 2025-0321 would adopt the 2021 State Codes and would make a number of locally specific changes that exceed, differ from, or clarify state requirements. All locally specific changes are policy choices for councilmembers.

In the building code, those changes include revisions to permit expiration timelines, limits on pre-issuance construction authorization, changes to exemptions, additional construction and demolition waste requirements, and modified electric vehicle (EV) charging infrastructure requirements for commercial and larger multifamily development. For EV infrastructure, the proposal would exempt all sites with fewer than ten parking spaces and require more EV infrastructure than State Code for some larger commercial and multifamily developments. The staff report notes that these changes appear to conflict with existing EV charging requirements in the zoning code.

The proposed ordinance would also make extensive changes to the energy code for commercial and larger multifamily buildings. These include:

- More stringent fenestration requirements;
- Revised HVAC requirements, including additional restrictions and exceptions related to fossil fuel and electric resistance heating, future decarbonization plan requirements for larger buildings retaining fossil fuel-fired HVAC, and more

stringent requirements for dedicated outdoor air systems, energy recovery ventilation, and air leakage dampers;

- Revised service water heating requirements centered on heat pump water heaters with specified exceptions;
- Reduced lighting power densities and expanded lighting controls;
- Updated building and site performance factors;
- 33% increased size of required renewable energy systems; and
- An increase in required energy credits for some development activities.

In the fire code, the proposed ordinance would make locally specific changes including requiring earlier application for special event structures and assembly areas, adding signage requirements for lithium battery installations, removing certain exemptions from automatic fire sprinkler requirements for some residential structures outside the urban growth area, and removing several exemptions from fire flow and hydrant requirements. The proposed ordinance would also adopt IFC Appendix D relating to fire apparatus access roads, though the staff report notes that, as transmitted, some turnaround standards appear unclear.

## **BACKGROUND**

Under state law,<sup>1</sup> King County is responsible for enacting and enforcing regulations for all building and construction-related activities in unincorporated King County. Jurisdictions may choose to adopt their own building, energy, and fire codes, provided they are not in conflict with state law, or adopt by reference Washington state statutes known collectively as the Washington State Building Code.<sup>2</sup> The most current Washington State Building Code is comprised of the following components:

- 2021 International Building Code (IBC)
- 2021 International Existing Building Code (IEBC)
- 2021 International Residential Code (IRC)
- 2021 International Fire Code (IFC)
- 2021 Washington State Energy Code
- 2021 International Mechanical Code (IMPC)
- 2021 Uniform Plumbing Code (UPC)
- 2021 Washington Wildland Urban Interface Code

The Washington State Building Code includes model codes developed by the International Code Council (ICC) and amended by the State Building Code Council to address regionally specific priorities or circumstances. Local jurisdictions, including King County, may further amend these codes to address locally specific priorities or circumstances. Local amendments that apply to single-detached or multiunit residential buildings require approval by the State Building Code Council.

Updates to these model code occur on a regular basis, with adoption cycles occurring every three years. The most current updates are on the 2021 codes, which became effective in March 2024.

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<sup>1</sup> RCW 36.32.120

<sup>2</sup> The Washington State Building Code can be found in Title 51 WAC.

The County's current building codes adopt the 2018 version of the Washington State Building Code and are located in Titles 16 and 17.

## **ANALYSIS**

**Adoption of State Codes.** PO 2025-0321 would amend K.C.C. Titles 16 and 17 to adopt Washington State's 2021 versions of the International Building Code (IBC), the International Residential Code (IRC), the Washington State Energy Code (WSEC), the International Mechanical Code (IMC), the International Existing Building Code (IEBC), the International Fire Code (IFC), and the Uniform Plumbing Code (UPC). It would also adopt the 2021 International Property Maintenance Code (IPMC), which is an international code not mandated by the state. The state also adopts the 2021 Washington Wildland Urban Interface code. This appears to have been inadvertently left out of the transmittal. This staff report will refer to these as "the State Code(s)."

Attachment 4 prepared by the Permitting Division includes a table summarizing proposed revisions in the proposed ordinance. Each case where the proposed ordinance goes beyond the requirements of state law represents a policy choice for Councilmembers. The Council could choose to adopt the state requirement, adopt the Executive's proposed locally specific change, or adopt a different standard as long as it is no less stringent than state law.

**Changes to the Building Code.** The proposed ordinance would make several locally specific changes to the State Code.

Construction and Demolition Waste (Section 1). The proposed ordinance would adopt optional appendices provided by the state that are intended to increase recycling of construction and demolition waste. For new building construction, alterations to existing buildings, and the demolition of existing buildings having a work area greater than 750 square feet or a project value greater than \$75,000, whichever is more restrictive, containers would need to be present on-site to separate reusables/recyclables from waste bound for the landfill. A salvage assessment would be required prior to permit issuance (for projects that involve demolition) and a waste diversion report would be required prior to issuance of a certificate of occupancy.

Exemptions (Section 5). The proposed ordinance would make the following changes to the types of work exempt from requiring a building permit:

- State that detached buildings must be unconditioned to be exempt from building permit.
- State that swimming pool barriers require a building permit even if less than six feet in height
- Add "agricultural wildlife exclusion fencing" up to eight feet tall to list of work exempt from permit.

Extension of permit expiration (Section 6). Under existing code, building permits expire within two years of issuance, and mechanical permits and building permits to correct code violations are limited to one year. The proposed ordinance reduces the expiration period for mechanical permits issued independent of a building permit to six months. Executive staff state that the reason for the shortened expiration period is that mechanical permits typically have a small scope and are done quickly, and that a year-long period of validity leads to contractors and owners losing track of the permit.

The proposed ordinance also adds a provision allowing for issued permits where only the final building inspection remains to be extended for one 60-day period subject to conditions. The proposed ordinance also makes edits to clarify existing requirements.

Pre-issuance construction authorization (PICA) – Permission to proceed (Section 7). In some circumstances, an applicant may be allowed to begin work prior to obtaining a permit or authorization. The proposed ordinance would prohibit work that includes alterations or site development regulated under K.C.C. Title 9, which regulates surface water management.

Electric Vehicle (EV) Charging Infrastructure (Section 13). The proposed ordinance would adopt and modify Washington State's EV charging infrastructure requirements, including what percentage of EV charging stations, EV-ready parking spaces, and EV-capable parking spaces are required.<sup>3</sup> Table 1 summarizes Washington State requirements and the proposed County changes in the proposed ordinance. Bolded text shows areas of difference between the state code and the proposed ordinance.

**Table 1. EV Charging Infrastructure Requirements**

|                                         | WA State             |                         |                    | King County          |                         |                    |
|-----------------------------------------|----------------------|-------------------------|--------------------|----------------------|-------------------------|--------------------|
|                                         | EV charging stations | EV-ready parking spaces | EV-capable parking | EV charging stations | EV-ready parking spaces | EV-capable parking |
| Group A, E, and M occupancies           |                      |                         |                    |                      |                         |                    |
| Sites with fewer than 10 parking spaces | 4                    | 4                       | 4                  | <b>0%</b>            | <b>0%</b>               | <b>0%</b>          |
| Sites with more than 10 parking spaces  | 4                    | 4                       | 4                  | <b>10%</b>           | <b>10%</b>              | <b>10%</b>         |
| Group B, F, H, I, and S occupancies     |                      |                         |                    |                      |                         |                    |
| Sites with fewer than 10 parking spaces | 0%                   | 0%                      | 0%                 | 0%                   | 0%                      | 0%                 |
| Sites with more than 10 parking spaces  | 10%                  | 10%                     | 10%                | 10%                  | 10%                     | 10%                |

<sup>3</sup> EV charging stations refer to parking spaces with an installed EV charger, EV-ready parking space refer to parking spaces with wiring and receptacle outlet but does not include the charger itself, and EV-capable parking spaces refer to parking spaces where conduit (such as metal, PVC, or flexible tubing), electrical panel, and load capacity is provided to support future EV installation.

<sup>4</sup> Group A, E, and M occupancies are required to provide the greater of: 1) 10% of designated employee parking spaces, or 2) one EV charging stations per 200 parking spaces and one EV-ready space per 200 parking spaces.



|                                                                      | WA State             |                         |                    | King County          |                         |                    |
|----------------------------------------------------------------------|----------------------|-------------------------|--------------------|----------------------|-------------------------|--------------------|
|                                                                      | EV charging stations | EV-ready parking spaces | EV-capable parking | EV charging stations | EV-ready parking spaces | EV-capable parking |
| Group R occupancies                                                  |                      |                         |                    |                      |                         |                    |
| Sites with fewer than 10 parking spaces                              | 0%                   | 0%                      | 0%                 | 0%                   | 0%                      | 0%                 |
| Sites with more than 10 spaces - 1 or 2 dwelling unit buildings      | 0%                   | 1 per unit              | 0%                 | 0%                   | 1 per unit              | 0%                 |
| Sites with more than 10 spaces - dwelling units with private garages | 0%                   | 1 per unit              | 0%                 | 0%                   | 1 per unit              | 0%                 |
| Sites with more than 10 spaces, for all other Group R occupancies    | 10%                  | <b>25%</b>              | <b>10%</b>         | 10%                  | <b>40%</b>              | <b>25%</b>         |

Under the proposed ordinance, all sites with fewer than 10 parking spaces, regardless of occupancy type, would be exempt from providing EV infrastructure.

Group A (Assembly), E (Educational), and M (Mercantile): The State Code requires sites to provide the greater of: 1) EV charging stations, EV-ready, and EV-capable spaces each need to be 10% of employee parking spaces, or 2) one EV charging station per 200 parking spaces and one EV-ready space per 200 parking spaces, regardless of the number of parking spaces on the site.

For sites with fewer than 10 parking spaces, the proposed ordinance would require fewer spaces to have EV charging infrastructure compared to the State Code. However, for sites with more than 10 parking spaces, it would require significantly more EV charging infrastructure, as EV charging stations, EV-ready, and EV-capable would each need to be 10% of total parking spaces, rather than 10% of employee parking spaces or one EV-ready and one EV charging station per 200 total spaces.

Group B (Business), F (Factory and Industrial), H (High Hazard), I (Institutional), and S (Storage) occupancies: the proposed ordinance would require EV charging infrastructure at the rate required by the State Code.

Group R (Residential) occupancies: the proposed ordinance would require EV-ready parking spaces to be provided for 40% of all parking spaces, compared to 25% required in the State Code, and EV-capable parking spaces to be provided at 25% of all parking spaces, compared to 10% required in the State Code. This represents an additional 60% and 150% increase respectively. The State Code would require 45% of total parking spaces to provide some kind of EV charging infrastructure, whereas the Executive's proposal would require a total of 75%.

K.C.C. 21A.18.150 has an entirely different set of electric vehicle requirements and exemptions that conflict with the proposed requirements in PO 2025-0321. For instance, proposed ordinance requires fewer EV spaces than K.C.C. 21A.18.150 for apartment

buildings with fewer than ten parking spaces, but more EV spaces for apartment buildings with more than ten parking spaces. K.C.C. 21A.18.150 also has a different set of exemptions than the proposed ordinance. It is a policy choice whether to repeal K.C.C 21A.18.150 or to bring the two sections into alignment.

**Changes to the Existing Building Code.** The proposed ordinance would make one notable locally specific change to the State Code, which governs the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

Electric Vehicle Charging Infrastructure (Section 31). The proposed ordinance would add a requirement that EV charging infrastructure is required when alterations to an existing building result in a work area that covers 50% or more of the building area, regardless of the valuation of the alteration. The EV charging infrastructure requirements for existing buildings would be the same as that required for new construction (see Section 13 of the proposed ordinance, which is discussed immediately above).

**Changes to the Energy Code.** As part of the 2018 code updates adopted under Ordinance 19485, King County amended the State Code to require more stringent energy conservation requirements than required by the state for commercial and multiunit buildings. The 2021 State Code is generally more stringent than the 2018 version, in some cases matching or surpassing the requirements the County adopted with Ordinance 19485. This PO would make further changes that would make energy conservation requirements more stringent than the 2021 State Code. The proposed ordinance includes the following requirements that exceed or differ from the State Code for commercial and larger multifamily buildings:<sup>5</sup>

Vesting of Initial Tenant Improvements (Section 35). The proposed ordinance would allow an initial tenant improvement to vest to the code used for the underlying base building permit if an application is submitted within 18 months of the final inspection of the base building.

Definitions (Section 36). In addition to definitions in the State Code, the proposed ordinance would add definitions for AFUE, best efficiency point, Btu/h, clean water pump, EER, high-end trim, IEER, IPLV, occupied-standby mode, REC, renewable energy investment fund, SEER, semi-heated space, metal building wall, steel-framed wall, and wood-framed and other wall. Removes definitions for automatic control device, conditioned space, continuous insulation, controlled receptacle, DOAS, mass transfer deck slab, multi-pass, solar zone, and temperature maintenance. The proposed ordinance also makes some clarifications to other existing definitions.

Fenestration (Section 40-43). The state code establishes prescriptive performance requirements for fenestration, which refers to the windows, glazed doors, skylights, and other glass elements installed in a building envelope. These materials typically insulate

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<sup>5</sup> These requirements do not apply to detached one- and two-family dwellings, townhouses, Group R-3 buildings three stories or less in height above grade plane, and Group R-2 occupancy areas in buildings three stories or less in height above grade plane whose dwelling units are accessed directly from the exterior.

less effectively than opaque walls, and so are regulated to limit energy loss and solar heat gain.

The performance of these materials is measured by a "U-factor," which is a measure of how readily heat flows through the component, a solar heat gain coefficient (SHGC), which is the amount of solar radiation passing through the component. Lower U-factor value and SHGC values indicate better insulation and improved energy performance.

The proposed ordinance would require a minimum of 20% of all fenestration in buildings or additions of 5,000 square feet or more to have a lower U-factor (i.e., be higher-performance) than what is required by the state code. Depending on the type of fenestration and the compliance path chosen, this portion of fenestration would have a U-factor 4% to 35% lower than the state baseline. Skylights and entrance doors would be exempt from providing higher-performance fenestration.

Operable fenestration would require an SHGC 13% lower than the state baseline. Fixed (i.e., non-openable) fenestration would be subject to the state baseline SHGC.

In addition to the performance of the fenestration itself, the state code regulates the maximum percentage of a building that can be covered with vertical fenestration. The state code sets a maximum of 30% regardless of occupancy type. The proposed ordinance would instead set different maximum percentages for different occupancy types. Some occupancy types would allow higher allowed percentages, up to 35% for large offices and 8+ story multiunit buildings, and others would have lower allowed percentages, as low as 6% for nonrefrigerated warehouses. Percentages could be increased by between 10% and 15% by using a performance-based, rather than prescriptive, path to compliance.

Heating, Ventilation, and Air Conditioning (HVAC) (Section 44-64, 136, 138). The proposed ordinance would make several substantive changes to state requirements for HVAC systems.

The state code prohibits use of electric resistance<sup>6</sup> or fossil fuel-fired HVAC heating equipment with several exceptions. The proposed ordinance would largely adopt these exceptions, but would:

- Add greater flexibility for dwelling units with multiple habitable spaces;
- Increase the minimum heating output for ground-source heat pumps using electric resistance from 70% to 75%;
- Require new hydronic systems or replacements in existing district energy systems utilizing fossil fuels to be designed for future heat pump conversion;
- Allow research labs to use fossil fuel-based backup generators on loss of power, and allow all uses to use fossil fuel-based emergency generators and standby HVAC heating equipment;
- Allow electric resistance to be used for wastewater heat recovery heat pumps;

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<sup>6</sup> Electric resistance heating generates heat by converting incoming electricity to heat in an internal heating element.

- Allow addition or replacement of existing fossil fuel or electric resistance HVAC with the same equipment/fuel type as existing equipment in a several instances beyond state law, including:
  - Affordable housing,<sup>7</sup> institutional occupancies, buildings occupied more than 50% by nonprofits, and buildings of 20,000 square feet or less;
  - 50% of total heating capacity in buildings not included in the bullet above, to be used only in high-load situations; and
  - Emergency replacement of boilers;
- Prohibit addition or replacement of existing fossil fuel or electric resistance HVAC with the same equipment/fuel type as existing equipment for several instances allowed under state law, including:
  - Terminal unit equipment including, but not limited to, hydronic VAV boxes, electric resistance VAV boxes, electric duct heaters, water source heat pumps, fan coils, or VRF indoor units that are served by an unaltered central system;
  - Replacement of oil-fired boilers; and
  - Replacements of any heating equipment where the rated capacity of the new equipment doesn't exceed the capacity of the existing equipment.

The proposed ordinance would also require a future decarbonization plan for buildings over 20,000 square feet that are proposing addition or replacement of existing fossil fuel-fired HVAC. The decarbonization plan would be a schematic level design of a heat pump system to replace the existing system. Though this design would be required, it would not be required to be implemented.

For dedicated outdoor air systems (DOAS)<sup>8</sup>:

- Explicitly state that these are required for residential occupancies (this is already required by the mechanical code but not explicitly stated in the building code);
- Require DOAS to use 20% less power than mandated by the state; and
- Require additional controls for large DOAS systems.

Other proposed changes include:

- 67% efficiency for energy recovery ventilation systems as opposed to 60% in the state code;
- Subjecting HVAC systems as small as 300 cubic feet per minute (cfm) to provide air leakage dampers, as opposed to a 5,000 cfm floor in state code;
- Requirements around testing, insulation for ducts, and standby controls; and
- Changes intended to increase design flexibility for builders.

Water Systems (Section 65-73, 137). The proposed ordinance has several changes relating to water systems; the changes primarily focus on enhancing energy efficiency and providing more precise design criteria. Proposed changes compared to the state code include:

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<sup>7</sup> Defined as buildings that restrict at least 51% of units affordable at 80% area median income, or government- or nonprofit-operated day or warming shelters.

<sup>8</sup> A type of HVAC system that pulls in and dehumidifies 100% outside air rather than recirculating air within the room.

- Prohibit fossil fuels from being used for supplemental water heating;
- As exceptions to the general requirement that water heating be provided by heat pump water heaters, allow ground source heat pumps, point of use electric water heaters in certain situations, and electric resistance standby service water heating;
- Set minimum efficiency standards for clean water pumps in line with the 2024 IECC (which the County will eventually be required to comply with, unless altered by state amendment when the state adopts the 2024 IECC);
- Include additional efficiency standards as well as additional design flexibility for water piping.
- Add several exception situations in which replacement of existing water systems do not have to switch to heat pump water heaters, including:
  - When the change would require a utility service upgrade;
  - When the system size is below a certain threshold;
  - Replacement of existing steam boilers with steam distribution piping to terminal units and replacement of the existing associated boiler feed equipment;
  - Affordable housing, institutional occupancies, buildings occupied more than 50% by nonprofits, and buildings of 20,000 square feet or less;
  - 50% of total heating capacity in buildings not included in the bullet above; and
  - Temporary replacement of failing equipment.
- Remove the exception situation in which replacement of service water heating appliances with equipment that is the same type and has the same or higher efficiency and the same or lower capacity does not have to convert to heat pump water heaters.

Lighting (Section 74-87). The proposed ordinance would make several changes to State Code that are intended to make lighting more energy efficient. These include:

- Additional requirements for lighting controls (e.g., timers, dimmers, daylight responsive lighting) that provide greater specificity and broader applicability than the state code; and
- Decreasing the lighting power density (LPD) allowed for most occupancy types compared to the allowance in State Code. While LPD for some occupancies are proposed to match State Code, most are proposed to be reduced by 10%-20%. LPD is a measure of the watts of energy used for lighting per square foot of floor area, and indicates decreased power to provide lighting, not a decrease in the amount of illumination.

Electric Outlets for Gas Appliances (Section 90). King County Code currently requires dwelling units subject to the WSEC to provide electric receptacles next to gas appliances to facilitate later conversion to electric appliances. The proposed ordinance would similarly require commercial kitchens to provide an electric panel sized to accommodate future electric cooking appliances where gas appliances are installed.

Building & Site Performance Factors (Sections 106-107). Establishes more stringent targets for building performance factors and site performance factors for energy code compliance. These performance factors are a ratio that compares annual energy use of a proposed design with the energy use of a 2004 baseline design. A lower number

indicates a more energy efficient building. For instance, a factor of 0.43 indicates that a proposed design could consume no more than 43% of the energy that a 2004 baseline building would consume.

**Table 2. Building Performance Factors<sup>9</sup>**

| Building Area Type  | WSEC | King County | Percent Change |
|---------------------|------|-------------|----------------|
| Multifamily         | 0.51 | 0.50        | 2%             |
| Healthcare/hospital | 0.7  | 0.64        | 9%             |
| Hotel/motel         | 0.51 | 0.48        | 6%             |
| Office              | 0.44 | 0.40        | 9%             |
| Restaurant          | 0.33 | 0.32        | 3%             |
| Retail              | 0.41 | 0.37        | 10%            |
| School              | 0.35 | 0.32        | 9%             |
| Warehouse           | 0.18 | 0.17        | 6%             |
| All others          | 0.43 | 0.40        | 7%             |

**Table 3. Site Performance Factors<sup>10</sup>**

| Building Area Type  | WSEC | King County | Percent Change |
|---------------------|------|-------------|----------------|
| Multifamily         | 0.59 | 0.53        | 10%            |
| Healthcare/hospital | 0.72 | 0.65        | 10%            |
| Hotel/motel         | 0.62 | 0.56        | 10%            |
| Office              | 0.58 | 0.52        | 10%            |
| Restaurant          | 0.59 | 0.53        | 10%            |
| Retail              | 0.46 | 0.42        | 9%             |
| School              | 0.52 | 0.47        | 10%            |
| Warehouse           | 0.29 | 0.26        | 10%            |
| All others          | 0.55 | 0.50        | 9%             |

The proposed ordinance requires a reduction in building performance factors and site performance factors between 2% and 10% above the State Code, with an average of 8.3%.

Renewable Energy Systems (Section 125, 128-131). King County Code currently requires all new buildings and all additions over 5,000 square feet to provide a renewable energy system. The proposed ordinance would maintain this requirement, which covers more buildings than the State Code (which requires renewable energy systems only for additions over 10,000 square feet), and would increase the watts per square foot of gross conditioned floor space to 0.75, a 33% increase compared to the requirement in State Code. Executive staff state that such a renewable energy system would, on average, supply 15% of building energy. Existing exceptions in King County Code to the requirement, including one for affordable housing, would be maintained.

<sup>9</sup> Building performance factor is used for “regulated uses”, such as lighting, heating, ventilation and cooling, and commercial refrigeration.

<sup>10</sup> Site performance factor is used for “unregulated uses”, such as computers, servers, or appliances, and includes credit for energy production from renewable sources.

Executive staff state that the amount of solar installed under the existing code is not tracked systematically, nor is the number of buildings applying for or receiving exceptions. Councilmembers could choose to direct the Executive to track these metrics.

The proposed ordinance would also make other minor changes specific to design and installation requirements for solar panels.

Energy Credits (Section 91, 94-102, 126-127). In addition to the other requirements of the energy code, certain development activities are required to achieve additional energy efficiency credits. The code provides a list of actions and associates credits awarded for each action, and applicants for certain development activities must choose from among the list to achieve a certain number of credits. Actions include more efficient HVAC performance, reduced lighting power, high performance water heating, and on-site renewable energy. The following development activities are subject to the energy credits requirement:

- New building construction;
- Changes in space conditioning (i.e. converting a low-energy space to a heated or semi-heated space);
- Change of occupancy;
- Building additions; and
- Initial tenant Improvements.

The proposed ordinance would increase the number of credits required for new buildings and building additions by roughly 10%. It also removes credit options that would be required by the new base code if the proposed ordinance is adopted, and disallows use of some credits in systems that have fossil fuel-fired HVAC equipment or district energy systems.

Additionally, the proposed ordinance would allow a heat pump water heating credit only when the system uses low global warming potential refrigerants. Executive staff state that the threshold for being considered "low global warming potential" was chosen to align with Seattle's energy code.

Commissioning and Metering. The proposed ordinance would also add requirements different from state code for system commissioning and energy metering. The commissioning process is a mandatory quality-assurance process that verifies and documents that building systems – primarily HVAC, lighting controls, and water heating – are installed, programmed, and functioning according to the design intent, construction documents, and efficiency standards. Metering and submetering then measure and continuously monitor system operation and efficiency after the system is commissioned.

The proposed ordinance would reduce the commissioning requirement from 25,000 sf spaces to 20,000 sf spaces, and would make changes and clarifications to the commissioning process and timeline that are intended to provide greater flexibility for builders. It would also require commissioning of high-end trim (a type of lighting control), which may be required in the next round of state code updates.



It would require metering and submetering in some situations where it is not required in the state code, but would also provide exceptions for certain fire-rated or smoke-rated spaces from being metered.

**Changes to the Fire Code.** The proposed ordinance would additionally make several locally specific changes to the State Code.

Special event structure and assembly area (Section 198). The proposed ordinance requires applications to be submitted at least 30 days prior to the event and identifies Executive agencies that may further review applications.

Definitions (Section 202). Removes a definition for “critical fire service areas” and revises the definition “fire detection system” to “automatic fire detection system”.

Lithium Batteries – Signage (Section 203). A major change in the 2021 edition of the IFC concerns new standards around lithium batteries, powered micromobility devices, and energy storage systems. The proposed ordinance would add requirements for signage and markings at locations where lithium batteries are installed.

Automatic Fire Sprinklers - Habitable space of structures built under the IRC (Section 217). Under existing County code, an automatic sprinkler system is required in habitable spaces of some residential structures when fire access, fire flow, or hydrants are not sufficient, or the total floor area exceeds 10,000 sf. The proposed ordinance would remove a provision that exempts lots that are 35,000 sf or larger, are outside the urban growth area (UGA), and have residential as the primary land use from installing automatic sprinkler systems.

Fire Flow and Fire Hydrant Exemptions (Section 222). The fire code establishes minimum fire flow and fire hydrants based on a number of site-specific factors. Under existing County code, some developments are exempt from fire flow and fire hydrant requirements. The proposed ordinance would remove provisions that exempt: 1) subdivisions, short subdivisions, or buildings with one or two dwelling units, provided they are located outside the UGA and lots over 35,000 sf, 2) structures less than 2,500 sf in floor area, excluding garages, that are served by a Group B water system, and are located outside the UGA; and 3) structures greater than 2,500 sf in floor area, excluding garages, served by a Group B water system, located outside the UGA, and the fire marshal determines there will be no substantial fire hazard.

Appendix D – Fire Apparatus Access Road (Sections 227-233). IFC Appendix D is an optional appendix that provides additional detail and standards for fire access and turnaround requirements in IFC Section 503. Some provisions in Appendix D have already been adopted in existing County code. Existing County code also references King County Administrative Rule 17-04,<sup>11</sup> which includes information on acceptable turnaround options, including dimensions such as widths and radiuses.

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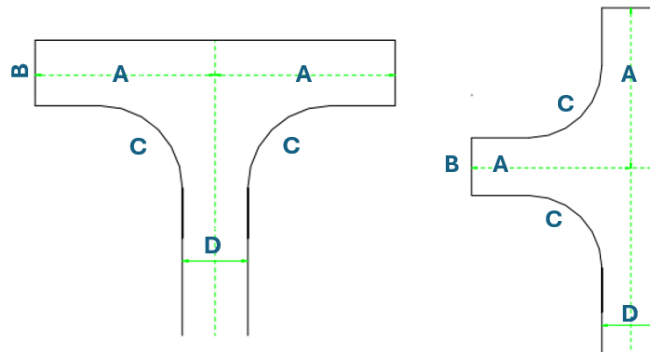
<sup>11</sup> [King County Administrative Rule 17-04](#) and [Attachment A](#)

The proposed ordinance would adopt optional appendix and maintain existing references to Rule 17-04. As transmitted, the proposed ordinance provides multiple acceptable dimensions for turnarounds on roads in excess of 150 feet, and it is unclear what standards would apply.

**Table 4. Acceptable Turnarounds for Fire Apparatus  
Access Roads In Excess of 150 Feet**

| Turnaround Type        | Dimension          | IFC 503.2.5 or Rule 17-04 (Existing) | Appendix D (Proposed) |
|------------------------|--------------------|--------------------------------------|-----------------------|
| Cul-de-sac             | Diameter           | 80 feet                              | 96 feet               |
| Hammerhead             | Leg Length (A)     | 55 feet                              | 60 feet               |
|                        | Leg Width (B)      | 20 feet                              | 20 feet               |
|                        | Inside Radius (C)  | 20 feet                              | 28 feet               |
|                        | Approach Width (D) | 20 feet                              | 26 feet               |
| Alternative Hammerhead | Leg Length (A)     | 55 feet                              | 70 feet               |
|                        | Leg Width (B)      | 20 feet                              | 20 feet               |
|                        | Inside Radius (C)  | 20 feet                              | 28 feet               |
|                        | Approach Width (D) | 20 feet                              | 20 feet               |

**Figure 1. Hammerhead and Alternative Hammerhead Dimensions**



The proposed ordinance would also establish a minimum width of 26 feet for access roads with a hydrant and limit the maximum grade of a fire apparatus access road to 15% (compared to 10% in Appendix D). The proposed ordinance would also adopt specific access standards for larger commercial and industrial buildings (including those over 30 feet high or 62,000 sf in floor area), multi-unit residential developments with more than 100 units, or single-detached or duplex residential developments with more than 30 units.

**Plumbing Code.** The proposed ordinance adopts the state's adopted Uniform Plumbing Code with a small number of local amendments, most of which are technical or clarifying in nature. In addition to these, the proposed ordinance would specify application requirements (Section 165), additional situations in which a reinspection fee would be charged (Section 168), and changes around specifications for stormwater and wastewater drainage systems (Section 182-187).

**Technical and Clarifying Changes.** In addition to substantive changes discussed above, the PO includes a number of technical and clarifying changes throughout K.C.C.

Titles 16 and 17 to align the Washington State Building Code with the K.C.C. and to remove incorrect, outdated, and duplicative language. The proposed ordinance would repeal 126 sections in Titles 16 and 17, principally for these reasons.

**Public Outreach and Engagement.** Executive staff provided a summary of the outreach and engagement that occurred during the development of the proposed ordinance. This summary is Attachment 5 to this staff report.

**State Environmental Policy Act Review.** The proposed ordinance is subject to the State Environmental Policy Act (SEPA). SEPA review occurred and a determination of nonsignificance was issued on March 24, 2025. If additional amendments are proposed in committee or at full Council, the SEPA official will need to review the changes to confirm that they do not affect the determination prior to final passage.

### **AMENDMENT**

Staff anticipate a technical amendment will be prepared to address minor edits, typographical or grammatical errors, and clarification.

### **INVITED**

- Kim Barker, Building Official, Permitting Division, Department of Local Services
- Eric Urban, Fire Marshal, Permitting Division, Department of Local Services

### **ATTACHMENTS**

1. Proposed Ordinance 2025-0321
2. Transmittal Letter
3. Fiscal Note
4. Executive's Plain Language Summary
5. Public Engagement Summary



**KING COUNTY**  
**Signature Report**

ATTACHMENT 1  
1200 King County Courthouse  
516 Third Avenue  
Seattle, WA 98104

**Ordinance**

**Proposed No. 2025-0321.1**

**Sponsors Perry**

1 AN ORDINANCE relating to building and construction  
2 standards; amending Ordinance 14111, Section 4, as  
3 amended, and K.C.C. 16.02.110, Ordinance 14914, Section  
4 9, as amended, and K.C.C. 16.02.150, Ordinance 15802,  
5 Section 5, as amended, and K.C.C. 16.02.152, Ordinance  
6 12560, Section 6, as amended, and K.C.C. 16.02.190,  
7 Ordinance 12560, Section 10, as amended, and K.C.C.  
8 16.02.240, Ordinance 12560, Section 17, as amended, and  
9 K.C.C. 16.02.280, Ordinance 12560, Section 18, as  
10 amended, and K.C.C. 16.02.290, Ordinance 12560, Section  
11 22, as amended, and K.C.C. 16.02.340, Ordinance 14914,  
12 Section 57, as amended, and K.C.C. 16.02.440, Ordinance  
13 12560, Section 30, as amended, and K.C.C. 16.02.470,  
14 Ordinance 12560, Section 36, as amended, and K.C.C.  
15 16.02.540, Ordinance 14914, Section 90, as amended, and  
16 K.C.C. 16.03.020, Ordinance 19485, Section 31, and  
17 K.C.C. 16.03.280, Ordinance 12560, Section 72, as  
18 amended, and K.C.C. 16.04.440, Ordinance 19485, Section  
19 48, as amended, and K.C.C. 16.04.600, Ordinance 12560,  
20 Section 72, as amended, and K.C.C. 16.04.620, Ordinance

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21 12560, Section 75, as amended, and K.C.C. 16.04.630,  
22 Ordinance 12560, Section 84, as amended, and K.C.C.  
23 16.04.720, Ordinance 12560, Section 85, as amended, and  
24 K.C.C. 16.04.730, Ordinance 12560, Section 86, as  
25 amended, and K.C.C. 16.04.740, Ordinance 12560, Section  
26 87, as amended, and K.C.C. 16.04.750, Ordinance 12560,  
27 Section 88, as amended, and K.C.C. 16.04.760, Ordinance  
28 12560, Section 86, as amended, and K.C.C. 16.04.770,  
29 Ordinance 12560, Section 90, as amended, and K.C.C.  
30 16.04.780, Ordinance 12560, Section 92, as amended, and  
31 K.C.C. 16.04.800, Ordinance 12560, Section 94, as  
32 amended, and K.C.C. 16.04.820, Ordinance 12560, Section  
33 95, as amended, and K.C.C. 16.04.830, Ordinance 12560,  
34 Section 96, as amended, and K.C.C. 16.04.840, Ordinance  
35 12560, Section 97, as amended, and K.C.C. 16.04.850,  
36 Ordinance 12560, Section 98, as amended, and K.C.C.  
37 16.04.860, Ordinance 14914, Section 272, as amended, and  
38 K.C.C. 16.05.040, Ordinance 15802, Section 78, as  
39 amended, and K.C.C. 16.05.065, Ordinance 19485, Section  
40 72, and K.C.C. 16.07.040, Ordinance 19485, Section 74,  
41 and K.C.C. 16.07.060, Ordinance 19485, Section 78, and  
42 K.C.C. 16.07.100, Ordinance 19485, Section 79, and  
43 K.C.C. 16.07.110, Ordinance 19485, Section 81, and

44 K.C.C. 16.07.130, Ordinance 19485, Section 82, and  
45 K.C.C. 16.07.140, Ordinance 19485, Section 86, and  
46 K.C.C.16.07.180, Ordinance 19485, Section 90, and K.C.C.  
47 16.07.220, Ordinance 19485, Section 99, and K.C.C.  
48 16.07.310, Ordinance 19485, Section 100, and K.C.C.  
49 16.07.320, Ordinance 19485, Section 117, and K.C.C.  
50 16.07.490, Ordinance 8766, Section 6, as amended, and  
51 K.C.C. 16.08.050, Ordinance 12560, Section 109, as  
52 amended, and K.C.C. 16.14.090, Ordinance 12560, Section  
53 112, as amended, and K.C.C. 16.14.100, Ordinance 12560,  
54 Section 110, as amended and K.C.C. 16.14.110, Ordinance  
55 14914, Section 359, as amended, and K.C.C. 16.14.200,  
56 Ordinance 14914, Section 360, and K.C.C. 16.14.210,  
57 Ordinance 12560, Section 120, and K.C.C. 16.14.220,  
58 Ordinance 14914, Section 370, and K.C.C. 16.14.280,  
59 Ordinance 14914, Section 370, and K.C.C. 16.14.290,  
60 Ordinance 12560, Section 121, as amended, and K.C.C.  
61 16.14.430, Ordinance 14111, Section 131, as amended, and  
62 K.C.C. 16.14.450, Ordinance 14111, Section 131, as  
63 amended, and K.C.C. 16.14.460, Ordinance 14914, Section  
64 408, and K.C.C. 16.14.490, Ordinance 12560, Section 115,  
65 as amended, and K.C.C. 16.14.540, Ordinance 14914,  
66 Section 416, and K.C.C. 16.14.550, Ordinance 6746,

67 Section 5, as amended, and K.C.C. 16.32.030, Ordinance  
68 6746, Section 7, as amended, and K.C.C. 16.32.050,  
69 Ordinance 6746, Section 10, as amended, and K.C.C.  
70 16.32.080, Ordinance 15802, Section 122, as amended, and  
71 K.C.C. 16.32.195, Ordinance 15802, Section 124, as  
72 amended, and K.C.C. 16.32.215, Ordinance 15802, Section  
73 126, as amended, and K.C.C. 16.32.235, Ordinance 15802,  
74 Section 131, as amended, and K.C.C. 16.32.285, Ordinance  
75 19485, Section 146, and K.C.C. 16.32.292, Ordinance  
76 15802, Section 132, as amended, and K.C.C. 16.32.295,  
77 Ordinance 15802, Section 133, as amended, and K.C.C.  
78 16.32.306, Ordinance 19485, Section 151, and K.C.C.  
79 16.32.338, Ordinance 19485, Section 153, and K.C.C.  
80 16.32.340, Ordinance 19485, Section 136, and K.C.C.  
81 16.32.341, Ordinance 19485, Section 154, and K.C.C.  
82 16.32.342, Ordinance 19485, Section 155, and K.C.C.  
83 16.32.343, Ordinance 19485, Section 156, and K.C.C.  
84 16.32.344, Ordinance 15802, Section 137, as amended, and  
85 K.C.C. 16.32.345, Ordinance 1488, Section 5, as amended,  
86 and K.C.C. 16.82.130, Ordinance 9614, Section 103, and  
87 K.C.C. 17.04.010, Ordinance 12560, Section 148, as  
88 amended, and K.C.C. 17.04.200, Ordinance 2910, Section  
89 6, as amended, and K.C.C. 17.04.210, Ordinance 12560,

90                   Section 153, as amended, and K.C.C. 17.04.220, Ordinance  
91                   12560, Section 149, as amended, and K.C.C. 17.04.280,  
92                   Ordinance 12560, Section 156, as amended, and K.C.C.  
93                   17.04.290, Ordinance 17837, Section 75, as amended, and  
94                   K.C.C. 17.04.295, Ordinance 14915, Section 25, as  
95                   amended, and K.C.C. 17.04.310, Ordinance 14915, Section  
96                   26, and K.C.C. 17.04.320, Ordinance 19485, Section 166,  
97                   as amended, and K.C.C. 17.04.330, Ordinance 19485,  
98                   Section 178, and K.C.C. 17.04.341, Ordinance 19485,  
99                   Section 169, and K.C.C. 17.04.375, Ordinance 19485,  
100                  Section 170, and K.C.C. 17.04.377, Ordinance 12560,  
101                  Section 165, and K.C.C. 17.04.380, Ordinance 12560,  
102                  Section 166, as amended, and K.C.C. 17.04.390, Ordinance  
103                  14915, Section 45, as amended, and K.C.C. 17.04.400,  
104                  Ordinance 7980, Section 1, as amended, and K.C.C.  
105                  17.04.420, Ordinance 19485, Section 173, and K.C.C.  
106                  17.04.425, Ordinance 19485, Section 174, and K.C.C.  
107                  17.04.445, Ordinance 19485, Section 175, as amended, and  
108                  K.C.C. 17.04.447, Ordinance 19485, Section 178, and  
109                  K.C.C. 17.04.462, Ordinance 19485, Section 180, and  
110                  K.C.C. 17.04.467, Ordinance 19485, Section 184, and  
111                  K.C.C. 17.04.476, Ordinance 19485, Section 192, and  
112                  K.C.C. 17.04.489, Ordinance 12560, Section 171, and



113 K.C.C. 17.04.520, Ordinance 12560, Section 174, as  
114 amended, and K.C.C. 17.04.560, Ordinance 19485, Section  
115 196, as amended, and K.C.C. 17.04.563, Ordinance 19485,  
116 Section 7, and K.C.C. 17.04.572, Ordinance 19485, Section  
117 198, as amended, and K.C.C. 17.04.574, Ordinance 19485,  
118 Section 200, as amended, and K.C.C. 17.04.582, Ordinance  
119 19485, Section 201, as amended, and K.C.C. 17.04.590,  
120 Ordinance 5828, Section 4, as amended, and K.C.C.  
121 17.08.030, Ordinance 5828, Section 10, as amended, and  
122 K.C.C. 17.08.090, Ordinance 3316, Section 4, as amended,  
123 and K.C.C. 17.08.100, Ordinance 14915, Section 125, as  
124 amended, and K.C.C. 17.08.140, Ordinance 19276, Section  
125 7, and K.C.C. 17.11.040, Ordinance 19276, Section 9, and  
126 K.C.C. 17.11.060, adding new sections to K.C.C. chapter  
127 16.04, adding a new section to K.C.C. chapter 16.05,  
128 adding new sections to K.C.C. chapter 16.07, adding new  
129 sections to K.C.C. chapter 16.32, adding new sections to  
130 K.C.C. chapter 17.04, adding a new chapter to K.C.C. Title  
131 17, repealing Ordinance 14914, Section 10, as amended,  
132 and K.C.C. 16.02.160, Ordinance 12560, Section 55, as  
133 amended, and K.C.C. 16.02.170, Ordinance 14914, Section  
134 20, and K.C.C. 16.02.230, Ordinance 12560, Section 15, as  
135 amended, and K.C.C. 16.02.310, Ordinance 17837, Section

136 13, and K.C.C. 16.02.316, Ordinance 12560, Section 13, as  
137 amended, and K.C.C. 16.02.370, Ordinance 12560, Section  
138 26, as amended, and K.C.C. 16.02.410, Ordinance 12560,  
139 Section 30, as amended, and K.C.C. 16.02.470, Ordinance  
140 12560, Section 31, as amended, and K.C.C. 16.02.480,  
141 Ordinance 12560, Section 32, as amended, and K.C.C.  
142 16.02.490, Ordinance 12560, Section 33, as amended, and  
143 K.C.C. 16.02.500, Ordinance 12560, Section 34, as  
144 amended, and K.C.C. 16.02.510, Ordinance 12560, Section  
145 35, as amended, and K.C.C. 16.02.520, Ordinance 12560,  
146 Section 37, as amended, and K.C.C. 16.02.530, Ordinance  
147 14914, Section 78, as amended, and K.C.C. 16.02.550,  
148 Ordinance 19414, Section 85, as amended, and K.C.C.  
149 16.02.600, Ordinance 19485; Section 29, and K.C.C.  
150 16.03.057, Ordinance 14914, Section 133, as amended, and  
151 K.C.C. 16.04.260, Ordinance 12560, Section 44, as  
152 amended, and K.C.C. 16.04.270, Ordinance 14914, Section  
153 141, as amended, and K.C.C. 16.04.290, Ordinance 12560,  
154 Section 47, as amended, and K.C.C. 16.04.310, Ordinance  
155 14111, Section 55, as amended, and K.C.C. 16.04.330,  
156 Ordinance 15802, Section 23, as amended, and K.C.C.  
157 16.04.344, Ordinance 15802, Section 24, and K.C.C.  
158 16.04.346, Ordinance 15802, Section 25, and K.C.C.

159 16.04.348, Ordinance 14914, Section 155, as amended, and  
160 K.C.C. 16.04.360, Ordinance 15802, Section 34, and  
161 K.C.C. 16.04.475, Ordinance 12560, Section 54, as  
162 amended, and K.C.C. 16.04.490, Ordinance 11923, Section  
163 2, as amended, and K.C.C. 16.04.890, Ordinance 11923,  
164 Section 3, as amended, and K.C.C. 16.04.900, Ordinance  
165 19485, Section 5, and K.C.C. 16.04.930, Ordinance 12380,  
166 Section 2, as amended, and K.C.C. 16.04.940, Ordinance  
167 12380, Section 3, as amended, and K.C.C. 16.04.950,  
168 Ordinance 12380, Section 4, as amended, and K.C.C.  
169 16.04.960, Ordinance 12380, Section 5, as amended, and  
170 K.C.C. 16.04.970, Ordinance 7853, Section 1, as amended,  
171 and K.C.C. 16.04.980, Ordinance 14914, Section 276, as  
172 amended, and K.C.C. 16.05.080, Ordinance 19485,  
173 Section 73, and K.C.C. 16.07.050, Ordinance 19485,  
174 Section 75, and K.C.C. 16.07.070, Ordinance 19485,  
175 Section 76, and K.C.C. 16.07.080, Ordinance 19485,  
176 Section 76, and K.C.C. 16.07.090, Ordinance 19485,  
177 Section 80, and K.C.C. 16.07.120, Ordinance 19485,  
178 Section 81, and K.C.C. 16.07.130, Ordinance 19485 Section  
179 83, and K.C.C. 16.07.150, Ordinance 19485, Section 84,  
180 and K.C.C. 16.07.160, Ordinance 19485, Section 85, and  
181 K.C.C. 16.07.170, Ordinance 19485, Section 86, and K.C.C

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|     |                                                     |
|-----|-----------------------------------------------------|
| 182 | 16.07.180, Ordinance 19485, Section 87, and K.C.C   |
| 183 | 16.07.190, Ordinance 19485, Section 88, and K.C.C   |
| 184 | 16.07.200, Ordinance 19485, Section 89, and K.C.C.  |
| 185 | 16.07.210, Ordinance 19485, Section 91, and K.C.C   |
| 186 | 16.07.230, Ordinance 19485, Section 92, and K.C.C   |
| 187 | 16.07.240, Ordinance 19485, Section 93, and K.C.C   |
| 188 | 16.07.250, Ordinance 19485, Section 94, and K.C.C   |
| 189 | 16.07.260, Ordinance 19485, Section 95, and K.C.C   |
| 190 | 16.07.270, Ordinance 19485, Section 96, and K.C.C   |
| 191 | 16.07.280, Ordinance 19485, Section 98, and K.C.C.  |
| 192 | 16.07.300, Ordinance 19485, Section 101, and K.C.C. |
| 193 | 16.07.330, Ordinance 19485, Section 102, and K.C.C  |
| 194 | 16.07.340, Ordinance 19485, Section 103, and K.C.C  |
| 195 | 16.07.350, Ordinance 19485, Section 104, and K.C.C  |
| 196 | 16.07.360, Ordinance 19485, Section 105, and K.C.C  |
| 197 | 16.07.370, Ordinance 19485, Section 106, and K.C.C  |
| 198 | 16.07.380, Ordinance 19485, Section 108, and K.C.C  |
| 199 | 16.07.400, Ordinance 19485, Section 109, and K.C.C  |
| 200 | 16.07.410, Ordinance 19485, Section 110, and K.C.C  |
| 201 | 16.07.420, Ordinance 19485, Section 111, and K.C.C  |
| 202 | 16.07.430, Ordinance 19485, Section 112, and K.C.C  |
| 203 | 16.07.440, Ordinance 19485, Section 113, and K.C.C  |
| 204 | 16.07.450, Ordinance 19485, Section 115, and K.C.C  |

205 16.07.470, Ordinance 19485, Section 116, and K.C.C.  
206 16.07.480, Ordinance 19485, Section 118, and K.C.C.  
207 16.07.500, Ordinance 19485, Section 119, and K.C.C.  
208 16.07.510, Ordinance 19485, Section 120, and K.C.C.  
209 16.07.520, Ordinance 19485, Section 121, and K.C.C.  
210 16.07.530, Ordinance 19485, Section 122, and K.C.C.  
211 16.07.540, Ordinance 19485, Section 123, and K.C.C.  
212 16.07.550, Ordinance 14111, Section 73, and K.C.C.  
213 16.10.010, Ordinance 12560, Section 58, as amended, and  
214 K.C.C. 16.10.020, Ordinance 12560, Section 59, as  
215 amended, and K.C.C. 16.10.030, Ordinance 12560, Section  
216 60, and as amended, K.C.C. 16.10.040, Ordinance 12560,  
217 Section 61, as amended, and K.C.C. 16.10.050, Ordinance  
218 12560, Section 62, as amended, and K.C.C. 16.10.060,  
219 Ordinance 12560, Section 63, as amended, and K.C.C.  
220 16.10.070, Ordinance 12560, Section 64, as amended, and  
221 K.C.C. 16.10.080, Ordinance 15802, Section 99, and  
222 K.C.C. 16.10.100, Ordinance 15802, Section 100, and  
223 K.C.C. 16.10.110, Ordinance 15802, Section 101, as  
224 amended, and K.C.C. 16.10.120, Ordinance 12560, Section  
225 127, as amended, and K.C.C. 16.14.020, Ordinance 14914,  
226 Section 337, and K.C.C. 16.14.040, Ordinance 14914,  
227 Section 338, and K.C.C. 16.14.050, Ordinance 14914,

228 Section 339, and K.C.C. 16.14.060, Ordinance 14914,  
229 Section 352, and K.C.C. 16.14.140, Ordinance 14914,  
230 Section 353, and K.C.C. 16.14.150, Ordinance 14914,  
231 Section 367, as amended, and K.C.C. 16.14.250, Ordinance  
232 14914, Section 407, and K.C.C. 16.14.480, Ordinance  
233 14914, Section 410, and K.C.C. 16.14.510, Ordinance  
234 14914, Section 413, and K.C.C. 16.14.530, Ordinance  
235 14914, Section 418, and K.C.C. 16.14.570, Ordinance  
236 14914, Section 419, and K.C.C. 16.14.580, Ordinance  
237 14914, Section 420, and K.C.C. 16.14.590, Ordinance  
238 19485, Section 149, and K.C.C. 16.32.336, Ordinance  
239 19485, Section 150, and K.C.C. 16.32.337, Ordinance  
240 19485, Section 152, and K.C.C. 16.32.339, Ordinance  
241 1283, Section 1, as amended, and K.C.C. 16.78.010,  
242 Ordinance 1283, Section 2, and K.C.C. 16.78.020,  
243 Ordinance 1283, Section 3, and K.C.C. 16.78.030,  
244 Ordinance 1283, Section 4, and K.C.C. 16.78.040,  
245 Ordinance 1283, Section 5, and K.C.C. 16.78.050,  
246 Ordinance 1283 (part) and K.C.C. 16.78.060, Ordinance  
247 19485, Section 174, and K.C.C. 17.04.445, Ordinance  
248 19485, Section 175, and K.C.C. 17.04.447, Ordinance  
249 19485, Section 179, and K.C.C. 17.04.466, Ordinance  
250 19485, Section 181, and K.C.C. 17.04.468, Ordinance

251 19485, Section 182, and K.C.C. 17.04.471, Ordinance  
252 19485, Section 183, and K.C.C. 17.04.472, Ordinance  
253 19485, Section 185, and K.C.C. 17.04.477, Ordinance  
254 19485, Section 186, and K.C.C. 17.04.478, Ordinance  
255 19485, Section 187, and K.C.C. 17.04.479, Ordinance  
256 19485, Section 188, and K.C.C. 17.04.481, Ordinance  
257 19485, Section 189, and K.C.C. 17.04.486, Ordinance  
258 19485, Section 190, and K.C.C. 17.04.487, Ordinance  
259 19485, Section 191, and K.C.C. 17.04.488, Ordinance  
260 14111, Section 215, and K.C.C. 17.04.540.

261 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

262 SECTION 1. Ordinance 14111, Section 4, as amended, and K.C.C. 16.02.110 are  
263 hereby amended to read as follows:

264 A. The following codes, published by or jointly with the International Code  
265 Council, Inc., together with amendments, additions, exceptions, and deletions adopted in  
266 this title by reference, together with the State Building Code Act, chapter 19.27 RCW,  
267 which are referred to in this title as "the International codes," and with King County  
268 modifications that are adopted and codified in this chapter, are adopted as the King  
269 County building codes and may be cited as such and are referred to in this chapter as "this  
270 code":

271 1. The International Building Code, (~~(2018 Edition)~~) 2021 edition, effective  
272 (~~(February 1, 2021)~~) March 15, 2024, together with (~~(Appendix)~~) Appendices C (Group  
273 U – Agricultural buildings), D (Fire Districts), E (Supplementary Accessibility

274 Requirements), and P (Construction and demolition material management), as amended  
275 in chapter 51-50 WAC, and Appendix Z (Seattle-Tacoma sound reduction standards), as  
276 adopted by this title, and referred to in this title as "the International Building Code", or,  
277 when used in a citation, "IBC";

278 2. The International Residential Code, (~~(2018)~~) 2021 edition, effective  
279 (~~(February 1, 2021)~~) March 15, 2024, except for Chapter 11 and Chapters 25 through 43,  
280 together with Appendices AF (Radon control methods), AH (Patio covers), AK (Sound  
281 transmission), AQ (Tiny homes), (~~and~~) AT (~~(PE)~~) (Solar-ready provisions-detached  
282 one- and two-family dwellings and townhouses), AU (Dwelling unit fire sprinkler  
283 systems), AY (Construction and demolition material management), and AZ (Building  
284 deconstruction), as amended in chapter 51-51 WAC, and referred to in this title as the  
285 "International Residential Code" or, when used in a citation, "IRC";

286 3. The (~~(International Energy Conservation Code, Commercial,)~~) Washington  
287 State Energy Code - Commercial Provisions, (~~(2018)~~) 2021 edition, effective (~~(February~~  
288 ~~1, 2021)~~) March 15, 2024, together with Appendices A (Default heat loss coefficients), B  
289 (Default internal load values and schedules), C (Exterior design conditions), and D  
290 (Calculation of HVAC total system performance ratio), as amended in chapter 51-11C  
291 WAC; and the (~~(International Energy Conservation Code)~~) Washington State Energy  
292 Code – Residential Provisions, (~~(Residential, 2018)~~) 2021 edition, effective (~~(February 1,~~  
293 ~~2021)~~) March 15, 2024, together with Appendices (~~(A (Default heat loss coefficients),)~~)  
294 RA/RB (Optional energy efficiency measures), and RC (Exterior design conditions), as  
295 amended in chapter 51-11R WAC, and referred to in this title as the "~~(International~~



296 ~~Energy Conservation Code~~) Washington State Energy Code" or, when used in a citation,  
297 "~~(IECC)~~ WSEC";

298 4. The International Mechanical Code, ~~((2018 Edition))~~ 2021 edition, effective  
299 ~~((February 1, 2021))~~ March 15, 2024, together with Appendix A (Chimney connector  
300 pass-throughs), as amended in chapter 51-52 WAC, and hereinafter referred to as the  
301 "International Mechanical Code" or, when used in a citation, "IMC";

302 5. The International Existing Building Code, ~~((2018 Edition))~~ 2021 edition,  
303 effective ~~((February 1, 2021))~~ March 15, 2024, with Appendix A (Guidelines for the  
304 ~~((Seismic Retrofit of Existing Buildings))~~ seismic retrofit of existing buildings), as  
305 amended in chapter WAC 51-50, and referred to in this title as the "International Existing  
306 Building Code" or, when used in a citation, "IEBC"; ~~((and))~~

307 6. The International Property Maintenance Code, ~~((2018))~~ 2021 ~~((E))~~ edition,  
308 effective ~~((February 1, 2021))~~ October 29, 2023, and referred to in this title as the  
309 "International Property Maintenance Code" or, when used in a citation, "IPMC~~((:))~~," and

310 7. The Uniform Plumbing Code, 2021 edition, effective March 15, 2024, as  
311 amended in chapter WAC 51-56, and referred to in this title as the "Uniform Plumbing  
312 Code" or, when used in a citation, "UPC."

313 B. This code also may be further clarified and implemented with administrative  
314 rules adopted in accordance with K.C.C. chapter 2.98.

315 SECTION 2. Ordinance 14914, Section 9, as amended, and K.C.C. 16.02.150 are  
316 hereby amended to read as follows:

317 Section 101.1 of the International Building Code is not adopted and the following  
318 is substituted:

319           **Title (IBC 101.1).** These regulations shall be known as the Building Codes of  
320 King County. These codes ~~((are))~~ include the International Building Code (IBC), the  
321 International Residential Code (IRC), the ~~((International Energy Conservation Code~~  
322 ~~(IECC)))~~ Washington State Energy Code (WSEC), the International Mechanical Code  
323 (IMC), the International Existing Building Code (IEBC), the International Property  
324 Maintenance Code (IPMC), the Uniform Plumbing Code, all as adopted in K.C.C. Title  
325 16 ~~((the King County Building Security Code (K.C.C. chapter 16.10)))~~, and the  
326 International Fire Code (IFC)~~((;))~~ as adopted in K.C.C. Title 17.

327           SECTION 3. Ordinance 15802, Section 5, as amended, and K.C.C. 16.02.152 are  
328 hereby amended to read as follows:

329           Section 101.2 of the International Building Code is not adopted and the following  
330 is substituted:

331           **Scope (IBC 101.2).** The provisions of this code shall apply to the construction,  
332 alteration, movement, enlargement, replacement, repair, equipment, use and occupancy,  
333 location, maintenance, removal, and demolition of every building or structure or any  
334 appurtenances connected or attached to such buildings or structures.

335           **EXCEPTIONS:**

336           1. The provisions of the International Residential Code apply to the following:

337           1.1. The construction, alteration, movement, enlargement, replacement, repair,  
338 equipment, use and occupancy, location, removal, and demolition of detached one- and  
339 two-family dwellings and townhouses; not more than three stories in height above grade  
340 plane with a separate means of egress, and their accessory structures ~~((; including adult~~  
341 ~~family homes, foster family care homes, and family day care homes licensed by the~~

Washington state Department of Social and Health Services)) not more than three stories in height above grade plane.

1.2. Detached residential accessory structures that are used for home occupations or home industries that include offices, mercantile, food preparation for off-site consumption, personal care salons, and similar uses, if the home occupation or home industry is subordinate to the primary residential use ~~((of the))~~ on site and the total cumulative floor area devoted to the home occupation or home industry in each detached accessory structure on-site is less than or equal to 500 square feet (46.5 ~~((m<sup>2</sup>))~~) square meters).

1.3. Live/work units located in townhouses and complying with the requirements of ~~((IBC 419. Fire suppression-))~~ 508.5 of the IBC. An automatic sprinkler system required by ~~((IBC 419.5 when))~~ 508.5.7 of the IBC where constructed under the ~~((International Residential Code))~~ IRC shall conform to Appendix U ~~((Dwelling unit fire sprinkler systems, as adopted in chapter 51-51 WAC))~~.

1.4. Owner-occupied lodging houses with one or two guestrooms.

1.5. Owner-occupied lodging houses with three to five guestrooms ~~((where))~~ equipped with an automatic fire sprinkler system in accordance with Appendix U ~~((Dwelling unit fire sprinkler systems, as adopted in chapter 51-51 WAC))~~.

1.6. A care facility with five or fewer persons receiving custodial care within a dwelling unit equipped with a fire sprinkler system in accordance with Appendix U.

1.7. A care facility with five or fewer persons receiving medical care within a dwelling unit equipped with a fire sprinkler system in accordance with Appendix U.

364           1.8. A care facility with five or fewer persons receiving care within a single-  
365 family dwelling equipped with a fire sprinkler system in accordance with Appendix U.

366           2. The provisions of the ~~((International Mechanical Code))~~ (IMC) shall regulate  
367 the design, installation, maintenance, alteration, and inspection of mechanical systems  
368 that are permanently installed and ~~((used))~~ utilized to provide control of the  
369 environmental conditions and related processes within buildings. This code shall also  
370 regulate those mechanical systems, system components, equipment, and appliances  
371 specifically addressed in ~~((this section))~~ the IMC. The installation of fuel gas  
372 ~~((distribution))~~ piping ~~((and equipment, fuel gas-fired appliances, and fuel gas-fired~~  
373 ~~appliance venting systems))~~ systems, fuel gas utilization equipment, gaseous hydrogen  
374 systems, and regulated accessories shall be regulated by the International Fuel Gas Code  
375 and WAC 51-52 ~~((-0101))~~. References in this code to Group R shall include Group I-1,  
376 Condition 2 assisted living facilities licensed by Washington state under chapter 388-78A  
377 WAC and Group I-1, Condition 2 residential treatment facilities licensed by Washington  
378 state under chapter 246-337 WAC.

379           2.1. Detached one- and two-family dwellings and multiple single-family  
380 dwellings (townhouses) not more than three stories high with separate means of egress  
381 and their accessory structures shall comply with the IRC.

382           2.2. The standards for liquefied petroleum gas installations shall be the 2020  
383 edition of NFPA 58 (Liquefied Petroleum Gas Code) and the 2021 edition of ANSI  
384 Z223.1/NFPA 54 (National Fuel Gas Code).

385           SECTION 4. Ordinance 12560, Section 6, as amended, and K.C.C. 16.02.190 are  
386 hereby amended to read as follows:

387           Section 104.1 of the International Building Code is not adopted and the following  
388 is substituted:

389           **General (IBC 104.1).**

390           A. The building official is hereby authorized and directed to enforce all the  
391 provisions of this code, with the exception of ~~((International Building Code Chapter 29,))~~  
392 the fuel gas piping requirements contained in the International Fuel Gas Code and  
393 Chapter 24 of the International Residential Code.

394           B. The director of public health is authorized to enforce ~~((the provisions of~~  
395 ~~Chapter 29 of the International Building Code,))~~ the fuel gas piping requirements  
396 contained in the International Fuel Gas Code and Chapter 24 of the International  
397 Residential Code. For such purposes, the building official and the director of public  
398 health shall have the powers of a law enforcement officer.

399           C. The building official shall have the ~~((power))~~ authority to render  
400 interpretations of this code and to adopt ~~((and enforce rules and supplemental regulations~~  
401 ~~in order))~~ policies and procedures to clarify the application of its provisions. Such  
402 interpretations, ~~((rules and regulations))~~ policies, and procedures shall be in  
403 ~~((conformance))~~ compliance with the intent and purpose of this code. Such policies and  
404 procedures shall not have the effect of waiving requirements specifically provided for in  
405 this code.

406           SECTION 5. Ordinance 12560, Section 10, as amended, and K.C.C. 16.02.240  
407 are hereby amended to read as follows:

408           Section 105.2 of the International Building Code is not adopted and the following  
409 is substituted:

410           **Work exempt from permit (IBC 105.2).** Exemptions from the permit  
411 requirements of this code shall not be deemed to grant authorization for any work to be  
412 done in any manner in violation of the provisions of this code or any other laws or  
413 ordinances of this jurisdiction. ~~((A building p))~~Permits shall not be required for the  
414 following:

415           Building:

416           1. One-story detached one- and two-family residential accessory buildings used  
417 as tool and storage sheds, playhouses, tree-supported structures used for play, and similar  
418 uses, not including garages or other buildings used for vehicular storage, if:

419           1.1. The floor area does not exceed 200 square feet (18.6 ~~((m2))~~ square meters);

420           1.2. The roof eave does not project closer than ~~((three))~~ 3 feet (914 millimeters)  
421 to any portion of an adjacent building and does not exceed ~~((twenty-four))~~ 24 inches (152  
422 millimeters) measured horizontally from the exterior wall; ~~((and))~~

423           1.3. The building is separated a minimum of ~~((five))~~ 5 feet (1,524 millimeters)  
424 from all other buildings; and

425           1.4. The building is unconditioned.

426           2. One-story detached commercial agricultural and forestry accessory buildings  
427 used as animal shelters or for the storage of tools, animal feed, animal bedding, seeds,  
428 seedlings, or similar materials or products, not including office, sleeping or resting  
429 quarters for human occupation, or garages, if:

430           2.1. The floor area does not exceed 400 square feet (37.2 ~~((m2))~~ square meters);

431           2.2. The roof eave does not project closer than (~~((three))~~) 3 feet (914 millimeters)  
432 to any portion of an adjacent building and does not exceed (~~((twenty-four))~~) 24 inches (610  
433 millimeters) measured horizontally from the exterior wall;

434           2.3. The building is separated a minimum of (~~((five))~~) 5 feet (1,524 millimeters)  
435 from other buildings; and

436           2.4. The building does not have an installed heating system and is not connected  
437 to water, sanitary sewer, or septic service.

438           3. Fences, other than swimming pool barriers, not over 6 feet (~~((1.8 m))~~) (1,829  
439 millimeters) high. Agricultural wildlife exclusion fencing consistent with Washington  
440 Department of Fish and Wildlife criteria and located in the Agricultural (A) zone not over  
441 8 feet (2,438 millimeters high).

442           4. Retaining walls (~~((that are))~~) not over 4 feet (~~((1.2 m))~~) (1,219 millimeters) in  
443 height measured from the bottom of the footing to the top of the wall, unless supporting a  
444 surcharge or impounding Class I, II, or IIIA liquids.

445           5. Water tanks supported directly upon grade if the capacity does not exceed  
446 5,000 gallons (18,927 liters) and the ratio of height to diameter or width does not exceed  
447 2 to 1.

448           6. Sidewalks, decks, and driveways not more than 30 inches (762 (~~((mm))~~)  
449 millimeters) above adjacent grade and not over any basement or story below and that are  
450 not part of an accessible route.

451           7. Painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish  
452 work.

453 8. Temporary motion picture, television, and theater stage sets and scenery.

454 9. Prefabricated swimming pools accessory to a ~~((detached one- or two-family~~  
455 ~~dwelling as applicable in IBC 101.2,))~~ Group R-3 occupancy that are installed entirely  
456 above ground and;

457 9.1. ~~((a))~~ Are ~~((either))~~ less than 24 inches (610 ~~((mm))~~ millimeters) deep and  
458 do not exceed 5,000 gallons ~~((18,925-l))~~ (18,927 liters); or

459 9.2. are installed for temporary use of less than ~~((three))~~ 3 months in a  
460 ~~((twelve))~~ 12-month period.

461 10. Temporary growing structures and temporary worker housing as exempted by  
462 WAC 51-50-007.

463 11. Shade cloth structures constructed for nursery or agricultural purposes, not  
464 including service systems.

465 12. Swings and other playground equipment, other than play structures installed  
466 inside all occupancies covered by the IBC that exceed 10 feet (3048 millimeters) in  
467 height or 150 square feet (13.9 square meters) in area.

468 ~~((12-))~~ 13. Window awnings for detached one- and two-family dwellings  
469 supported by an exterior wall that do not project more than 54 inches (1,372 ~~((mm))~~  
470 millimeters) from the exterior wall and do not require additional support.

471 ~~((13-))~~ 14. Nonfixed and ~~((M))~~ moveable fixtures, cases, racks, counters, and  
472 partitions not over 5 feet 9 inches ~~((1.75-m-high))~~ 1,753 millimeters in height).

473 ~~((14-))~~ 15. Reroofing of existing one- and two-family residential buildings.



474           **EXCEPTION:** When replacement roofing adds more than 5 pounds per square  
475 foot (24 kilograms per square meter) cumulative dead load to the weight of the original  
476 roofing a permit shall be required.

477           ~~((15.))~~ 16. Submerged, freestanding mechanical boat lifts associated with single-  
478 family residential piers and recreational watercraft not exceeding 25 feet ~~((7.6 m))~~ 7,620  
479 millimeters) in length or 15 feet (4,572 millimeters) in width with no portion exceeding a  
480 height of 10 feet (3,048 millimeters) above the ordinary high water mark as defined in  
481 K.C.C. 21A.06.825.

482           ~~((16.))~~ 17. Work located primarily in a public way, public utility towers, and  
483 poles.

484           ~~((17.))~~ 18. Mechanical equipment not specifically regulated in this code. ~~((18.))~~  
485 19. Antenna and dishes that fall under FCC Antenna Rule 47 C.F.R., including masts  
486 under ~~((twelve))~~ 12 feet (3,658 millimeters) above the roof line and dishes up to 3 feet  
487 and 3 3/8 inches ~~((one meter))~~ (1,000 millimeters) in diameter.

488           ~~((19.))~~ 20. Roof-mounted photovoltaic solar panels for one- and two-family  
489 dwellings that have a total dead load not exceeding ~~((four))~~ 4 pounds per square foot (20  
490 kilograms per square meter) and are no more than 18 inches (457 ~~((mm))~~ millimeters)  
491 above the roof or highest roof point on which they are mounted.

492           ~~((20.))~~ 21. Ground-mounted wind turbines for one- and two-family dwellings for  
493 which any portion of the unit does not exceed ~~((twelve))~~ 12 feet ~~((3.7 m))~~ 3,658  
494 millimeters) in height.

495           Gas:

496           1. Portable heating or cooking appliances.

497           2. Replacement of any minor part that does not alter approval of equipment or  
498 make such equipment unsafe.

499           Mechanical:

500           1. Portable heating or clothes drying appliances.

501           2. Portable ventilation appliances and equipment.

502           3. Portable cooling unit.

503           4. Steam, hot, or chilled water piping within any heating or cooling equipment  
504 regulated by this code.

505           5. Replacement of any part that does not alter its approval or make it unsafe.

506           6. Portable evaporative cooler.

507           7. Self-contained refrigeration system containing 10 pounds ~~((4.54 kg))~~ 5  
508 kilograms) or less of refrigerant and actuated by motors of ~~((one))~~ 1 horsepower ~~((746~~  
509 ~~W))~~ 1 metric horsepower or 746 watts) or less.

510           8. Portable fuel cell appliances that are not connected to a fixed piping system  
511 and are not interconnected to a power grid.

512           ~~((Exempted items shall still be subject to separate plumbing, electrical and~~  
513 ~~mechanical permits.~~

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

517           SECTION 6. Ordinance 12560, Section 18, as amended, and K.C.C. 16.02.290  
518 are hereby amended to read as follows:

519 Section 105.5 of the International Building Code is not adopted and the following  
520 is substituted:

521 **Expiration (IBC 105.5).** ~~((Every permit approved by the building official under~~  
522 ~~the code shall expire by limitation and become null and void two years from the date of~~  
523 ~~its issue.~~

524 **EXCEPTION:** ~~Building permits issued by the building official to correct a code~~  
525 ~~violation, or mechanical permits issued independent of a building permit, shall expire by~~  
526 ~~limitation and become null and void one year from the date of its issue.))~~ Permit  
527 expiration dates are as follows:

528 A. Mechanical permits issued independent of a building permit shall expire six  
529 months from the date of issuance.

530 B. Building permits issued to correct a code violation shall expire one year from  
531 the date of issuance.

532 C. All other permits not listed above shall expire two years from the date of  
533 issuance.

534 D. Issued permits may be extended for one-year periods subject to the following  
535 conditions:

536 1. An application for a permit extension together with the applicable fee is  
537 submitted to the department ~~((at least 7,))~~ prior to, but no more than 60~~((;))~~ calendar days  
538 before the date the original permit ~~((becomes null and void))~~ expires. Once the permit  
539 extension application is submitted and if that extension is not denied, work may continue  
540 past the expiration date of the original permit. If the extension application is denied, all  
541 work must stop until a valid permit is obtained.

542 2. ~~((The permit shall not be extended if:~~

543 2.1. ~~Construction of a building or structure has not substantially begun, as~~  
544 ~~determined by the building official, within two years from the date of the first issued~~  
545 ~~permit; and~~

546 2.2. ~~The building or the structure, or its intended use, is no longer authorized~~  
547 ~~by the zoning code or other applicable law.~~

548 3. ~~An applicant may request a total of two permit extensions if there are no~~  
549 ~~substantial changes in the approved plans and specifications.~~

550 4.)) The building official may approve up to two one-year extensions if there are  
551 no substantial changes in the approved plans and specifications. The building official  
552 may extend a building or mechanical permit beyond the second extension only to allow  
553 completion of ((a building, structure or mechanical system)) work authorized by the  
554 original permit ~~((and))~~ which has been substantially constructed. If ~~((substantial))~~ the  
555 building official determines that work~~((, as determined by the building official, has not~~  
556 ~~begun))~~ on a building, structure, or mechanical system authorized in the original permit  
557 has not been substantially constructed, then a new permit shall be required for  
558 construction to proceed.

559 ~~((5.))~~ 3. The ~~((staff of the))~~ department may revise a permit at the permittee's  
560 request but such a revision does not ~~((constitute a renewal or otherwise extend the life~~  
561 ~~of))~~ extend the permit expiration date.

562 E. Issued permits for which only the final building inspection is remaining, and  
563 all other work has been approved, may be extended for one 60-day period subject to the  
564 following conditions:

565           1. An application for a permit extension is submitted to the department prior to  
566 the expiration date.

567           2. If work required under a final building inspection is not completed within the  
568 60-day extension period, the permit shall expire, and a new permit shall be required for  
569 construction to proceed.

570           F. The permit shall not be extended if:

571           1. Construction of a building or structure has not substantially begun, as  
572 determined by the building official, within two years from the date the permit was first  
573 issued; and

574           2. The building or the structure, or its intended use, is no longer authorized by  
575 the zoning code or other applicable law.

576           SECTION 7. Ordinance 12560, Section 22, as amended, and K.C.C. 16.02.340  
577 are hereby amended to read as follows:

578           Section 107.3.3 of the International Building Code is not adopted and the  
579 following is substituted:

580           **Pre-issuance construction authorization (PICA) – Permission to proceed**  
581 **(IBC 107.3.3.).** If the applicant for a permit or approval required by this code ~~((desires))~~  
582 seeks authorization to begin work before obtaining the required permit or approval, the  
583 building official may allow the applicant to proceed if it is determined:

584           1. ~~The ((building official determines that the))~~ work would not endanger or harm  
585 the property;

586           2. ~~((The building official determines that a))~~Allowing the work to proceed would  
587 not violate the requirements of the state environmental policy act; ~~((and))~~

588           3. The scope of work does not include alterations or site development regulated  
589 under K.C.C. Title 9; and

590           4. The applicant first deposits cash or its equivalent with the building official, or  
591 in an irrevocable escrow approved by the building official, in an amount determined by  
592 the building official to be sufficient to restore the building and site, and to perform the  
593 corrective work described in K.C.C. 16.02.350.

594           SECTION 8. Ordinance 14914, Section 57, as amended, and K.C.C. 16.02.440  
595 are hereby amended to read as follows:

596           Section ~~((110.3.8))~~ 110.3.9 of the International Building Code is not adopted and  
597 the following is substituted:

598           **Energy efficiency inspections (IBC ~~((110.3.8))~~ 110.3.9).** Energy efficiency  
599 inspections shall be in accordance with the ~~((International Energy Conservation))~~  
600 Washington State Energy Code, as adopted and amended by chapters 51-11C and 51-11R  
601 WAC, and as amended in this title.

602           SECTION 9. Ordinance 12560, Section 30, as amended, and K.C.C. 16.02.470  
603 are hereby amended to read as follows:

604           Section 111.2 of the International Building Code is not adopted and the following  
605 is substituted:

606           **Certificate~~((s))~~ issued (IBC 111.2).** After ~~((F))~~ the building official inspects the  
607 building or structure and does not find violations of the provisions of this code or other  
608 laws that are enforced by the department, the building official shall ~~((may))~~ issue  
609 ~~((either))~~ a certificate of occupancy ~~((or a certificate of shell completion.))~~ that contains  
610 the following:

- 611        1. The permit number.
- 612        2. The address of the structure.
- 613        3. The name and address of the owner or the owner's authorized agent.
- 614        4. A description of that portion of the structure for which the certificate is issued.
- 615        5. A statement that the described portion of the structure has been inspected for
- 616 compliance with the requirements of this code.
- 617        6. The name of the building official.
- 618        7. The edition of the code under which the permit was issued.
- 619        8. The use and occupancy, in accordance with the provisions of IBC Chapter 3.
- 620        9. The type of construction as defined in IBC Chapter 6.
- 621        10. The design occupant load.
- 622        11. Where an automatic sprinkler system is provided, whether the sprinkler
- 623 system is required.
- 624        12. Any special stipulations and conditions of the building permit.
- 625        13. An explanation that the responsibility for compliance with King County
- 626 codes and building maintenance rests exclusively with the permit applicants and their
- 627 agents and the building's owners.

628        EXCEPTION: The inspection record card specified in K.C.C. 16.02.410 shall

629 serve as the certificate of occupancy for structures built under the International

630 Residential Code.

631        SECTION 10. Ordinance 12560, Section 36, as amended, and K.C.C. 16.02.540

632 are hereby amended to read as follows:

633           Section 111 of the International Building Code is supplemented with the  
634 following:

635           **Posting (IBC 111.5).** The certificate of occupancy (~~((and/or the certificate of shell~~  
636 ~~completion))~~) shall be posted in a conspicuous place on the premises and shall not be  
637 removed except by the building official.

638           SECTION 11. Ordinance 14914 Section 90, as amended, and K.C.C. 16.03.020  
639 are hereby amended to read as follows:

640           The following definitions in Section 202 of the International Building Code are  
641 not adopted:

- 642           A. Base flood;
- 643           B. Base flood elevation;
- 644           C. Coastal high-hazard area;
- 645           D. Design flood;
- 646           E. Dry floodproofing;
- 647           F. Flood hazard area;
- 648           G. Flood insurance rate map (FIRM);
- 649           H. Flood insurance study;
- 650           I. Floodway;
- 651           J. ~~((Historic buildings;~~
- 652           ~~K.))~~ Special flood hazard area; and
- 653           ~~((L.))~~ K. Substantial improvement.

654           SECTION 12. Ordinance 19485, Section 31, and K.C.C. 16.03.280 are hereby  
655 amended to read as follows:

---



656 Water heater: any listed heating appliance or equipment that(~~(;~~  
657 ~~A. H))~~heats potable water and supplies such water to the potable hot water  
658 distribution system(~~(; and)~~) excluding any appliance or equipment that exceeds any of the  
659 following:

- 660 A. An operating temperature of 210° Fahrenheit (99° Celsius);  
661 B. (~~((Does not exceed a))~~) A maximum allowable working pressure of 160 pounds  
662 per square inch (1,103 (~~((kPa))~~) kilopascals)(~~(;)~~) ;  
663 C. (~~((a))~~) A volume of 120 gallons (454 (~~((L))~~)liters) (~~((and a))~~); or  
664 D. A heat input of 200,000 Btu/h (~~((per hour (58 kW)))~~) (211,011 kilojoules/h or  
665 59 kilowatts per hour). Any appliances and equipment that exceed any one of these  
666 values are classified as boilers.

667 NEW SECTION. SECTION 13. There is hereby added to K.C.C. chapter 16.04  
668 a new section to read as follows:

669 Section 429.2 of the International Building Code is not adopted and is substituted  
670 with the following:

671 **Electric Vehicle (EV) Charging Infrastructure (IBC 429.2).** Buildings and  
672 accessory structures shall be provided with EV charging stations, EV-ready parking  
673 spaces, and EV-capable parking spaces in accordance with IBC Table 429.2.

674 Calculations shall be rounded up to the nearest whole number. Where a building contains  
675 more than one occupancy, the electric vehicle charging infrastructure percentages of IBC  
676 Table 429.2 shall be applied to the number of spaces required for each occupancy.

677 **EXCEPTION:** On-site parking with less than 10 parking spaces shall not be  
678 required to comply with Section 429.2.

Table 429.2

## Electric Vehicle Charging Infrastructure

| Occupancy                                                  | Number of EV charging stations | Number of EV-ready parking spaces | Number of EV-capable parking spaces |
|------------------------------------------------------------|--------------------------------|-----------------------------------|-------------------------------------|
| Group A, B, E, F, H, I, M, and S occupancies               | 10% of total parking spaces    | 10% of total parking spaces       | 10% of total parking spaces         |
| Group R occupancies                                        |                                |                                   |                                     |
| Buildings that do not contain more than two dwelling units | Not required                   | One for each dwelling unit        | Not required                        |
| Dwelling units with private garages                        | Not required                   | One for each dwelling unit        | Not required                        |
| All other Group R occupancies                              | 10% of total parking spaces    | 40% of total parking spaces       | 25% of total parking spaces         |

SECTION 14. Ordinance 19485, Section 48, as amended, and K.C.C. 16.04.440

are hereby amended to read as follows:

Section 1612.4 of the International Building Code is not adopted and the

following is substituted:

**Flood hazard documentation (IBC 1612.4).** For construction in flood hazard

areas the applicant shall provide actual as-built elevation certificate by a professional

((~~civil engineer or~~)) land surveyor licensed by the state of Washington in accordance with

K.C.C. 21A.24.270.

SECTION 15. Ordinance 12560, Section 72, as amended, and K.C.C. 16.04.600

are hereby amended to read as follows:

691 The International Building Code is supplemented by the following appendix:

692 **Definitions (IBC AZ 106).**

693 ~~((NOISE REDUCTION COEFFICIENT (NRC): is))~~ A. Noise Reduction  
694 Coefficient (NRC): ~~((+))~~The arithmetic average of the sound absorption coefficients of a  
695 material at 250, 500, 1,000, and 2,000 ~~((Hz))~~ hertz.

696 ~~((SOUND TRANSMISSION CLASS (STC): is))~~ B. Sound Transmission Class  
697 (STC): The single-number rating for describing sound transmission loss of a wall, roof,  
698 floor, window, door, partition, or other individual building components or assemblies.

699 SECTION 16. Ordinance 12560, Section 72, as amended, and K.C.C. 16.04.620  
700 are hereby amended to read as follows:

701 The International Building Code is supplemented with the following appendix:

702 **Seattle-Tacoma noise program area (IBC AZ 108).** Noise-determined  
703 construction requirements detailed in this chapter shall be applied to new construction  
704 and additions within the designated areas of the Port of Seattle's Noise Remedy  
705 Boundary, except for not-normally-inhabited portions of warehouses, storage buildings,  
706 and similar structures as determined by the director. Specific construction requirements  
707 are:

708 ~~((+))~~ A. Bedrooms shall comply with IBC AZ 125 which is designed to achieve  
709 a noise reduction of 35 ~~((dB))~~ decibels.

710 ~~((+))~~ B. All other living and working areas shall comply with IBC AZ 117 which  
711 is designed to achieve a noise reduction level of 30 ~~((dB))~~ decibels.

712 SECTION 17. Ordinance 12560, Section 75, as amended, and K.C.C. 16.04.630  
713 are hereby amended to read as follows:

714 The International Building Code is supplemented by the following appendix:

715 **Air leakage for all buildings (IBC AZ 109).**

716 ~~((a))~~ A. The requirements of this section shall apply to the design of the exterior  
717 envelope of all buildings in the Sea-Tac Noise Program Area designed for human  
718 occupancy. The requirements of this section are not applicable to the separation of  
719 interior spaces from each other.

720 ~~((b))~~ B. The following limitations shall be sealed, caulked, gasketed, or  
721 weather-stripped to limit or eliminate air leakage:

722 1~~((1))~~. Exterior joints around window and door frames between the window or  
723 door frame and the framing.

724 2~~((2))~~. Openings between walls and foundations.

725 3~~((3))~~. Between the wall sole plate and the rough flooring.

726 4~~((4))~~. Opening at penetrations of utility services through walls, floor, and roofs.

727 5~~((5))~~. Between wall panels at corners.

728 6~~((6))~~. All other openings in the building envelope.

729 ~~((c))~~ C. Through the wall, floor, or roof/ceiling penetrations not specifically  
730 addressed in these sections shall be designed to limit sound transmission and shall have  
731 the same average laboratory sound transmission classification as required for doors.

732 SECTION 18. Ordinance 12560, Section 84, as amended, and K.C.C. 16.04.720  
733 are hereby amended to read as follows:

734 The International Building Code is supplemented by the following appendix:

735 **Exterior walls 30 dB compliance (IBC AZ 118).**

- 736           ~~((a))~~ A. Exterior walls, other than as described in this section, shall have a  
737 laboratory sound transmission class rating of at least STC-35; or
- 738           ~~((b))~~ B. Masonry walls having a weight of at least 40 pounds per square foot  
739 (195 kilograms per square meter) do not require a furred (stud) interior wall. At least one  
740 surface of concrete block walls shall be plastered.
- 741           ~~((c))~~ C. Stud walls shall be at least 4 (~~(")~~) inches (102 millimeters) in nominal  
742 depth and shall be finished on the outside with solid sheathing under an approved exterior  
743 wall finish.
- 744           1. Interior surface of the exterior walls shall be of gypsum board or plaster at  
745 least 1/2 inch (13 millimeters) thick, installed on the studs. The gypsum board or plaster  
746 may be fastened rigidly to the studs if the exterior is brick veneer or stucco. If the  
747 exterior is siding, the interior gypsum board or plaster must be fastened resiliently to the  
748 studs.
- 749           2. Continuous composition board, plywood, or gypsum board sheathing at least  
750 3/4 (~~(")~~) inch (19 millimeters) thick shall cover the exterior side of the wall studs.   3.  
751 Sheathing panels shall be covered on the exterior with overlapping building paper.
- 752           4. Insulation material at least R-11 shall be installed continuously throughout  
753 the cavity space behind the exterior sheathing and between wall studs. Insulation shall be  
754 glass fiber or mineral wool.

755           SECTION 19. Ordinance 12560, Section 85, as amended, and K.C.C. 16.04.730  
756 are hereby amended to read as follows:

757           The International Building Code is supplemented by the following appendix:

758           **Exterior window 30 dB compliance (IBC AZ 119).**

---

759           ~~((a))~~ A. Windows other than as described in this section shall have a laboratory  
760 sound transmission class rating of at least STC-33; or

761           ~~((b))~~ B. Windows shall be double glazed with panes at least 1/8(~~(")~~) inch (3  
762 millimeters) thick. Panes of glass shall be separated by a minimum 1/2 (~~(")~~) inch (13  
763 millimeters) airspace.

764           ~~((c))~~ C. Double-glazed windows shall employ fixed sash or efficiently weather-  
765 stripped, operable sash. The sash shall be rigid and weather-stripped with material that is  
766 compressed airtight when the window is closed so as to conform to an air infiltration test  
767 not to exceed 0.5 cubic foot per minute per foot of crack length in accordance with  
768 ASTM E-283-65-T.T.

769           ~~((d))~~ D. Glass shall be sealed in an airtight manner with a nonhardening sealant  
770 or a soft elastomer gasket or gasket tape.

771           ~~((e))~~ E. The perimeter of window frames shall be sealed airtight to the exterior  
772 wall construction with a sealant conforming to one of the following Federal  
773 specifications: TT-S-0027, TT-S-00230, or TT-S-00153.

774           SECTION 20. Ordinance 12560, Section 86, as amended, and K.C.C. 16.04.740  
775 are hereby amended to read as follows:

776           The International Building Code is supplemented by the following appendix:

777           **Exterior doors 30 dB compliance (IBC AZ 120).**

778           ~~((a))~~ A. Doors other than as described in this section shall have a laboratory  
779 sound transmission class rating of at least STC-33; or

780           ~~((b))~~ B. Double door construction is required for all door openings to the  
781 exterior. Openings fitted with side-hinged doors shall have one solid core of wood or be

an insulated hollow metal door at least 1-3/4 (~~(("))~~) inches (44 millimeters) thick separated by an airspace of at least 3 (~~(("))~~) inches (76 millimeters) from another door, which can be a storm door. Both doors shall be tightly fitted and weather-stripped.

~~((~~(e)~~)))~~ C. The glass of double-glazed sliding doors shall be separated by a minimum 1/2 (~~(("))~~) inch (13 millimeters) airspace. Each sliding frame shall be provided with an efficiently airtight weather-stripping material (~~((as))~~) that conforms to an air infiltration test not to exceed 0.2 cubic (~~((feet))~~) foot per minute per foot of crack length in accordance with ASTM E-283-65-T.

~~((~~(d)~~)))~~ D. Glass (~~((f))~~)over (~~((two))~~) 2 square feet (0.2 square meter) in area(~~((h))~~) of all doors shall be at least 3/16 (~~(("))~~) inch (5 millimeters) thick. Glass of double sliding doors shall not be equal in thickness.

~~((~~(e)~~)))~~ E. The perimeter of door frames shall be sealed airtight to the exterior wall construction (framing) with a sealant conforming to one of the following Federal specifications: TT-S-0227, TT-S-00230<sub>2</sub> or TT-S-00153.

~~((~~(f)~~)))~~ F. Glass in doors shall be sealed in an airtight nonhardening sealant or in a soft elastomer gasket or glazing tape.

SECTION 21. Ordinance 12560, Section 87, as amended, and K.C.C. 16.04.750 are hereby amended to read as follows:

The International Building Code is supplemented by the following appendix:

**Roofs 30 dB compliance (IBC AZ 121).**

~~((~~(a)~~)))~~ A. Combined roof and ceiling construction other than described in this section and AZ 122 shall have a laboratory sound transmission class rating of at least STC-44; or

805           ~~((b))~~ B. With an attic or rafter space at least 6 (~~(("))~~) inches (152 millimeters)  
806    deep, and with a ceiling below, the roof shall consist of 3/4 (~~(("))~~) inch (19 millimeters)  
807    composition board, plywood, or gypsum board sheathing topped by roofing as required.

808           ~~((c))~~ C. Open beam roof construction shall follow the energy insulation  
809    standard method for batt insulation, except use 1 (~~(("))~~) inch or (25 millimeters) plywood  
810    decking with shakes or other suitable roofing material.

811           ~~((d))~~ D. Window or dome skylights shall have a laboratory sound transmission  
812    class rating of at least STC-33.

813           SECTION 22. Ordinance 12560, Section 88, as amended, and K.C.C. 16.04.760  
814    are hereby amended to read as follows:

815           The International Building Code is supplemented by the following appendix:

816           **Ceilings 30 dB compliance (IBC AZ 122).**

817           ~~((a))~~ A. Gypsum board or plaster ceilings at least 5/8 (~~(("))~~) inch (16 millimeters)  
818    thick shall be provided where required by AZ 121(b) above. Ceilings shall be  
819    substantially airtight with a minimum of penetrations.

820           ~~((b))~~ B. Glass fiber or mineral wool insulation of least R-19 shall be provided  
821    above the ceiling between joists.

822           SECTION 23. Ordinance 12560, Section 86, as amended, and K.C.C. 16.04.770  
823    are hereby amended to read as follows:

824           The International Building Code is supplemented with the following appendix:

825           **Floors 30 dB compliance (IBC AZ 123).** The floor of the lowest occupied

826    rooms shall be slab on fill, below grade, or over a fully enclosed basement or crawl



827 space. All door and window openings in the fully enclosed basement shall be tightly  
828 fitted.

829       **EXCEPTION:** Floors over fully enclosed garages or ~~((over))~~ carports shall have  
830 a laboratory sound transmission class rating of at least STC-35. The floor over the garage  
831 or carport shall be insulated to not less than R-19, ~~((but not less than that))~~ or as specified  
832 by the (( International Energy Conservation)) Washington State Energy Code, whichever  
833 is the higher rating, and enclosed with one layer of 5/8 ~~(("))~~ inch (16 millimeters) type  
834 ~~(("))X(("))~~ GWB on the garage or carport side or any equivalent approved garage or  
835 dwelling separation assembly in conformance with International Residential Code  
836 Section R302.6.

837       SECTION 24. Ordinance 12560, Section 90, as amended, and K.C.C. 16.04.780  
838 are hereby amended to read as follows:

839       The International Building Code is supplemented by the following appendix:

840       **Ventilation 30 dB compliance (IBC AZ 124).**

841       ~~((a))~~ A. A ventilation system shall be installed that would provide the minimum  
842 air circulation and fresh air supply requirements for various uses in occupied rooms  
843 without the need to open any windows, doors, or other openings to the exterior. The inlet  
844 and discharge openings shall be fitted with sheet metal transfer ducts of at least 26-gauge  
845 steel, which shall be lined with 1 ~~(("))~~ inch (25 millimeters) thick coated glass fiber or  
846 insulated with R-11 sound-absorbing duct insulation, and shall be at least 5 feet 1,524  
847 millimeters) long with one 90-degree bend.

848       ~~((b))~~ B. Gravity vent openings in attics or crawlspaces shall be as close to  
849 minimum code in number and size, as practical. The openings shall be fitted with

transfer ducts at least 3 feet (914 millimeters) in length containing internal 1 ((<sup>1</sup>)) inch  
(25 millimeters) thick coated fiberglass sound-absorbing duct lining or insulated with R-  
11 sound-absorbing duct insulation. Each duct shall have a lined 90-degree bend in the  
duct such that there is no direct line-of-sight from the exterior through the duct into the  
attic.

~~((c))~~ C. Bathroom, laundry, and similar exhaust ducts connecting the interior  
space to the outdoors, shall contain at least 10-foot (3,048 millimeters) length of internal  
sound-absorbing duct lining. Exhaust ducts less than 10 feet (3,048 millimeters) in  
length shall be fully lined and shall also ~~((b))~~ meet the provisions of AZ 109(c). Each  
duct shall be provided with a lined 90-degree bend in the duct such that there is no direct  
line-of-sight through the duct from the venting cross-section to the room opening cross-  
section. Duct lining shall be coated glass fiber duct liner at least 1 ((<sup>1</sup>))inch (25  
millimeters) thick or insulated with R-11 sound-absorbing duct insulation. In areas that  
produce moisture such as ~~((i.e.))~~ shower rooms(~~(-which produce moisture))~~, duct lining  
shall be made of non-absorbent material. Commercial kitchen exhaust systems and  
product conveying duct systems (Chapter 5 U.M.C.) shall be exempt.

~~((d))~~ D. Domestic range exhaust ducts connecting the interior space to the  
outdoors shall contain a self-closing baffle plate across the exterior termination which  
allows proper ventilation. The duct shall be provided with a 90-degree bend.

SECTION 25. Ordinance 12560, Section 92, as amended, and K.C.C. 16.04.800  
are hereby amended to read as follows:

The International Building Code is supplemented by the following appendix:

**Exterior walls 35 dB compliance (IBC AZ 126).**

873           ~~((a))~~ A. Exterior walls, other than as described in this section shall have a  
874 laboratory sound transmission class rating of at least STC-40; or

875           ~~((b))~~ B. Masonry walls having a weight of at least 75 pounds per square ~~((feet))~~  
876 foot (366 kilograms per square meter) do not require a furred (stud) interior wall. At  
877 least one surface of concrete block walls shall be plastered.

878           ~~((c))~~ C. Stud walls shall be at least 4 ~~(("))~~ inches (101 millimeters) in nominal  
879 depth and shall be finished on the outside with solid sheathing under an approved exterior  
880 wall finish.

881           1. Interior surface of the exterior walls shall be of gypsum board or plaster at  
882 least 5/8 ~~(("))~~ inch (16 millimeters) thick installed on the studs. The gypsum board or  
883 plaster may be fastened rigidly to the studs if the exterior is brick veneer or stucco. If the  
884 exterior is stucco or siding, the interior gypsum board or plaster must be fastened  
885 resiliently to the studs or double thickness must be used.

886           2. Continuous composition board, plywood, or gypsum board sheathing, or any  
887 combination of these materials of unequal thickness, that is at least 1 ~~(("))~~ inch (25  
888 millimeters) thick shall cover the exterior side of the wall studs.

889           3. Sheathing panels shall be butted tightly and covered on the exterior with  
890 overlapping building paper.

891           4. Insulation material at least R-19 or R-19 equivalent shall be installed  
892 continuously throughout the cavity space behind the exterior sheathing and between wall  
893 studs. Insulation shall be glass fiber or mineral wool.

894           SECTION 26. Ordinance 12560, Section 94, as amended, and K.C.C. 16.04.820  
895 are hereby amended to read as follows:

---

896 The International Building Code is supplemented by the following appendix:

897 **Exterior doors 35 dB compliance (IBC AZ 128).**

898 ~~((a))~~ A. Doors other than as described in this section shall have a laboratory  
899 sound transmission class rating of a least STC 33; or

900 ~~((b))~~ B. Double door construction is required for all door openings to the  
901 exterior. The doors shall be side-hinged and shall be solid core wood or insulated hollow  
902 metal door at least 1-3/4 (~~(("))~~) inch (44 millimeters) thick, separated by a vestibule or  
903 enclosed porch at least 3 feet (914 millimeters) in length. Both doors shall be tightly  
904 fitted and weather-stripped.

905 ~~((c))~~ C. The glass or double-glazed sliding doors shall be separated by a  
906 minimum 1/2 (~~(("))~~) inch (13 millimeters) airspace. Each sliding door frame shall be  
907 provided with an efficiently airtight weather-stripping material that conforms to an air  
908 infiltration test not to exceed 0.5 cubic (~~((feet))~~) foot per minute per foot of crack length in  
909 accordance with ASTM E-283-65-T.

910 ~~((d))~~ D. Glass of all doors shall be at least 3/16 (~~(("))~~) inch (5 millimeters) thick.  
911 Glass of double sliding doors shall not be equal in thickness.

912 ~~((e))~~ E. The perimeter of door frames shall be sealed airtight to the exterior wall  
913 construction (framing) with a sealant conforming to one of the following Federal  
914 specifications: TT-S-00227, TT-S-00230, or TT-S-00153.

915 ~~((f))~~ F. Glass in doors shall be sealed in an airtight nonhardening sealant or in a  
916 soft elastomer gasket of glazing tape.

917 SECTION 27. Ordinance 12560, Section 95, as amended, and K.C.C. 16.04.830  
918 are hereby amended to read as follows:

919 The International Building Code is supplemented by the following appendix:

920 **Roofs 35 dB compliance (IBC AZ 129).**

921 ~~((a))~~ A. Combined roof and ceiling construction other than as described in this  
922 section and AZ 130 shall have a laboratory sound transmission class rating of at least  
923 STC-49; or

924 ~~((b))~~ B. With an attic or rafter space at least 6 (~~(("))~~) inches (152 millimeters)  
925 deep, and with a ceiling below, the roof shall consist of composition board, plywood, or  
926 gypsum board sheathing, or any combination of these materials of unequal thickness, that  
927 is at least 1 (~~(("))~~) inch (25 millimeters) thick and topped by roofing as required. ~~((c))~~

928 C. Open beam roof construction shall follow the energy insulation standard method for  
929 batt insulation, except use 1 (~~(("))~~) inch (25 millimeters) plywood decking with concrete or  
930 clay tiles as roofing material.

931 SECTION 28. Ordinance 12560, Section 96, as amended, and K.C.C. 16.04.840  
932 are hereby amended to read as follows:

933 The International Building Code is supplemented by the following appendix:

934 **Ceiling 35 dB compliance (IBC AZ 130).**

935 ~~((a))~~ A. Gypsum board or plaster ceiling at least 5/8 (~~(("))~~) inch (16 millimeters)  
936 thick shall be provided where required by AZ 129, above. Ceiling shall be substantially  
937 airtight with a minimum of penetrations. The ceiling panels shall be mounted on resilient  
938 clips or channels.

939 ~~((b))~~ B. Glass fiber or mineral wool insulation at least R-30 shall be provided  
940 above the ceiling between joists.

941            SECTION 29. Ordinance 12560, Section 97, as amended, and K.C.C. 16.04.850  
942 are hereby amended to read as follows:

943            The International Building Code is supplemented with the following appendix:

944            **Floors 35 dB compliance (IBC AZ 131).** The floor of the lowest occupied  
945 rooms shall be slab on fill or below grade or over a fully enclosed basement or crawl  
946 space. All door and window openings in the fully enclosed basement shall be tightly  
947 fitted.

948            **EXCEPTION:** Floors over fully enclosed garages or ~~((over))~~ carports shall have  
949 a laboratory sound transmission class rating of at least STC-40. The floor over the garage  
950 or carport shall be insulated to not less than R-19, ~~((but not less than that))~~ or as specified  
951 by the ~~((International Energy Conservation)) Washington State Energy Code, whichever~~  
952 is the higher rating, and enclosed with two layers of 5/8 ~~(("))~~ inch (16 millimeters) type  
953 ~~((X))~~ GWB on the garage or carport side or any equivalent approved garage/dwelling  
954 separation assembly in conformance with International Residential Code Section R302.6.

955            SECTION 30. Ordinance 12560, Section 98, as amended, and K.C.C. 16.04.860  
956 are hereby amended to read as follows:

957            The International Code is supplemented by the following appendix:

958            **Ventilation 35 dB compliance (IBC AZ 132).**

959            ~~((a))~~ A. A ventilation system shall be installed that will provide the minimum  
960 air circulation and fresh air supply requirements for various uses in occupied rooms  
961 without the need to open any windows, doors, or other openings to the exterior. The inlet  
962 and discharge openings shall be fitted with sheet metal transfer ducts of at least 26-gauge  
963 steel, which shall be lined with 1 ~~(("))~~ inch (25 millimeters) thick coated glass fiber or

964 insulated with R-11 sound-absorbing duct insulation, and shall be at least 10 feet (3,048  
965 millimeters) long with one 90-degree bend.

966 ~~((b))~~ B. Gravity vent openings in attics shall be as close to minimum code in  
967 number and size, as practical. The openings shall be fitted with transfer ducts at least 6  
968 feet (1,829 millimeters) in length containing internal 1 ~~(("))~~ inch (25 millimeters) thick  
969 coated fiberglass sound-absorbing duct lining or insulated with R-11 sound-absorbing  
970 duct insulation. Each duct shall have a lined 90-degree bend in the duct such that there is  
971 no direct line-of-sight from the exterior through the duct into the attic.

972 ~~((c))~~ C. Bathroom, laundry, and similar exhaust ducts connecting the interior  
973 space to the outdoors, shall contain at least a 10-foot (3,048 millimeters) length of  
974 internal sound-absorbing duct lining or insulated with R-11 sound-absorbing duct  
975 insulation. Exhaust ducts less than 10 feet (3,048 millimeters) in length shall be fully  
976 lined and shall also meet the provisions of AZ 109(c). Each duct shall be provided with a  
977 lined 90-degree bend in the duct such that there is no direct line-of-sight through the duct  
978 from the venting cross-section to the room-opening cross-section. Duct lining shall be  
979 coated glass fiber duct liner at least 1 ~~(("))~~ inch (25 millimeters) thick or R-11 sound-  
980 absorbing duct insulation. In areas such as shower rooms which produce moisture, duct  
981 lining shall be made of non-absorbent material. Commercial kitchen exhaust systems and  
982 product conveying duct systems (Chapter 51) shall be exempt.

983 ~~((d))~~ D. Domestic range exhaust ducts connecting the interior space to the  
984 outdoors shall contain a self-closing baffle plate across the exterior termination which  
985 allows proper ventilation. The duct shall be provided with a 90-degree bend.

986 NEW SECTION. SECTION 31. There is hereby added to K.C.C. chapter 16.04 a

987 new section to read as follows:

988 Chapter 9 Alterations - Level 3 of the International Existing Building Code is

989 supplemented with the following:

990 Section 908 Electric Vehicle Charging Infrastructure.

991 908.1 Electric vehicle charging infrastructure. Electric vehicle charging

992 infrastructure shall be provided in accordance with Section 429 of the International

993 Building Code as required for new construction.

994 SECTION 32. Ordinance 14914, Section 272, as amended, and K.C.C. 16.05.040

995 are hereby amended to read as follows:

996 Table R301.2(1) of the International Residential Code is not adopted and the

997 following is substituted:

998 **Table R301.2(1)**

999 **CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA FOR KING COUNTY**

| Subject to damage from     |                                |                                           |                    |                            |              |               |                                   |                                        |                          |                              |                                     |
|----------------------------|--------------------------------|-------------------------------------------|--------------------|----------------------------|--------------|---------------|-----------------------------------|----------------------------------------|--------------------------|------------------------------|-------------------------------------|
| Grou<br>nd<br>snow<br>load | Wi<br>nd<br>spe<br>ed<br>(mph) | Seis<br>mic<br>desig<br>n<br>categ<br>ory | Weat<br>herin<br>g | Frost<br>line<br>dept<br>h | Term<br>ite  | Dec<br>ay     | Wint<br>er<br>desig<br>n<br>temp. | Ice-<br>shie<br>ld<br>req<br>uire<br>d | Floo<br>d<br>haza<br>rds | Air<br>freezi<br>ng<br>index | Mea<br>n<br>annu<br>al<br>temp<br>. |
| Varie<br>sl                | 110                            | D1<br>or                                  | Mod<br>erate       | 12"<br><                   | Slight<br>to | Slig<br>ht to | 25                                | No                                     | Vari<br>es <sup>4</sup>  | 100<br>to                    | 50                                  |



|  |  |                 |  |                             |      |      |  |  |  |     |  |
|--|--|-----------------|--|-----------------------------|------|------|--|--|--|-----|--|
|  |  | D2 <sup>2</sup> |  | 1,000 ft elev. <sup>3</sup> | Mod. | Mod. |  |  |  | 250 |  |
|--|--|-----------------|--|-----------------------------|------|------|--|--|--|-----|--|

1000 Footnotes:

1001 1. Snow loads shall be determined in accordance with King County public rules.

1002 The minimum roof design snow load shall be 25 pounds per square ((feet)) foot (122  
 1003 kilograms per square meter).

1004 2. Seismic design category shall be D1 for areas of unincorporated King County  
 1005 to the east of the Snoqualmie River as it traverses from the King County-Snohomish  
 1006 County line to the city limits of Snoqualmie, east of the city of Snoqualmie, east of the  
 1007 Snoqualmie Parkway and the Echo Lake-Snoqualmie Cut-off SE as they run from the  
 1008 city limits of the city of Snoqualmie to State Route 18 and to the south or east of State  
 1009 Route 18. All other portions of unincorporated King County shall be seismic design  
 1010 category D2.

1011 3. The frost line depth shall be considered to be 12 inches (305 millimeters) for  
 1012 sites up to an elevation of 1,000 feet (304,800 millimeters) above sea level, 18 inches  
 1013 (457 millimeters) for sites more than 1,000 feet (304,800 millimeters) and up to an  
 1014 elevation of 2,000 feet (609,600 millimeters) above sea level or 24 inches (610  
 1015 millimeters) for sites more than 2,000 feet (609,600 millimeters) above sea level. Frost  
 1016 depth may be otherwise determined by specific site analysis, but shall not be less than 12  
 1017 inches (305 millimeters).

4. Flood hazard within King County varies. See the flood hazard areas code provisions of K.C.C. chapter 21A.24.

SECTION 33. Ordinance 15802, Section 78, as amended, and K.C.C. 16.05.065 are hereby amended to read as follows:

Section R310.2.4 of the International Residential Code is not adopted and the following is substituted:

**Emergency escape ~~((windows))~~ and rescue openings under decks ~~((and))~~, porches, and cantilevers (IRC R310.2.4).** Emergency escape ~~((windows are allowed to be))~~ and rescue openings installed under decks, porches, ~~((roof overhangs, awnings or similar projections if the location allows the emergency escape window to be))~~ and cantilevers shall be fully ~~((opened))~~ openable and ~~((provides a path))~~ provided with an unobstructed pathway of not less than 36 inches (914 ~~((mm))~~ millimeters) in height, ~~((and not less than))~~ 36 inches (914 ~~((mm))~~ millimeters) in width, and no greater than ~~((with a maximum unobstructed travel length directly to a yard or court))~~ 60 inches (1,524 millimeters in length) ~~((based on 3:1, length to height ratio or as approved by the building official))~~ that opens to a yard or court. ~~((This distance))~~ The pathway shall be measured from the ~~((edge))~~ exterior face of the ~~((window))~~ glazed opening, or if ~~((served by))~~ the glazed opening is in a window well ~~((from the edge of that))~~, at the window well wall furthest from the exterior face of the glazed opening.

**EXCEPTION:** When the vertical height is 6 feet 8 inches (2,032 ~~((mm))~~ millimeters) or more, the travel distance or length is unlimited.

NEW SECTION. SECTION 34. There is hereby added to K.C.C. chapter 16.05 a new section to read as follows:

1041 Table R311.2 of the International Residential Code is not adopted and the  
1042 following is substituted:

1043 **Egress Door (IRC 311.2).** Not less than one egress door shall be provided for  
1044 each dwelling unit, including from all habitable rooms and spaces within or above  
1045 garages. The egress door shall be side-hinged and shall provide a clear width of not less  
1046 than 32 inches (813 millimeters) where measured between the face of the door and the  
1047 stop, with the door open 90 degrees. The clear height of the door opening shall be not  
1048 less than 78 inches (1,981 millimeters) in height measured from the top of the threshold  
1049 to the bottom of the stop. Other doors shall not be required to comply with these  
1050 minimum dimensions. Egress doors shall be readily openable from inside the dwelling  
1051 without the use of a key or special knowledge or effort.

1052 NEW SECTION. SECTION 35. There is hereby added to K.C.C. chapter 16.07  
1053 a new section to read as follows:

1054 Section C101 of the Washington State Energy Code – Commercial Provisions is  
1055 supplemented with the following:

1056 **Vesting of initial tenant improvements (WSEC C101.7).** The initial tenant  
1057 improvements of spaces within a building are permitted to comply with the codes  
1058 applicable to the base building if permit applications are submitted within 18 months of  
1059 the final inspection approval date for the building.

1060 SECTION 36. Ordinance 19485, Section 72, and K.C.C. 16.07.040 are hereby  
1061 amended to read as follows:

1062 The definitions in this section apply to this chapter and supplement the definitions  
1063 contained in the ((~~IECC~~)) WSEC as adopted, amended, and supplemented by this title.

Where definitions in this section differ from the definitions in the International codes as amended and supplemented by K.C.C. chapter 16.03, the definitions in this section shall control.

A. AAMA: the American Architectural Manufacturers Association.

B. Affordable housing: buildings that:

1. Are owned by a public housing authority for the purpose of providing housing ~~((the))~~ that restricts at least 51 percent of the units to be occupied by and made affordable to households with incomes no more than 80 percent of area median income;

2. Are owned by a government agency or nonprofit organization and operated as a shelter, including temporary and emergency shelter facilities providing day and warming centers that do not provide overnight accommodation, for people receiving support services from county-recognized assistance programs for homelessness; or

3. Are subject to a regulatory agreement, covenant, or other legal instrument recorded on the property title for a minimum of 40 years that:

a. Restricts at least 51 percent of the units to be occupied by and made affordable to households with incomes no more than 80 percent of area median income; or

b. Restricts initial and subsequent sales of at least 51 percent of the residential units to households with incomes no more than 80 percent of area median income.

C. AFUE: annual fuel utilization efficiency.

D. ASHRAE: the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

~~((D))~~ E. ASTM: the American Society for Testing and Materials.

1087           ~~((E.))~~ ~~((Automatic control device: a device capable of automatically turning~~  
1088 ~~electrical loads off and on without manual intervention))~~ F. Best efficiency point (BEP):  
1089 The pump hydraulic power operating point, consisting of both flow and head conditions,  
1090 that results in the maximum efficiency.

1091           ~~((F.))~~ G. Btu: British thermal units.

1092           ~~((G.))~~ ~~((Conditioned space: an area, room or space enclosed within the building~~  
1093 ~~thermal envelope and that is directly or indirectly heated or cooled. Spaces are indirectly~~  
1094 ~~heated or cooled where they communicate through openings with conditioned spaces,~~  
1095 ~~where they are separated from conditioned spaces by uninsulated walls, floors or ceilings,~~  
1096 ~~or where they contain uninsulated ducts, piping or other sources of heating or cooling.~~  
1097 ~~Elevator shafts, stair enclosures, enclosed corridors connecting conditioned spaces and~~  
1098 ~~enclosed spaces through which conditioned air is transferred at a rate exceeding three air~~  
1099 ~~changes per hour are considered conditioned spaces for the purposes of the building~~  
1100 ~~thermal envelope requirements.~~

1101           ~~((H. Continuous insulation: insulating material that is continuous across all~~  
1102 ~~structural members without metal thermal bridges other than fasteners that have a total~~  
1103 ~~cross-sectional area not more than 0.04 percent (0.12 percent where all metal thermal~~  
1104 ~~bridges are stainless steel) of the envelope surface through which they penetrate, and~~  
1105 ~~service openings. It is installed on the interior or exterior or is integral to any opaque~~  
1106 ~~surface of the building envelope.~~

1107           ~~((I. Controlled receptacle: an electrical receptacle that is controlled by an~~  
1108 ~~automatic control device.))~~ H. Btu/h: British thermal units per hour.

1109           I. Clean water pump: A device designed for use in pumping water with a

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1110 maximum nonabsorbent free solid content of 0.016 pounds per cubic foot (0.256  
1111 kilograms per cubic meter) and with a maximum dissolved solid content of 3.1 pounds  
1112 per cubic foot (49.66 kilograms per cubic meter), provided that the total gas content of  
1113 the water does not exceed the saturation volume, and disregarding any additives  
1114 necessary to prevent the water from freezing at a minimum of 14 ° Fahrenheit (-10 °  
1115 Celsius).

1116 J. CSA: the ((CSA)) Canadian Standards Association group.

1117 K. ~~((DOAS: dedicated outdoor air system.~~

1118 ~~L.))~~ EER: energy efficiency ratio.

1119 L. Fossil fuel: a substance used to generate energy as defined in K.C.C.

1120 21A.06.532C.

1121 M. High-end trim: a lighting control setting which limits the maximum power to  
1122 individual luminaires or groups of luminaires in a space.

1123 N. HPWH: heat pump water heater.

1124 ~~((N.))~~ O. HVAC: heating, ventilation, and air conditioning.

1125 ~~((O.))~~ P. IEER: integrated energy efficiency ratio.

1126 Q. IPLV: integrated part-load value.

1127 R. LLLC: luminaire-level lighting control~~((s))~~.

1128 ~~((P))~~ S. LPD: lighting power density.

1129 ~~((Q. Mass transfer deck slab: a concrete slab designed to transfer structural load~~  
1130 ~~from the building perimeter wall or column line above, laterally to an offset wall or~~  
1131 ~~column line below, and which has conditioned or semi-heated space on the inside of the~~  
1132 ~~upper wall and exterior or unconditioned space on the outside of the upper wall, such as~~

1133 ~~the transition from an above-grade structure to a below-grade structure or the transition~~  
1134 ~~from a tower to a podium. The area of the slab edge shall be defined as the thickness of~~  
1135 ~~the slab multiplied by the length of the edge condition. A cantilevered concrete balcony~~  
1136 ~~does not constitute a mass transfer deck slab.~~

1137 ~~R. Multi-pass: a heat pump water heater control strategy requiring multiple~~  
1138 ~~passes of water through the heat pump to reach the final target storage water temperature.~~

1139 ~~S.))~~ T. NAECA: the National Appliance Energy Conservation Act of 1987.

1140 ~~((F.))~~ U. NFRC: the National Fenestration Rating Council, Inc.

1141 ~~((U.))~~ V. Occupied-standby mode: mode of operation when an HVAC zone is  
1142 scheduled to be occupied and an occupant sensor indicates no occupants are within the  
1143 zone.

1144 W. REC: renewable energy certificate.

1145 X. Renewable energy investment fund (REIF): a fund established by the local  
1146 government or other entity to accept payment from building owners to construct or  
1147 acquire qualifying renewable energy (along with the associated RECs) on their behalf.

1148 Y. SEER: seasonal energy efficiency ratio.

1149 Z. Semi-heated space: an enclosed space within a building, including adjacent  
1150 connected spaces separated by an uninsulated component such as basements, utility  
1151 rooms, garages, or corridors, which:

1152 1. Is heated but not cooled, and has an installed heating system output capacity  
1153 greater than or equal to 3.4 Btu/h per square foot (38.612 kilojoule/h per square meter)  
1154 but not greater than 8 Btu/h per square foot (90.852 kilojoule/h per square meter).

1155 Heating is permitted to be provided by heat pumps complying with the exception to  
1156 WSEC Section C402.1.1.2; and

1157 2. Is not a walk-in cooler, walk-in freezer, refrigerated warehouse cooler, or  
1158 refrigerated warehouse freezer space.

1159 AA. Single-pass heat pump water heater: a heat pump water heater control  
1160 strategy using variable flow or variable capacity to deliver water from the heat pump at  
1161 the final target storage water temperature in a single pass through the heat exchanger with  
1162 variable incoming water temperatures.

1163 ~~((V. Solar zone: a clear area or areas reserved solely for current or future~~  
1164 ~~installation of photovoltaic or solar hot water systems.~~

1165 ~~W. Temperature maintenance: the system used to maintain the temperature of~~  
1166 ~~the building domestic hot water delivery system, typically by circulation and reheating or~~  
1167 ~~by a heat trace system.))~~

1168 ~~((X.))~~ BB. TSPR: total system performance ratio.

1169 ~~((Y.))~~ CC. VAV: variable air volume.

1170 DD. Wall, metal building: a wall whose structure consists of metal spanning  
1171 members supported by steel structural members and does not include spandrel glass or  
1172 metal panels in curtain wall systems.

1173 EE. Wall, steel-framed: a wall with a cavity, insulated or otherwise, whose  
1174 exterior surfaces are separated by steel framing members or typical steel stud walls and  
1175 curtain wall systems.

1176 FF. Wall, wood-framed and other: all other wall types, including wood stud  
1177 walls.



1178           NEW SECTION. SECTION 37. There is hereby added to K.C.C. chapter 16.07  
1179 a new section to read as follows:

1180           Section C402.1.3 of the Washington State Energy Code is not adopted and is  
1181 substituted with the following:

1182           **Insulation component R-value based method (WSEC C402.1.3).** Building  
1183 thermal envelope opaque assemblies shall comply with the requirements of WSEC  
1184 C402.2 based on the climate zone specified in Chapter 3. For opaque portions of the  
1185 building thermal envelope intended to comply on an insulation component R-value basis,  
1186 the R-values for cavity insulation and continuous insulation shall not be less than that  
1187 specified in WSEC Table C402.1.3. Where cavity insulation is installed in multiple  
1188 layers, the cavity insulation R-values shall be summed to determine compliance with the  
1189 cavity insulation R-value requirements.

1190           Where continuous insulation is installed in multiple layers, the continuous  
1191 insulation R-values shall be summed to determine compliance with the continuous  
1192 insulation R-value requirements. Cavity insulation R-values shall not be used to  
1193 determine compliance with the continuous insulation R-value requirements in WSEC  
1194 Table C402.1.3. Commercial buildings or portions of commercial buildings enclosing  
1195 Group R occupancies shall use the R-values from the "Group R" column of WSEC Table  
1196 C402.1.3. Commercial buildings or portions of commercial buildings enclosing  
1197 occupancies other than Group R shall use the R-values from the "All other" column of  
1198 WSEC Table C402.1.3.

1199           **EXCEPTION:** For stair and elevator shafts that do not comply with WSEC  
1200 C402.1.2.1 and that are located within enclosed garages or other enclosed non-

Table C402.1.3

**Opaque Thermal Envelope Insulation Component**

**Minimum Requirements, R-value Method<sup>a, j</sup>**

|                                           |                                                                                    |                                                                                    |
|-------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Attic and other                           | R-49                                                                               | R-49                                                                               |
| <b>Walls, Above Grade<sup>i</sup></b>     |                                                                                    |                                                                                    |
| Mass <sup>h</sup>                         | Exterior: R-16 ci<br>Interior: R-13+R-6 ci wood stud, or R-13 + R-10 ci metal stud | Exterior: R-16 ci<br>Interior: R-13+R-6 ci wood stud, or R-13 + R-10 ci metal stud |
| Mass transfer deck slab edge <sup>g</sup> |                                                                                    |                                                                                    |
| Metal buildings                           | R-13 + R-14ci                                                                      | R-13 + R-14ci                                                                      |
| Steel framed                              | R-13 + R-10ci                                                                      | R-19 + R-8.5ci                                                                     |
| Wood framed and other                     | R-13 + R-7.5ci std or R-20 + R-3.8ci std                                           | R-13 + R-7.5ci std or R-20 + R-3.8ci std or R-25 std                               |
| <b>Walls, Below Grade</b>                 |                                                                                    |                                                                                    |
| Below-grade wall <sup>d, h</sup>          | Exterior: R-10 ci<br>Interior: R-19 wood stud, or R-13 + R-6 metal stud            | Exterior: R-10 ci<br>Interior: R-19 wood stud, or R-13 + R-6 metal stud            |
| <b>Floors</b>                             |                                                                                    |                                                                                    |
| Mass <sup>f</sup>                         | R-30ci                                                                             | R-30ci                                                                             |

|                             |                                    |                                    |
|-----------------------------|------------------------------------|------------------------------------|
| Joist/framing               | R-30e                              | R-30e                              |
| <b>Slab-on-Grade Floors</b> |                                    |                                    |
| Unheated slabs              | R-10 for 24" below                 | R-10 for 24" below                 |
| Heated slabs                | R-10 perimeter & under entire slab | R-10 perimeter & under entire slab |

1215 For SI: 1 inch = 25.4 mm. ci = Continuous insulation. NR = No requirement.

1216 LS = Liner system—A continuous membrane installed below the purlins and  
 1217 uninterrupted by framing members. Uncompressed, unfaced insulation rests on top of the  
 1218 membrane between the purlins.

1219 Footnotes:

1220 a. Assembly descriptions can be found in chapter 2 and Appendix A.

1221 b. Where using R-value compliance method, a thermal spacer block with  
 1222 minimum thickness of 1/2-inch (13 millimeters) and minimum R-value of R-3.5 shall be  
 1223 provided, otherwise use the U-factor compliance method in WSEC Table C402.1.4.

1224 c. Reserved.

1225 d. Where heated slabs are below grade, they shall comply with the insulation  
 1226 requirements for heated slabs.

1227 e. Reserved.

1228 f. "Mass floors" shall include floors weighing not less than:

1229 1. 35 pounds per square foot (171 kilograms per square meter) of floor surface  
 1230 area; or

1231 2. 25 pounds per square foot (122 kilograms per square meter) of floor surface  
1232 area where the material weight is not more than 120 pounds per cubic foot (586  
1233 kilograms per square meter).

1234 g. Component performance in accordance with WSEC C402.1.5 shall be required  
1235 for buildings with a mass transfer deck slab.

1236 h. Peripheral edges of intermediate concrete floors are included in the above-  
1237 grade mass wall category and therefore must be insulated as above-grade mass walls  
1238 unless they meet the definition of Mass Transfer Deck Slab Edge. The area of the  
1239 peripheral edges of concrete floors shall be defined as the thickness of the slab multiplied  
1240 by the perimeter length of the edge condition. See WSEC Table A103.3.7.2 for typical  
1241 default U-factors for above-grade slab edges and foot-note c for typical conditions of  
1242 above-grade slab edges.

1243 i. Where the total area of through-wall mechanical equipment is greater than 1  
1244 percent of the opaque above-grade wall area, use of the R-value method is not permitted.  
1245 See WSEC C402.1.4.3.

1246 j. For roof, wall, or floor assemblies where the proposed assembly would not be  
1247 continuous insulation, alternate nominal R-value compliance options for assemblies with  
1248 isolated metal fasteners that penetrate otherwise continuous insulation are as shown in  
1249 columns B and C of WSEC Table C402.1.3(i):

1250 **Table C402.1.3(i)**  
 1251 **Continuous Insulation Equivalents**

| Column A | Column B | Column C |
|----------|----------|----------|
|----------|----------|----------|

| <b>Assemblies with continuous insulation (see definition)</b> | <b>Alternate option for assemblies with metal penetrations, greater than 0.04% but less than 0.08%</b> | <b>Alternate option for assemblies with metal penetrations, greater than or equal to 0.08% but less than 0.12%</b> |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| R-9.5ci                                                       | R-11.9ci                                                                                               | R-13ci                                                                                                             |
| R-11.4ci                                                      | R-14.3ci                                                                                               | R-15.7ci                                                                                                           |
| R-13.3ci                                                      | R-16.6ci                                                                                               | R-18.3ci                                                                                                           |
| R-15.2ci                                                      | R-19ci                                                                                                 | R-21ci                                                                                                             |
| R-30ci                                                        | R-38ci                                                                                                 | R-42ci                                                                                                             |
| R-38ci                                                        | R-48ci                                                                                                 | R-53ci                                                                                                             |
| R-13 + R-7.5ci                                                | R-13 + R-9.4ci                                                                                         | R-13 + R-10.3ci                                                                                                    |
| R-13 + R-10ci                                                 | R-13 + R-12.5ci                                                                                        | R-13 + R-13.8ci                                                                                                    |
| R-13 + R-12.5ci                                               | R-13 + R-15.6ci                                                                                        | R-13 + R-17.2ci                                                                                                    |
| R-13 + R-13ci                                                 | R-13 + R-16.3ci                                                                                        | R-13 + R-17.9ci                                                                                                    |
| R-19 + R-8.5ci                                                | R-19 + R-10.6ci                                                                                        | R-19 + R-11.7ci                                                                                                    |
| R-19 + R-14ci                                                 | R-19 + R-17.5ci                                                                                        | R-19 + R-19.2ci                                                                                                    |
| R-19 + R-16ci                                                 | R-19 + R-20ci                                                                                          | R-19 + R-22ci                                                                                                      |
| R-20 + R-3.8ci                                                | R-20 + R-4.8ci                                                                                         | R-20 + R-5.3ci                                                                                                     |
| R-21 + R-5ci                                                  | R-21 + R-6.3ci                                                                                         | R-21 + R-6.9ci                                                                                                     |

1252 Notes for Table C402.1.3(i):

1253 1. These alternate nominal R-value compliance options are allowed for projects  
 1254 complying with all of the following:

1255           1.a The ratio of the cross-sectional area, as measured in the plane of the surface,  
1256 of metal penetrations of otherwise continuous insulation to the opaque surface area of the  
1257 assembly is greater than 0.0004 (0.04 percent), but less than 0.0008 (0.08) percent for use  
1258 of Column B equivalents, and greater than or equal to 0.008 (0.08) percent, but less than  
1259 0.0012 (0.12) percent, for use of Column C equivalents.

1260           1.b. Where all metal penetrations are stainless steel, Column B is permitted to  
1261 be used for penetrations greater than 0.12 percent, but less than 0.24 percent of opaque  
1262 surface area, and Column C is permitted to be used for penetrations greater than or equal  
1263 to 0.24 percent, but less than 0.48 percent of opaque surface area.

1264           2. The metal penetrations of otherwise continuous insulation are isolated or  
1265 discontinuous (e.g., brick ties or other discontinuous metal attachments, offset brackets  
1266 supporting shelf angles that allow insulation to go between the shelf angle and the  
1267 primary portions of the wall structure). No continuous metal elements (e.g., metal studs,  
1268 z-girts, z-channels, shelf angles) penetrate the otherwise continuous portion of the  
1269 insulation.

1270           3. Building permit drawings shall contain details showing the locations and  
1271 dimensions of all the metal penetrations (e.g., brick ties or other discontinuous metal  
1272 attachments, offset brackets, etc.) of otherwise continuous insulation. In addition,  
1273 calculations shall be provided showing the ratio of the cross- sectional area of metal  
1274 penetrations of otherwise continuous insulation to the overall opaque wall area.

1275           For other cases where the proposed assembly is not continuous insulation, see  
1276 WSEC C402.1.4 for determination of U-factors for assemblies that include metal other  
1277 than screws and nails.

1278 SECTION 38. Ordinance 19485, Section 74, and K.C.C. 16.07.060 are hereby  
 1279 amended to read as follows:

1280 Table C402.1.4 of the ~~((International Energy Conservation))~~ Washington State  
 1281 Energy Code is not adopted and the following is substituted:

1282 **TABLE C402.1.4**  
 1283 **OPAQUE THERMAL ENVELOPE ASSEMBLY MAXIMUM REQUIREMENTS,**  
 1284 **U-FACTOR METHOD ~~((a,f))~~<sup>a,f</sup>**

|                                                            | CLIMATE ZONE 5 AND MARINE 4    |                                |
|------------------------------------------------------------|--------------------------------|--------------------------------|
|                                                            | All Other                      | Group R                        |
| <b>Roofs</b>                                               |                                |                                |
| Insulation entirely above deck                             | U-0.027                        | U-0.027                        |
| Metal buildings                                            | U-0.027                        | U-0.027                        |
| Attic and other                                            | U-0.021                        | U-0.021                        |
| Joist or single rafter                                     | U-0.027                        | U-0.027                        |
| <b>Walls, Above Grade<sup>k</sup></b>                      |                                |                                |
| Mass <del>((g,b))</del> <sup>g</sup>                       | U-0.057                        | U-0.057                        |
| Mass transfer deck slab edge <del>((d))</del> <sup>i</sup> | U-0.20                         | U-0.20                         |
| Slab penetrating thermal envelope wall <del>((h))</del>    | U-0.10                         | U-0.10                         |
| Metal building <del>((b))</del>                            | <del>((U-0.052))</del> U-0.050 | <del>((U-0.052))</del> U-0.050 |
| Steel framed <del>((b))</del>                              | U-0.055                        | U-0.055                        |
| Wood framed and other <del>((b))</del>                     | U-0.051                        | U-0.051                        |
| <b>Walls, Below Grade</b>                                  |                                |                                |



|                                                                              |                                           |                                           |
|------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|
| Below-grade wall((g)) <sup>g</sup>                                           | U-0.070                                   | U-0.070                                   |
| <b>Floors</b>                                                                |                                           |                                           |
| Mass((e)) <sup>e</sup>                                                       | U-0.031                                   | U-0.031                                   |
| Joist/framing                                                                | U-0.029 steel joist<br>U-0.025 wood joist | U-0.029 steel joist<br>U-0.025 wood joist |
| Concrete column or wall penetrating thermal envelope floor((i)) <sup>i</sup> | U-0.55                                    | U-0.55                                    |
| Concrete slab floor directly above an electrical utility vault               | N.R.                                      | N.R.                                      |
| <b>Slab-on-Grade Floors</b>                                                  |                                           |                                           |
| Unheated slabs                                                               | F-0.54                                    | F-0.54                                    |
| Heated slabs((e)) <sup>e</sup>                                               | F-0.55                                    | F-0.55                                    |
| <b>Opaque Doors</b>                                                          |                                           |                                           |
| ((Swinging door))                                                            | ((U-0.37))                                | ((U-0.37))                                |
| Nonswinging door                                                             | ((U-0.34)) <u>U-0.31</u>                  | ((U-0.34)) <u>U-0.31</u>                  |
| <u>Swinging door</u>                                                         | <u>U-0.37</u>                             | <u>U-0.37</u>                             |
| Garage door <14% glazing                                                     | U-0.31                                    | U-0.31                                    |
| <u>Garage door ≥14% glazing and &lt;50% glazing<sup>i</sup></u>              | <u>U-0.34</u>                             | <u>U-0.34</u>                             |

1285 Footnotes:

1286 a. Use of opaque assembly U-factors, C-factors, and F-factors from ((IECC))

1287 WSEC Appendix A is required unless otherwise allowed by ((IECC)) WSEC C402.1.4.

b. ~~((Through-wall mechanical equipment subject to IECC C402.1.4.2 shall be calculated at the U-factor defined in IECC C402.1.4.2. The area-weighted U-value of the wall, including through-wall mechanical equipment, shall not exceed the value in the table.))~~ Reserved.

c. Heated slab F-factors shall be determined specifically for heated slabs. Unheated slab factors shall not be used.

d. ~~((A mass transfer deck, due to its configuration, is not insulated. The table value (U 0.20) shall be used as the baseline value for component performance or total building performance path calculations. For the proposed value, the appropriate value from the top line of IECC Table A104.3.7.2 shall be used.))~~ Reserved.

e. "Mass floors" shall include floors weighing not less than:  
((1)). 35 pounds per square foot (171 kilograms per square meter) of floor surface area; or

((2)). 25 pounds per square foot (122 kilograms per square meter) of floor surface area where the material weight is not more than 120 pounds per cubic foot (586 kilograms per square meter).

f. Opaque assembly U-factors based on designs tested in accordance with ASTM C1363 ~~((is allowed))~~ shall be permitted. The R-value of continuous insulation ~~((is allowed))~~ shall be permitted to be added or subtracted from the original test design.

g. Peripheral edges of intermediate concrete floors are included in the above grade mass wall category and therefore must be insulated as above grade mass walls unless they meet the definition of a ~~((m))~~Mass ~~((t))~~Transfer ~~((d))~~Deck ~~((s))~~Slab ~~((edge))~~.  
The area of the peripheral edges of concrete floors shall be defined as the thickness of the

slab multiplied by the perimeter length of the edge condition. See ((~~IECC~~)) WSEC Table A103.3.7.2 for typical default U-factors for above-grade slab edges and footnote c for typical conditions of above grade slab edges.

h. (~~Intermediate concrete floor slabs penetrating the building thermal envelope shall comply with IECC C402.2.9. The area of such penetrating concrete floor slabs shall be defined as the thickness of the slab multiplied by the length of the penetration. The "exposed concrete" row in IECC Table A103.3.7.2 shall be used for typical default U-factors for the penetrating concrete slab.~~) Swinging door U-factors shall be determined in accordance with NFRC-100.

i. (~~Value applies to concrete columns and concrete walls that interrupt mass floor insulation, but not to perimeter walls or columns separating interior conditioned space from exterior space.~~) Garage doors having a single row of fenestration shall have an assembly U-factor less than or equal to 0.44, provided that the fenestration area is not less than 14 percent and not more than 50 percent of the total door area.

j. Component performance in accordance with WSEC C402.1.5 shall be required for buildings with a mass transfer deck slab. A mass transfer deck, due to its configuration, is not insulation. The table value (U-0.20) shall be used as the baseline value for component performance or total building performance path calculations. For the proposed value, the appropriate value from WSEC Table A103.3.7.2 shall be used.

k. Through-wall mechanical equipment subject to WSEC C402.1.4.3 shall be calculated at the U-factor defined in WSEC C402.1.4.3. The area-weighted U-factor of the wall, including through-wall mechanical equipment, shall not exceed the value in the table.

1334           1. Value applies to concrete columns and concrete walls that interrupt mass floor  
1335           insulation, but not to perimeter walls or columns separating interior conditioned space  
1336           from exterior space.

1337           NEW SECTION. SECTION 39. There is hereby added to K.C.C. chapter 16.07  
1338 a new section to read as follows:

1339           **Component performance alternative (WSEC C402.1.5).** Building envelope  
1340 values and fenestration areas determined in accordance with Equation 4-2 shall be  
1341 permitted in lieu of compliance with the U-factors and F-factors in WSEC Table  
1342 C402.1.4 and WSEC C402.4 and the maximum allowable fenestration areas in WSEC  
1343 C402.4.1.

1344           For buildings with more than one space conditioning category, component  
1345 performance compliance shall be demonstrated separately for each space conditioning  
1346 category. Interior partition ceilings, walls, fenestration, and floors that separate space  
1347 conditioning areas shall be applied to the component performance calculations for the  
1348 space conditioning category with the highest level of space conditioning.

1349           High-performance vertical fenestration types required by Column B of WSEC  
1350 Table C402.4 shall be calculated separately from other vertical fenestration types in  
1351 Equation 4-2. The maximum U-factors permitted in Column B of WSEC Table C402.4  
1352 shall not be exceeded for the required Column B vertical fenestration area.

1353           **EXCEPTION:** The maximum U-factor permitted for operable vertical  
1354 fenestration in Column B of WSEC Table C402.4 may be exceeded when the Proposed  
1355 Column B vertical fenestration area weighted UA is less than or equal to the Allowable

1356 Column B vertical fenestration area weighted UA for all types of Column B vertical  
1357 fenestration.

1358 **Equation 4-2:**

1359 Proposed Total UA  $\leq$  Allowable Total UA

1360 Where:

1361 Proposed Total UA = UA-glaz-prop + UA sky-prop + UA-opaque-prop + FL-  
1362 slab-prop.

1363 Allowable Total UA = UA-glaz-allow + UA-glaz-excess + UA sky-allow + UA-  
1364 sky-excess + UA-opaque-allow + FL-slab-allow UA-glaz-prop = Sum of (proposed U-  
1365 value  $\times$  proposed area) for each distinct vertical fenestration type, up to code maximum  
1366 area.

1367 UA-sky-prop = Sum of (proposed U-value  $\times$  proposed area) for each distinct  
1368 skylight type, up to the code maximum area UA-opaque-prop = Sum of (proposed U-  
1369 value  $\times$  proposed area) for each distinct opaque thermal envelope type.

1370 FL-slab-prop = Sum of (proposed F-value  $\times$  proposed length) for each distinct  
1371 slab on grade perimeter assembly.

1372 UA-glaz-allow = Sum of (code maximum vertical fenestration U-value from  
1373 WSEC Table C402.4, or WSEC C402.4.1.1.2 if applicable,  $\times$  proposed area) for each  
1374 distinct vertical fenestration type, not to exceed the code maximum area<sup>1</sup>.

1375 UA-glaz-excess = U-value for the proposed wall type from WSEC Table C402.4<sup>2</sup>  
1376  $\times$  vertical fenestration area in excess of the code maximum area.

1377           UA-sky-allow = Sum of (code maximum skylight U-value from WSEC Table  
1378 C402.4 × proposed area) for each distinct skylight type proposed, not to exceed the code  
1379 maximum area.

1380           UA-sky-excess = U-value for the proposed roof type from WSEC Table C402.4<sup>3</sup>  
1381 × skylight area in excess of the code maximum area.

1382           UA-opaque-allow = Code maximum opaque envelope U-value from WSEC Table  
1383 C402.1.4 for each opaque door, wall, roof, and floor assembly × proposed area.

1384 FL-slab-allow = Code maximum F-value for each slab-on-grade perimeter assembly ×  
1385 proposed length.

1386           Footnotes:

1387           1. Where multiple vertical fenestration types are proposed and the code  
1388 maximum area is exceeded, the U-value shall be the average WSEC Table C402.1.4 U-  
1389 value weighted by the proposed vertical fenestration area of each type.

1390           2. Where multiple wall types are proposed the U-value shall be the average  
1391 WSEC Table C402.1.4 U-value weighted by the proposed above grade wall area of each  
1392 type.

1393           3. Where multiple roof types are proposed the U-value shall be the average  
1394 WSEC Table C402.1.4 U-value weighted by the proposed roof area of each type.

1395           SECTION 40. Ordinance 19485, Section 78, and K.C.C. 16.07.100 are hereby  
1396 amended to read as follows:

1397           Section C402.4 of the ((~~International Energy Conservation~~)) Washington State  
1398 Energy Code is not adopted and the following is substituted:

**EXCEPTIONS:**

1. Buildings or additions with less than 5,000 square feet (464.5 square meters) of conditioned floor area are not required to provide the Column B high performance fenestration.

2. For prescriptive envelope compliance, single-pane glazing is allowed for security purposes and for revolving doors, not to exceed ~~((one))~~ 1 percent of the gross exterior wall area. Where ~~((IECC))~~ WSEC C402.1.5, component performance alternative, is used, the single-pane glazing shall be included in the percentage of the total glazing area, U-factor, and SHGC requirements.

|                                                                                                                                                                                                                       |        |                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <del>((CLIMATE ZONEs 5 AND MARINE 4))</del>                                                                                                                                                                           |        |                                                                                                                                                                                                                   |
| <b><u>Column A</u></b><br><br><b><u>Standard performance portion, applicable to no more than 80 percent of vertical fenestration area, or 65 percent for compliance with Exception 1 to WSEC Section C402.4.1</u></b> |        | <b><u>Column B</u></b><br><br><b><u>High performance portion, applicable to no less than 20 percent of vertical fenestration area, or 35 percent for compliance with Exception 1 to WSEC Section C402.4.1</u></b> |
| <b>U-factor for Class AW windows rated in accordance with AAMA/CSA101/I.S.2/A440, vertical curtain walls and site-built fenestration products<sup>a</sup></b>                                                         |        |                                                                                                                                                                                                                   |
| Fixed <sup>b</sup> U-factor                                                                                                                                                                                           | U-0.34 | <u>U-0.22</u>                                                                                                                                                                                                     |
| Operable <sup>c</sup> U-factor                                                                                                                                                                                        | U-0.36 | <u>U-0.26</u>                                                                                                                                                                                                     |
| <b>Entrance doors<sup>d</sup></b>                                                                                                                                                                                     |        |                                                                                                                                                                                                                   |
| U-factor                                                                                                                                                                                                              | U-0.60 | n/a                                                                                                                                                                                                               |
| <b>U-factor for all other vertical fenestration</b>                                                                                                                                                                   |        |                                                                                                                                                                                                                   |
| Fixed U-factor                                                                                                                                                                                                        | U-0.26 | <u>U-0.20</u>                                                                                                                                                                                                     |
| Operable <sup>c</sup> U-factor                                                                                                                                                                                        | U-0.28 | <u>U-0.20</u>                                                                                                                                                                                                     |



| <b>SHGC for all vertical fenestration</b> |                           |                                 |     |
|-------------------------------------------|---------------------------|---------------------------------|-----|
| <b>Orientation<sup>e</sup></b>            | <b><del>((SEW))</del></b> | <b><del>((N))</del></b>         |     |
| <b>f</b>                                  | <b>Fixed</b>              | <b>Operable</b>                 |     |
| PF < 0.2                                  | 0.38                      | <del>((0.51))</del> <u>0.33</u> | n/a |
| 0.2 ≤ PF < 0.5                            | 0.46                      | <del>((0.56))</del> <u>0.40</u> | n/a |
| PF ≥ 0.5                                  | 0.61                      | <del>((0.61))</del> <u>0.53</u> | n/a |
| <b><u>All Skylights</u></b>               |                           |                                 |     |
| U-factor                                  | U-0.45                    |                                 | n/a |
| SHGC                                      | 0.32                      |                                 | n/a |

1422 Footnotes:

1423 a. U-factor and SHGC shall be rated in accordance with NFRC 100. This  
 1424 category includes curtain wall, storefront, ribbon wall, window wall, and similar site-  
 1425 assembled systems. This category does not include punched-opening manufactured  
 1426 windows except for "Class AW" windows as designated by AAMA.

1427 b. "Fixed" includes curtain wall, storefront, picture windows, and other fixed  
 1428 windows.

1429 c. "Operable" includes openable fenestration products other than "entrance  
 1430 doors((-))," and includes only the operable portions of multi-pane assemblies.

1431 d. "Entrance door" includes glazed swinging entrance doors and glazed automatic  
 1432 sliding entrance doors. Other doors which are not entrance doors, including manually  
 1433 operated sliding glass doors, are considered "operable."

1434 e. (~~"N" indicates vertical fenestration oriented within 30 degrees of true north.~~  
1435 ~~"SEW" indicates orientations other than "N."~~) Reserved.

1436 f. Fenestration that is entirely within the conditioned space or is between  
1437 conditioned and other enclosed space is exempt from solar heat gain coefficient  
1438 requirements and not included in the SHGC calculation.

1439 NEW SECTION. SECTION 41. There is hereby added to K.C.C. chapter 16.07  
1440 a new section to read as follows:

1441 Section C402.4.1 of the Washington State Energy Code is not adopted and the  
1442 following is substituted:

1443 **Fenestration – Maximum area (WSEC C402.4.1).** The total building vertical  
1444 fenestration area (not including opaque doors and opaque spandrel panels) shall not  
1445 exceed the percentage of above-grade wall area permitted by WSEC Table C402.4.1.  
1446 The skylight area shall not exceed 5 percent of the total building gross roof area  
1447 (skylight-to-roof ratio).

1448 For buildings with more than one space conditioning category, compliance with  
1449 the maximum allowed window-to-wall ratio and skylight-to-roof ratio shall be  
1450 demonstrated separately for each space conditioning category. Interior partition ceiling,  
1451 wall, fenestration, and floor areas that separate space conditioning areas shall not be ap-  
1452 plied to the window-to-wall ratio and skylight-to-roof ratio calculations.

1453 **EXCEPTIONS:**

1454 1. The allowable total building vertical fenestration area in WSEC Table  
1455 C402.4.1 is permitted to be increased by 5 percent where a minimum of 35 percent of all

vertical fenestration complies with the high-performance fenestration required in Column B of WSEC Table C402.4.

2. For vertical fenestration at street level retail, the vertical fenestration area shall not exceed 75 percent of the area of the street-level wall that faces the street or that adjoins other pedestrian areas used for retail access. For the purposes of this exception, the street-level wall shall be measured from the street-level floor to the interior ceiling level or to 20 feet (6,096 millimeters) above floor level, whichever is lowest. When this exception is used, separate calculations shall be performed for these sections of the building envelope, and these values shall not be averaged with any others for compliance purposes. On the street level the 75 percent vertical fenestration area is permitted to be exceeded if the additional fenestration area is deducted from fenestration allowances from other areas of the building.

3. Accessory occupancy areas that comprise less than 10 percent of the conditioned floor area of any floor are permitted to be included in the primary occupancy of that floor for determination of the allowable fenestration area for that floor.

**Table C402.4.1**

**Allowable Vertical Glazing Area Percentages**

| <b>Occupancy</b> | <b>Building Area Type</b>  | <b>Maximum prescriptive vertical fenestration percentage</b> |
|------------------|----------------------------|--------------------------------------------------------------|
| Group A-2 or B   | Restaurant (quick service) | 34                                                           |
| Group A-2 or B   | Restaurant (full service)  | 24                                                           |

|           |                                                                 |    |
|-----------|-----------------------------------------------------------------|----|
| Group B   | Healthcare (outpatient)                                         | 21 |
| Group B   | Office (5,000 ft <sup>2</sup> /464.52m <sup>2</sup> or smaller) | 19 |
| Group B   | Office (5,000 to 50,000 ft <sup>2</sup> )                       | 31 |
| Group B   | Office (larger than 50,000 ft <sup>2</sup> )                    | 35 |
| Group B   | University or college                                           | 30 |
| Group E   | School (primary and secondary)                                  | 26 |
| Group I-2 | Hospital                                                        | 27 |
| Group M   | Grocery Store                                                   | 15 |
| Group M   | Retail (standalone)                                             | 20 |
| Group M   | Retail (strip mall)                                             | 20 |
| Group R-1 | Hotel/motel (75 or fewer rooms)                                 | 24 |
| Group R-1 | Hotel/motel (more than 75 rooms)                                | 34 |
| Group R-2 | Multifamily 7 stories or less                                   | 30 |
| Group R-2 | Multifamily 8 stories or taller                                 | 35 |
| Group S-2 | Warehouse (non-refrigerated)                                    | 6  |
|           | All other                                                       | 30 |

1473 NEW SECTION. SECTION 42. There is hereby added to K.C.C. chapter 16.07

1474 a new section to read as follows:

1475 Section C402.4.1.1 of the Washington State Energy Code is not adopted and the

1476 following is substituted:

1477 **Vertical fenestration maximum area with high performance alternates**

1478 **(WSEC C402.4.1.1).** For buildings that comply with Section C402.4.1.1.1 or Section

1479 C402.4.1.1.2, the total building vertical fenestration area is permitted to exceed the

percentage of the total building gross above grade wall area allowed in Table C402.4.1 by 15 percent for Group R-2 multifamily building area types and 10 percent for all other building area types for the purpose of prescriptive compliance with Section C402.1.4. Not less than 20 percent of all vertical fenestration must comply with the Column B values of WSEC Table C402.4.

When determining compliance using the component performance alternative in accordance with WSEC C402.1.5, the total building vertical fenestration area allowed in Equation 4-2 (UA-glaze-allow) is allowed to exceed the value in WSEC Table C402.4.1 for Group R-2 multifamily building area types by 15 percent and for all other building area types by 10 percent of the above grade wall area for buildings that comply with the vertical fenestration alternates described in this section. Not less than 20 percent of all vertical fenestration must comply with the Column B values of WSEC Table C 402.4.

SECTION 43. Ordinance 19485, Section 79, and K.C.C. 16.07.110 are hereby amended to read as follows:

Section C402.4.1.1.2 of the ~~((International Energy Conservation))~~ Washington State Energy Code is not adopted and the following is substituted:

**High-performance fenestration ((~~IECC~~)) WSEC C402.4.1.1.2.** The following requirements shall be met:

1. All vertical fenestration in the building shall comply with the ~~((following maximum))~~ U-factors ~~((:~~

~~1.1. U factor for Class AW windows rated in accordance with AAMA/CSA101/I.S.2/A440, vertical curtain walls and site-built fenestration products (fixed) = 0.30.~~

1520 Table C402.4.1.1.2

1521 Building Envelope High Performance

1522 Fenestration Maximum U-Factor

|           |                                                                                        | <b><u>Column C</u></b><br><b><u>Standard performance</u></b><br><b><u>portion, applicable to no</u></b><br><b><u>more than 80 percent of</u></b><br><b><u>vertical fenestration area,</u></b><br><b><u>or 65 percent for</u></b><br><b><u>compliance with Exception</u></b><br><b><u>1 to WSEC C402.4.1</u></b> | <b><u>Column D</u></b><br><b><u>High performance</u></b><br><b><u>portion applicable to no</u></b><br><b><u>less than 20 percent of</u></b><br><b><u>vertical fenestration</u></b><br><b><u>area, or 35 percent for</u></b><br><b><u>compliance with</u></b><br><b><u>Exception 1 to WSEC</u></b><br><b><u>C402.4.1</u></b> |
|-----------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |                                                                                        | <u>U-factor for Class AW windows rated in accordance with AAMA/CSA101/I.S.2/A440, vertical curtain walls and site-built fenestration products<sup>1</sup></u>                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                             |
| <u>a.</u> | <u>Fixed<sup>2</sup> U-factor</u>                                                      | <u>U-0.26</u>                                                                                                                                                                                                                                                                                                   | <u>U-0.22</u>                                                                                                                                                                                                                                                                                                               |
| <u>b.</u> | <u>Operable<sup>3</sup> U-factor</u>                                                   | <u>U-0.30</u>                                                                                                                                                                                                                                                                                                   | <u>U-0.26</u>                                                                                                                                                                                                                                                                                                               |
|           | <u>Entrance doors<sup>4</sup></u>                                                      |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                             |
| <u>c.</u> | <u>U-factor</u>                                                                        | <u>U-0.60</u>                                                                                                                                                                                                                                                                                                   | <u>N/A</u>                                                                                                                                                                                                                                                                                                                  |
|           |                                                                                        | <u>U-factor for all other vertical fenestration</u>                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                             |
| <u>d.</u> | <u>Fixed U-factor</u>                                                                  | <u>U-0.22</u>                                                                                                                                                                                                                                                                                                   | <u>U-0.20</u>                                                                                                                                                                                                                                                                                                               |
| <u>e.</u> | <u>Operable or mulled</u><br><u>windows with fixed</u><br><u>and operable sections</u> | <u>U-0.23</u>                                                                                                                                                                                                                                                                                                   | <u>U-0.22</u>                                                                                                                                                                                                                                                                                                               |

|  |                 | <b><u>Column C</u></b><br><b><u>Standard performance</u></b><br><b><u>portion, applicable to no</u></b><br><b><u>more than 80 percent of</u></b><br><b><u>vertical fenestration area,</u></b><br><b><u>or 65 percent for</u></b><br><b><u>compliance with Exception</u></b><br><b><u>1 to WSEC C402.4.1</u></b> | <b><u>Column D</u></b><br><b><u>High performance</u></b><br><b><u>portion applicable to no</u></b><br><b><u>less than 20 percent of</u></b><br><b><u>vertical fenestration</u></b><br><b><u>area, or 35 percent for</u></b><br><b><u>compliance with</u></b><br><b><u>Exception 1 to WSEC</u></b><br><b><u>C402.4.1</u></b> |
|--|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <u>U-factor</u> |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                             |

1523 Footnotes:

1524 1. U-factor and SHGC shall be rated in accordance with NFRC 100. This  
1525 category includes curtain wall, storefront, ribbon wall, window wall, and similar site-  
1526 assembled systems. This category does not include punched-opening manufactured  
1527 windows except for "Class AW" windows as designated by AAMA.

1528 2. "Fixed" includes curtain wall, storefront, picture windows, and other fixed  
1529 windows.

1530 3. "Operable" includes operable fenestration products other than "entrance  
1531 doors," and includes only the operable portions of multi-pane assemblies.

1532 4. "Entrance door" includes glazed swinging entrance doors and automatic glazed  
1533 sliding entrance doors. Other doors which are not entrance doors, including manually  
1534 operated sliding glass doors, are considered "operable."



1539 **HVAC Total System Performance Ratio (HVAC TSPR)** ~~((--medical-office~~  
1540 ~~**and residential applications)) (WSEC C403.1.1.1).**~~ ((Systems serving medical offices,  
1541 ~~and the dwelling units and residential common areas within R-2 multifamily, shall~~  
1542 ~~comply with 403.1.1.1.)) For systems serving occupancy areas included in WSEC Table~~  
1543 C403.1.1, the HVAC total system performance ratio (HVAC TSPR) of the proposed  
1544 design HVAC system shall be greater than or equal to the HVAC TSPR of the standard  
1545 reference design as calculated according to Appendix D, Calculation of HVAC Total  
1546 System Performance Ratio.

1548 Occupancy Classifications Requiring TSPR

| <u><b>Occupancy<br/>Classification</b></u> | <u><b>Inclusions</b></u>                             | <u><b>Excluded</b></u>                                                         |
|--------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------|
|                                            | <u>areas within Group R-2 areas of<br/>buildings</u> | <u>Sleeping units and associated residential<br/>common areas in Group R-2</u> |
| <u>F, H, I, S, U</u>                       |                                                      | <u>All occupancies</u>                                                         |

1549 **EXCEPTIONS TO SECTION C403.1.1:** ((Buildings or areas of medical office  
1550 buildings that comply fully with ASHRAE Standard 170, including but not limited to  
1551 surgical centers, or that are required by other applicable codes or standards to provide air  
1552 handling units that operate 24 hours per day, 7 days per week.))

1553 1. Buildings where the sum of the conditioned floor area of occupancies included  
1554 in the Inclusions column of WSEC Table C403.1.1 is less than 5,000 square feet (464.5  
1555 square meters). Areas that are eligible for any of the exceptions below do not count  
1556 towards the 5,000 square feet (464.5 square meters).

1557 2. HVAC systems using district heating water, chilled water, or steam.

1558 3. HVAC systems connected to a low-carbon district energy exchange system.

1559 4. HVAC systems not included in Table D601.10.1.

1560 5. HVAC systems with chilled water supplied by absorption chillers, heat  
1561 recovery chillers, water to water heat pumps, air to water heat pumps, or a combination of  
1562 air and water cooled chillers on the same chilled water loop.

1563 6. HVAC systems included in WSEC Table D601.10.1 with parameters in WSEC  
1564 Table D601.10.2 not identified as applicable to that HVAC system type.

- 1565        7. HVAC systems served by heating water plants that include air-to-water or  
1566 water-to-water heat pumps.
- 1567        8. Underfloor air distribution and displacement ventilation HVAC systems.
- 1568        9. Space conditioning systems that do not include mechanical cooling.
- 1569        10. Alterations to existing buildings that do not substantially replace the entire  
1570 HVAC system and are not serving initial build-out construction.
- 1571        11. HVAC systems meeting all the requirements of the standard reference design  
1572 HVAC system in WSEC Table D602.11, Standard Reference Design HVAC Systems.
- 1573        12. Buildings or areas of medical office buildings that comply fully with  
1574 ASHRAE Standard 170 including, but not limited to, surgical centers, or that are required  
1575 by other applicable codes or standards to provide 24/7 air handling unit operation.
- 1576        13. HVAC systems serving the following areas and spaces:
- 1577            13.1. Laundry rooms;
- 1578            13.2. Elevator machine rooms;
- 1579            13.3. Mechanical and electrical rooms;
- 1580            13.4. Data centers and computer rooms;
- 1581            13.5. Laboratories with fume hoods;
- 1582            13.6. Locker rooms with more than 2 showers;
- 1583            13.7. Natatoriums and rooms with saunas;
- 1584            13.8. Restaurants and commercial kitchens with total cooking capacity greater  
1585 than 100,000 Btu/h (105,506 kilojoules/h) ;
- 1586            13.9. Areas of buildings with commercial refrigeration equipment exceeding  
1587 100 kW of power input; and
-

1588           13.10. Cafeterias and dining rooms.

1589           SECTION 45. Ordinance 19485, Section 82, and K.C.C. 16.07.140 are hereby  
1590 amended to read as follows:

1591           Section C403.1.4 of the (~~((International Energy Conservation))~~) Washington State  
1592 Energy Code is (~~((supplemented with))~~) not adopted and the following is substituted:

1593           **Use of electric resistance and fossil fuel-fired HVAC heating equipment**  
1594 ~~((IECC))~~ **WSEC C403.1.4).** HVAC heating energy shall not be provided by electric  
1595 resistance or fossil fuel combustion appliances. For the purposes of this section, electric  
1596 resistance HVAC heating appliances include, but are not limited to, electric baseboard,  
1597 electric resistance fan coil, (~~and~~) VAV electric resistance terminal reheat units, and  
1598 electric resistance boilers. For the purposes of this section, fossil fuel combustion HVAC  
1599 heating appliances include but are not limited to appliances burning natural gas, heating  
1600 oil, propane, or other fossil fuels.

1601           **EXCEPTIONS:**

1602           1. (~~((Pasteurization. Electric resistance heat controls are allowed to reset the~~  
1603 ~~supply water temperature of hydronic heating systems that serve service water heating~~  
1604 ~~heat exchangers during pasteurization cycles of the service hot water storage volume.~~  
1605 ~~The hydronic heating system supply water temperature shall be configured to be 145° F~~  
1606 ~~or lower during the pasteurization cycle.~~

1607           2.)) Low heating capacity. Buildings or areas of buildings, other than dwelling  
1608 units or sleeping units, that meet the interior temperature requirements of the  
1609 ~~((International Building Code))~~ IBC Chapter 12 with a total installed HVAC heating  
1610 capacity no more than 8.5 Btu/h (9 kilojoules/h or 2.5 (~~((W))~~) watts) per square foot (per

1611 0.1 square meter) of conditioned space may be heated using electric resistance  
1612 appliances. ~~((For the purposes of this exception, overhead or wall-mounted radiant~~  
1613 ~~heating panels installed in an unheated or semi-heated space, insulated in compliance~~  
1614 ~~with IECC C402.2.8 and controlled by occupancy sensing devices in compliance with~~  
1615 ~~IECC C403.11.1 shall not be part of the HVAC heating energy calculation.))~~  
1616 ((3-)) 2. Dwelling or sleeping units. Dwelling or sleeping units ((having an  
1617 installed HVAC heating capacity no more than)) may be heated using electric resistance  
1618 appliances as long as the installed HVAC heating capacity in any separate space is not  
1619 greater than specified in 2.1 through 2.3. Where a single dwelling unit includes multiple  
1620 habitable spaces that are all heated with electric resistance heat, individual spaces are  
1621 permitted have more electric resistance heating capacity than specified in 2.1 through 2.3,  
1622 where the total electric resistance heating capacity for the dwelling unit is less than or  
1623 equal to the total allowed.  
1624 2.1 750 ((W)) watts in ((any separate)) each habitable room with exterior  
1625 fenestration ~~((may be heated using electric resistance appliances)).~~  
1626 ~~((3.1 Corner rooms. A room within a dwelling or sleeping unit))~~ 2.2. 1,000  
1627 watts for each habitable space that has two primary walls facing different cardinal  
1628 directions, each with exterior fenestration~~((, is permitted to have an installed HVAC~~  
1629 ~~heating capacity no more than 1000 watts)).~~ Bay windows and other minor offsets are  
1630 not considered primary walls.  
1631 ~~((4-))~~ 2.3. 250 watts in spaces adjoining the building thermal envelope but  
1632 without exterior fenestration.  
1633 For the purposes of this section habitable space is as defined in the IBC.

---

1634            3. Small buildings. Buildings with less than 2,500 square feet (~~464.5 square~~  
1635 meters) of conditioned floor area may be heated using electric resistance appliances.

1636            ~~((5.))~~ 4. Defrost. Heat pumps may use electric resistance as the first stage of  
1637 heating when a defrost cycle is required and is in operation.

1638            ~~((6.))~~ 5. Air-to-air heat pumps. Buildings (~~(may use)~~) are permitted to utilize  
1639 electric resistance (~~((auxiliary heating to))~~) supplemental (~~((heat pump))~~) heating for air-to-  
1640 air heat pumps (~~((with))~~) that meet all of the following conditions:

1641            ~~((6.1.))~~ 5.1. Internal electric resistance heaters have controls that prevent  
1642 supplemental heater operation when the heating load can be met by the heat pump alone  
1643 during both steady-state operation and setback recovery.

1644            ~~((6.2.))~~ 5.2. The heat pump controls are configured to use the compressor to  
1645 provide heating down to an outdoor air temperature of 17° (~~((F))~~) Fahrenheit (-8° Celsius)  
1646 or lower(~~((°))~~).

1647            **EXCEPTIONS TO 5.2:**

1648            1. Packaged terminal heat pumps (PTHPs) that comply with the minimum  
1649 heating efficiency requirements in Table C403.3.2(4) are exempt from heating pump  
1650 controls capable of operating the compressor as the first stage of heating down to an  
1651 outdoor air temperature of 17° Fahrenheit (-8° Celsius) or lower.

1652            2. Heat pumps whose minimum efficiency is regulated by NAECA and whose  
1653 ratings meet the requirements shown in WSEC Table C403.3.2(2) and include all usage  
1654 of internal electric resistance heating are exempt from heat pump controls capable of  
1655 operating the compressor as the first state of heating down to an outdoor air temperature  
1656 of 17° Fahrenheit (-8° Celsius) or lower, except that thermostats that are not integral to

1657 the heat pump equipment shall be configured to use the compressor as the first stage of  
1658 heating down to an outdoor air temperature of 17° Fahrenheit (-8° Celsius) or lower  
1659 except when in defrost.

1660 ((6.3.)) 5.3. The heat pump complies with all of the following:

1661 ((a.)) 5.3.1. Controlled ~~((by))~~ by a digital or electronic thermostat designed  
1662 for heat pump use that energizes the supplemental heat only when the heat pump has  
1663 insufficient capacity to maintain set point or to warm up the space at a sufficient rate;

1664 ((b.)) 5.3.2. Controlled by a multistage space thermostat and an outdoor air  
1665 thermostat wired to energize supplemental heat only on the last stage of the space  
1666 thermostat and when outdoor air temperature is less than 32° ((F)) Fahrenheit (0°  
1667 Celsius); or

1668 ((c.)) 5.3.3. The minimum efficiency of the heat pump is regulated by  
1669 NAECA, its rating meets the requirements shown in ~~((IECC))~~ WSEC Table C403.3.2(2),  
1670 and its rating includes all usage of internal electric resistance heating.

1671 ((6.4)) 5.4. The heat pump rated heating capacity is sized to meet the heating  
1672 load at an outdoor air temperature of 32° ((F)) Fahrenheit (0° Celsius) or lower and has a  
1673 rated heating capacity at 47° ((F)) Fahrenheit (8° Celsius) no less than 2 times more than  
1674 supplemental electric resistance heating capacity, or uses the smallest available factory-  
1675 available internal electric resistance heater.

1676 ((7.)) 6. Air-to-water heat pumps ~~((, up to 2,000 MBH))~~. Buildings ~~((may~~  
1677 ~~use))~~ are permitted to utilize electric resistance (for Climate Zone 4 or 5) or fossil fuel-  
1678 fired (for Climate Zone 5) auxiliary heating to supplement heat pump heating for

1679 hydronic heating systems that ~~((have air-to-water heat pump heating capacity no more~~  
1680 ~~than 2,000 kBtu/h at 47° F, and that))~~ meet all of the following conditions:

1681       ~~((7.1.))~~ 6.1. Controls for the auxiliary electric resistance heating are configured  
1682 to lock out the supplemental heat when the outside air temperature is above ~~3((2))~~ 6°  
1683 ~~((F))~~ Fahrenheit (2° Celsius), unless the hot water supply temperature setpoint to the  
1684 building heat coils cannot be maintained for 20 minutes;

1685       ~~((7.2.))~~ 6.2. The heat pump controls are configured to use the compressor as the  
1686 first stage of heating down to ~~((an outdoor temperature of 17° F or lower))~~ the lowest  
1687 exterior design temperature for which the equipment is rated except during startup or  
1688 defrost operation; and

1689       ~~((7.3.))~~ 6.3. The heat pump rated heating capacity at 47°~~((F))~~ Fahrenheit (8°  
1690 Celsius) is no less than ~~((2 times more than supplemental electric resistance heating~~  
1691 ~~capacity))~~ 75 percent of the design heating load at 29° Fahrenheit (-2° Celsius).

1692       ~~((8. Air-to-water heat pumps, up to 3,000 MBH. Buildings may use electric~~  
1693 ~~resistance auxiliary heating to supplement heat pump heating for hydronic heating~~  
1694 ~~systems that have air-to-water heat pump heating capacity more than 2,000 kBtu/hr and~~  
1695 ~~no more than 3,000 kBtu/hr at 47° F, and that meet the following conditions:~~

1696       ~~8.1. Controls for the auxiliary electric resistance heating are configured to lock~~  
1697 ~~out the supplemental heat when the outside air temperature is above 36° F, unless the hot~~  
1698 ~~water supply temperature setpoint to the building heat coils cannot be maintained for 20~~  
1699 ~~minutes;~~



1700           ~~8.2. The heat pump controls are configured to use the compressor as the first~~  
1701 ~~stage of heating down to an outdoor temperature of 17° F or lower except during startup~~  
1702 ~~or defrost operation; and~~

1703           ~~8.3. The heat pump rated heating capacity at 47° F is no less than 1.75 times~~  
1704 ~~more than supplemental electric resistance heating capacity.~~

1705           ~~9. Air to water heat pumps, over 3,000 MBH. Buildings may use electric~~  
1706 ~~resistance auxiliary heating to supplement heat pump heating for hydronic heating~~  
1707 ~~systems that have air to water heat pump heating capacity more than 3,000 kBtu/h at 47°~~  
1708 ~~F, and that meet the following conditions:~~

1709           ~~9.1. Controls for the auxiliary electric resistance heating are configured to lock~~  
1710 ~~out the supplemental heat when the outside air temperature is above 40° F, unless the hot~~  
1711 ~~water supply temperature setpoint to the building heat coils cannot be maintained for 20~~  
1712 ~~minutes;~~

1713           ~~9.2. The heat pump controls are configured to use the compressor as the first~~  
1714 ~~stage of heating down to an outdoor temperature of 17° F or lower except during startup~~  
1715 ~~or defrost operation; and~~

1716           ~~9.3. The heat pump rated heating capacity at 47° F is no less than 2 times more~~  
1717 ~~than supplemental electric resistance heating capacity.~~

1718           ~~40.))~~ 7. Ground source heat pumps. Buildings may use electric resistance  
1719 auxiliary heating to supplement heat pump heating for hydronic heating systems with  
1720 ground source heat pump equipment that meets the following conditions:

1721           ~~((40.1.))~~ 7.1. Controls for the auxiliary resistance heating are configured to lock  
1722 out the supplemental heat when the outdoor air temperature is above ~~((32° F))~~ 42°

1723 Fahrenheit (6° Celsius), unless the hot water supply temperature setpoint to the building  
1724 heat coils cannot be maintained for 20 minutes;

1725 ~~((10.2.))~~ 7.2. The heat pump controls are configured to use the compressor as  
1726 the first stage of heating ~~((down to an outdoor temperature of 17° F or lower))~~; and

1727 ~~((10.3.))~~ 7.3. The ~~((heat pump rated heating capacity at 32° F entering water~~  
1728 ~~conditions is no less than 2 times more than supplemental electric resistance heating~~  
1729 ~~capacity))~~ ground source heat exchanger shall be sized so that the heat pump annual  
1730 heating output is no less than 75 percent of the total annual heating output in the final  
1731 year of a 30-year simulation using International Ground Source Heat Pump Association  
1732 (IGSHPA) listed simulation software.

1733 ~~((11.))~~ 8. Small systems. Buildings in which electric resistance or fossil fuel  
1734 appliances, including decorative appliances, in total either provide less than 5 percent of  
1735 the total building HVAC system heating capacity or serve less than 5 percent of the  
1736 conditioned floor area.

1737 ~~((12.))~~ 9. Specific conditions. Portions of buildings that require fossil fuel or  
1738 electric resistance space heating for specific conditions approved by the code official for  
1739 research, health care, process, or other specific needs that cannot practicably be served by  
1740 heat pump or other space heating systems. This does not constitute a blanket exception  
1741 for any occupancy type.

1742 ~~((13.))~~ 10. Kitchen ~~((exhaust))~~ make-up air. Make-up air for commercial kitchen  
1743 exhaust systems required to be tempered by ~~((International Mechanical Code Section))~~  
1744 IMC 508.1.1 may be heated using electric resistance ~~((appliances))~~.

1745           ~~((14.))~~ 11. District energy. Steam or hot water district energy systems that ~~((use))~~  
1746 utilize fossil fuels as their primary source of heat energy, that serve multiple buildings,  
1747 and that were already in existence ~~((before January 1, 2023))~~ prior to the effective date of  
1748 the 2021 WSEC, which is March 15, 2024, including more energy-efficient upgrades to  
1749 such existing systems, ~~((may))~~ are permitted to serve as the primary heating energy  
1750 source. Any new hydronic system or new or replacement hydronic heating coil in an  
1751 existing system, that is served by fossil fuel-fired district energy shall be sized to provide  
1752 all required space heating at local design winter outdoor temperature with maximum  
1753 entering water temperature of 118° Fahrenheit (48° Celsius) at design conditions, to  
1754 permit future conversion to heat pump heating.

1755           ~~((15.))~~ 12. Heat tape. Heat tape is allowed where it protects water-filled  
1756 equipment and piping located outside of the building thermal envelope, ~~((if))~~ provided  
1757 that it is configured and controlled to be automatically turned off when the outside air  
1758 temperature is above 40° ~~((F-))~~ Fahrenheit (4° Celsius).

1759           ~~((16.))~~ 13. Temporary systems. Temporary electric resistance heating systems  
1760 are allowed where serving future tenant spaces that are unfinished and unoccupied if the  
1761 heating equipment is sized and controlled to achieve interior space temperatures no  
1762 higher than 40° ~~((F-))~~ Fahrenheit (4° Celsius).

1763           ~~((17.))~~ 14. Pasteurization. Electric resistance heat controls are allowed to reset  
1764 the supply water temperature of hydronic heating systems that serve service water heating  
1765 heat exchangers during pasteurization cycles of the service hot water storage volume.  
1766 The hydronic heating system supply water temperature shall be configured to be 145°  
1767 Fahrenheit (63° Celsius) or lower during the pasteurization cycle.

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1768        15. Freeze protection. Heating systems sized for spaces with indoor design  
1769 conditions of 45° Fahrenheit (7° Celsius) and intended for freeze protection are permitted  
1770 to use electric resistance. The building envelope of any such space shall be insulated in  
1771 compliance with WSEC C402.1.

1772        16. DOAS ERV auxiliary heat. Dedicated outdoor air systems with energy  
1773 recovery ventilation are permitted to utilize electric resistance for auxiliary heating to  
1774 preheat outdoor air for defrost or as auxiliary supplemental heat to temper supply air to  
1775 55° Fahrenheit (13° Celsius) or lower for buildings or portions of buildings that do not  
1776 have hydronic heating systems.

1777        17. Low-carbon district energy systems. Low-carbon district energy systems that  
1778 meet the definitions of low-carbon district energy exchange system or low-carbon district  
1779 heating and cooling or heating only systems.

1780        18. Essential facilities. Groups I-2 and I-3 occupancies that by regulation are  
1781 required to have in place redundant emergency backup systems, and research  
1782 laboratories, are permitted to utilize fossil fuels for emergency generators and for  
1783 redundant emergency space heating and water heating appliances, provided that such  
1784 systems are sized and controlled to operate only upon loss of electrical power.

1785        19. Standby HVAC heating equipment. Standby HVAC heating equipment  
1786 provided in addition to the primary heating system, and controlled such that it will only  
1787 be used when the primary heating equipment is not available, is permitted to utilize  
1788 electric resistance.

1789            20. Emergency generators. ((Emergency generators)) Generators serving  
1790 emergency power, legally required standby power, or optional standby power are  
1791 permitted to ((use)) utilize fossil fuels.

1792            21. Wastewater heat recovery heat pumps. Buildings are permitted to utilize  
1793 electric resistance auxiliary heating to supplement heat pump heating for hydronic  
1794 heating systems with wastewater heat recovery or other approved waste heat recovery  
1795 systems provided the heat pump equipment meets all of the following conditions:

1796            21.1. Controls for the auxiliary resistance heating are configured to lock out the  
1797 supplemental heat when the equipment source-side entering water temperature is above  
1798 42° Fahrenheit (6° Celsius), unless the hot water supply temperature setpoint to the  
1799 building heat coils cannot be maintained for 20 minutes.

1800            21.2. The heat pump controls are configured to use the compressor as the first  
1801 stage of heating.

1802            21.3. The wastewater heat exchanger and heat pumps or other heat pump  
1803 supplemental systems shall be sized so that the heat pump rated heating capacity at heat  
1804 pump design entering water temperature conditions or other heat pump heating systems  
1805 are no less than 75 percent of the design heating load at 29° Fahrenheit (-2° Celsius).  
1806 Wastewater heat exchanger source side shall be sized for a design wastewater entering  
1807 temperature of 55° Fahrenheit (13° Celsius) or lower.

1808            NEW SECTION. SECTION 46. There is hereby added to K.C.C. chapter 16.07  
1809 a new section to read as follows:

1810            Section C403.3.2 of the Washington State Energy Code is not adopted and the  
1811 following is substituted:

1812           **HVAC equipment performance requirements (WSEC C403.3.2).** Equipment  
1813 shall meet the minimum efficiency requirements of Tables C403.3.2(1) through  
1814 C403.3.2(16) when tested and rated in accordance with the applicable test procedure.  
1815 After new equipment efficiency values including HSPF2, EER2, and SEER2 have been  
1816 published by the US Department of Energy, equipment is permitted to meet those values  
1817 in lieu of the table values. Plate-type liquid-to-liquid heat exchangers shall meet the  
1818 minimum requirement of AHRI 400. The efficiency shall be verified through  
1819 certification and listed under an approved certification program or, if no certification  
1820 program exists, the equipment efficiency ratings shall be supported by data furnished by  
1821 the manufacturer. Where multiple rating conditions or performance requirements are  
1822 provided, the equipment shall satisfy all stated requirements. Where components, such as  
1823 indoor or outdoor coils, from different manufacturers are used, calculations and  
1824 supporting data shall be furnished by the designer that demonstrates that the combined  
1825 efficiency of the specified components meets the requirements herein.

1826           Air-to-water heat pump manufactures shall report the hourly heating output or  
1827 heating efficiency with and without defrost operation at 32° Fahrenheit or (0° Celsius), in  
1828 addition to meeting the efficiency requirements of Table C403.3.2(15) at the AHRI  
1829 550/590 applicable leaving water temperatures. The hourly heating output or heating  
1830 efficiency with and without defrost operation shall be documented on the mechanical  
1831 permit application documents.

1832           EXCEPTION: Heat recovery chillers and air-to-water heat pumps covered under  
1833 Table C403.3.2(15) are not required to be listed in the AHRI certification program for  
1834 AHRI 550/590. The equipment heating and cooling efficiency ratings shall be supported

1835 by data furnished by the manufacturer at AHRI 550/590 conditions. Where multiple  
1836 rating conditions or performance requirements are provided, the equipment shall satisfy  
1837 all stated requirements.

1838 NEW SECTION. SECTION 47. There is hereby added to K.C.C. chapter 16.07  
1839 a new section to read as follows:

1840 Table C403.3.5 of the Washington State Energy Code is not adopted and the  
1841 following is substituted:

1842 **Table C403.3.5**  
1843 **Occupancy Classifications Requiring DOAS**

| <b>Occupancy Classification<sup>a</sup></b> | <b>Inclusions</b>                                                                                                | <b>Exempted</b>                                                            |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| A-1                                         | All occupancies not specifically exempted                                                                        | Television and radio studios                                               |
| A-2                                         | Casinos (gaming area)                                                                                            | All other A-2 occupancies                                                  |
| A-3                                         | Lecture halls, community halls, exhibition halls, gymnasiums, courtrooms, libraries, places of religious worship | All other A-3 occupancies                                                  |
| A-4, A-5                                    |                                                                                                                  | All occupancies excluded                                                   |
| B                                           | All occupancies not specifically exempted                                                                        | Food processing establishments including commercial kitchens, restaurants, |

| <b>Occupancy Classification<sup>a</sup></b> | <b>Inclusions</b>                                                                                                                                                                                                                                                                                                                                    | <b>Exempted</b>                                                                                                                                                                                                                                                                           |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                             |                                                                                                                                                                                                                                                                                                                                                      | cafeterias; laboratories for testing and research; data processing facilities and telephone exchanges; air traffic control towers; animal hospitals, kennels, pounds; ambulatory care facilities                                                                                          |
| F, H, I, S, U                               |                                                                                                                                                                                                                                                                                                                                                      | All occupancies excluded                                                                                                                                                                                                                                                                  |
| R                                           | <p>Group R dwelling and sleeping units served by energy recovery ventilation systems that each serve two or more dwelling or sleeping units for which energy recovery ventilation is required in accordance with Section C403.7.6.</p> <p>Group R spaces other than dwelling and sleeping units, including corridors and other common use areas.</p> | <p>Groups R-1 and R-3 dwelling or sleeping units for which energy recovery ventilation is not required in accordance with WSEC C403.7.6.</p> <p>Group R dwelling and sleeping units served by energy recovery ventilation systems that each serve only one dwelling or sleeping unit.</p> |
| E, M                                        | All occupancies included                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                           |

1844

Footnote:



1845 a. Occupancy classification from the IBC Chapter 3.

1846 NEW SECTION. SECTION 48. There is hereby added to K.C.C. chapter 16.07

1847 a new section to read as follows:

1848 Section C403.3.5.2 of the Washington State Energy Code is not adopted and the  
1849 following is substituted:

1850 **DOAS fan power (WSEC C403.3.5.2).** For a DOAS that does not have at least  
1851 one fan or fan array with fan electrical input power greater than or equal to 1 kilowatt, the  
1852 total combined fan power shall not exceed 0.8 watts per cubic feet (0.03 cubic meters)  
1853 per minute of outdoor air as calculated in accordance with Equation 4-10 using design  
1854 maximum airflows and external static pressures. For a DOAS with at least one fan or fan  
1855 array with fan electrical input power less than or equal to 1 kilowatt, the DOAS shall  
1856 comply with the fan power limitations of WSEC C403.8.1. DOAS total combined fan  
1857 power shall include all supply, exhaust, and other fans utilized for the purpose of  
1858 ventilation. This fan power restriction applies to each DOAS in the permitted project but  
1859 does not include the fan power associated with the zonal heating and cooling equipment.  
1860 **(Equation 4-10)**

$$\text{DOAS Total Combined Fan Power} \quad \left( \frac{\text{Watts}}{\text{CFM}} \right) = \sum \left( \frac{\text{Fan bhp}}{\eta_m} \right) \times \frac{746}{\text{CFM}_{\text{supply}}}$$

|        |          |   |                                                                                                        |
|--------|----------|---|--------------------------------------------------------------------------------------------------------|
| Where: |          |   |                                                                                                        |
|        | Fan bhp  | = | Brake horsepower for each supply, exhaust, and other fan in the system at design maximum airflow rate. |
|        | $\eta_m$ | = | Fan motor efficiency including all motor, drive, and                                                   |

---

|  |                       |   |                                                      |
|--|-----------------------|---|------------------------------------------------------|
|  |                       |   | other losses for each fan in the system.             |
|  | CFM <sub>supply</sub> | = | Design maximum airflow rate of outdoor (supply) air. |

1861        NEW SECTION. SECTION 49. There is hereby added to K.C.C. chapter 16.07

1862        a new section to read as follows:

1863                Section C403.3.5.5 of the Washington State Energy Code is not adopted and the  
1864        following is substituted:

1865                **Supplemental heating and cooling (WSEC C403.3.5.5).** Supply air stream  
1866        heating in the DOAS system shall comply with WSEC C403.7.3. Cooling is permitted  
1867        for dehumidification only. Cooling coil shall be sized to meet peak dehumidification  
1868        requirement at design outdoor temperatures, and no larger. Cooling coil shall be  
1869        controlled to maintain supply air relative humidity or zone relative humidity.

1870                **EXCEPTIONS:**

1871                1. Heating permitted for defrost control shall be locked out when outside air  
1872        temperatures are above 35° Fahrenheit (2° Celsius). Supplemental heating for defrost  
1873        shall modulate to 10 percent of the peak capacity, and shall be sized to prevent frost  
1874        damage to the unit at design temperatures and provide supply air less than or equal to 55°  
1875        Fahrenheit (13° Celsius).

1876                2. A DOAS serving Group R-1 or R-2 occupancy spaces that are served by zonal  
1877        heating systems, but not by zonal heat pumps, air conditioners, or other zonal mechanical  
1878        cooling systems, is permitted to be provided with a supplemental heating and cooling  
1879        system in compliance with WSEC C403.1.4.

1880        NEW SECTION. SECTION 50. There is hereby added to K.C.C. chapter 16.07

1881        a new section to read as follows:

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1882           Section C403.3.5.6 of the Washington State Energy Code is not adopted and the  
1883 following is substituted:

1884           **DOAS Energy Recovery Ventilator Temperature Control (WSEC**  
1885 **C403.3.5.6).** Where DOAS includes energy or heat recovery and the design outdoor  
1886 airflow is greater than 500 cubic feet per minute (250 liters per second), the DOAS shall  
1887 be equipped with an air economizer bypass damper, energy recovery media bypass  
1888 damper, or energy recovery wheel speed control that is controlled to prevent overheating  
1889 of the supply air between the outdoor air temperatures of 55° Fahrenheit (13° Celsius)  
1890 and 75° Fahrenheit (24° Celsius). Controls must be configured to minimize energy  
1891 recovery operation or maintain an appropriate DOAS leaving air temperature to prevent  
1892 zonal heating when the building is in cooling, based either on outdoor air temperature,  
1893 return air temperature, or a DDC zone-based cooling system demand status reset, based  
1894 on one of the following:

- 1895           1. Outdoor air temperature;  
1896           2. Return air temperature; or  
1897           3. A DDC zone-based cooling system demand status reset.

1898           **NEW SECTION. SECTION 51.** There is hereby added to K.C.C. chapter 16.07  
1899 a new section to read as follows:

1900           Section C403.3.5 of the Washington State Energy Code is supplemented with the  
1901 following:

1902           **Impracticality (WSEC C403.3.5.7).** Where the code official determines that full  
1903 compliance with one or more of the requirements in WSEC C403.3.5.1 through  
1904 C403.3.5.6 is impractical, it is permissible to provide an approved alternate means of

compliance that achieves a comparable level of energy efficiency as the requirement(s) deemed impractical. For the purposes of this section, impractical means that an HVAC system complying with all requirements in WSEC C403.3.5 cannot effectively be utilized due to an unusual use or configuration of the building.

NEW SECTION. SECTION 52. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Section C403.3.6 of the Washington State Energy Code is not adopted and the following is substituted.

**Ventilation for Group R-2 Occupancy (WSEC C403.3.6).** See Section C403.7.6.1 for Ventilation for Group R-2 occupancies.

NEW SECTION. SECTION 53. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Section C403.4.1.7 of the Washington State Energy Code is not adopted and the following is substituted:

**Demand responsive controls (WSEC C403.4.1.7).** Thermostatic controls for heating or cooling systems shall be provided with demand responsive controls capable of increasing the cooling setpoint and decreasing the heating setpoint by no less than 4° Fahrenheit (-16° Celsius). The thermostatic controls shall be capable of performing all other functions provided by the control when the demand responsive controls are not available. Systems with direct digital control of individual zones reporting to a central control panel shall be capable of remotely increasing the cooling setpoint and decreasing the heating setpoint for each zone by no less than 4° Fahrenheit (-16° Celsius).

**EXCEPTIONS:**

1928           1. Health care and assisted living facilities.

1929           2. R-2 occupancy dwelling units.

1930           NEW SECTION. SECTION 54. There is hereby added to K.C.C. chapter 16.07  
1931 a new section to read as follows:

1932           Section C403.4.2 of the Washington State Energy Code is not adopted and the  
1933 following is substituted:

1934           **Off-hour controls (WSEC C403.4.2).** For all occupancies other than Group R,  
1935 and for conditioned spaces other than dwelling units and sleeping units within Group R  
1936 occupancies, each zone shall be provided with thermostatic setback controls that are  
1937 controlled by either an automatic time clock or programmable control system.

1938           **EXCEPTIONS:**

1939           1. Zones that will be operated continuously.

1940           2. Zones with a full HVAC load demand not exceeding 6,800 Btu/h (7,174  
1941 kilojoules/h or 2 kilowatts) and having a manual shutoff switch located with ready access.

1942           NEW SECTION. SECTION 55. There is hereby added to K.C.C. chapter 16.07  
1943 a new section to read as follows:

1944           Section C403.5 of the Washington State Energy Code is not adopted and the  
1945 following is substituted.

1946           **Economizers (WSEC C403.5).** Air economizers shall be provided on all new  
1947 cooling systems including those serving computer server rooms, electronic equipment,  
1948 radio equipment, and telephone switchgear. Economizers shall comply with WSEC  
1949 C403.5.1 through C403.5.5.

1950           **EXCEPTIONS:**

1951           1.a For other than Group R-2 occupancies, cooling system where the supply fan  
1952 is not installed outside the building thermal envelope nor in a mechanical room adjacent  
1953 to outdoors, and is installed in conjunction with DOAS complying with WSEC C403.3.5  
1954 and serving only spaces with year-round cooling loads from lights and equipment of less  
1955 than 5 watts per square foot (per 0.1 square meter).

1956           1.b. For Group R-2 occupancies, cooling system where the supply fan is not  
1957 installed outside the building thermal envelope nor in a mechanical room adjacent to  
1958 outdoors, and is installed in conjunction with DOAS complying with WSEC C403.3.5,  
1959 where the ERV/HRV has a minimum 68 percent sensible recovery or 60 percent enthalpy  
1960 recovery heating effectiveness, and serving only spaces with year-round cooling loads  
1961 from lights and equipment of less than 5 watts per square foot (per 0.1 square meter).

1962           2. Unitary or packaged systems serving one zone with dehumidification where an  
1963 economizer would increase the overall building energy consumption. New humidification  
1964 equipment shall comply with WSEC C403.3.2.7.

1965           3. Unitary or packaged systems serving one zone where the cooling efficiency  
1966 meets or exceeds the efficiency requirements in WSEC Table C403.5(3).

1967           4. Equipment serving chilled beams and chilled ceiling space cooling systems  
1968 which are provided only with a water economizer meeting the requirements of WSEC  
1969 C403.5.4.

1970           5. For Group R occupancies, cooling unit where the supply fan is not installed  
1971 outside the building thermal envelope or in a mechanical room adjacent to outdoors with  
1972 a total cooling capacity less than 20,000 Btu/h (21,101 kilojoules/h) and other cooling  
1973 units with a total cooling capacity less than 54,000 Btu/h (56,973 kilojoules/h) provided

that these are high-efficiency cooling equipment with IEER, CEER, SEER, and EER values more than 15 percent higher than minimum efficiencies listed in WSEC Tables C403.3.2(1), C403.3.2(2), C403.3.2(4), C403.3.2(8), and C403.3.2(9), or an IPLV kilowatts per ton that is at least 15 percent lower than the minimum efficiencies listed in WSEC Table C403.3.2(3) or C403.3.2(15), in the appropriate size category, using the same test procedures. Equipment shall be listed in the appropriate certification program to qualify for this exception. For split systems, compliance is based on the cooling capacity of individual fan coil units.

6. Equipment used to cool Controlled Plant Growth Environments provided these are high-efficiency cooling equipment with SEER, EER, and IEER values a minimum of 20 percent greater than the values listed in WSEC Tables C403.3.2 (1), (3), (4), and (15).

7. Equipment serving a space with year-round cooling loads from lights and equipment of 5 watts per square foot (53.82 watts per square meter) or greater complying with the following criteria:

7.1. Equipment serving the space utilizes chilled water as the cooling source;  
and

7.2. The chilled water plant includes a condenser heat recovery system that meets the requirements of WSEC C403.9.5 or the building and water-cooled system meets the following requirements:

7.2.1. A minimum of 90 percent (capacity-weighted) of the building space heat is provided by hydronic heating water.

1998 7.2.3. Heat recovery chillers shall have a minimum COP of 7.0 when

1999 providing heating and cooling water simultaneously.

2002 9. Dedicated outdoor air systems that include energy recovery as required by  
2003 WSEC C403.7.6 but that do not include mechanical cooling.

2008 12. Equipment used to cool any dedicated server room, electronic equipment  
2009 room, elevator machine room or telecom switch room provided the system complies with  
2010 Option a, b, c, d, or e in WSEC Table C403.5(9) below. The total cooling capacity of all  
2011 fan systems qualifying under this exception without economizers shall not exceed  
2012 240,000 Btu/h (253,213 kilojoules/h) per building or 10 percent of its air economizer  
2013 capacity, whichever is greater. This exception shall not be used for Total Building  
2014 Performance or Target Performance Path compliance.

2017 **Table C403.5(9)**



2018 **Server room, electronic equipment room, or telecom room cooling equipment**

|          | <b>Equipment Type</b>                                               | <b>Higher<br/>Equipmen<br/>t<br/>Efficiency</b> | <b>Part-Load Control</b>                   | <b>Economizer</b>                                 |
|----------|---------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------|---------------------------------------------------|
| Option a | Tables C403.3.2(1),<br>C403.3.2(2) and<br>C403.3.2(14) <sup>a</sup> | +15% <sup>b</sup>                               | Required over 85,000<br>Btu/h <sup>c</sup> | None Required                                     |
| Option b | Tables C403.3.2(1),<br>C403.3.2(2) and<br>C403.3.2(14) <sup>a</sup> | +5% <sup>d</sup>                                | Required over 85,000<br>Btu/h <sup>c</sup> | Waterside<br>Economizer <sup>5</sup>              |
| Option c | ASHRAE Standard<br>127 <sup>f</sup>                                 | +0% <sup>g</sup>                                | Required over 85,000<br>Btu/h <sup>c</sup> | Waterside<br>Economizer <sup>e</sup>              |
| Option d | Table C403.3.2(7) <sup>h</sup>                                      | + 25% <sup>i</sup>                              | Required for all chillers <sup>j</sup>     | None Required                                     |
| Option e | Table C403.3.2(7) <sup>h</sup>                                      | + 10/15% <sup>k</sup>                           | Required over<br>85,000 Btu/h <sup>c</sup> | Dedicated<br>waterside<br>Economizer <sup>e</sup> |

2019 Footnotes:

2020 a. For a system where all of the cooling equipment is subject to the AHRI  
 2021 standards listed in WSEC Tables C403.3.2(1), C403.3.2(2), and C403.3.2 (14), the  
 2022 system shall comply with the higher equipment efficiency, part-load control and  
 2023 economizer requirements of the row in which this footnote is located, including the  
 2024 associated footnotes (note that if the system contains any cooling equipment that exceeds

the capacity limits in WSEC Table C403.3.2(1), C403.3.2(2), or C403.3.2 (14), or if the system contains any cooling equipment that is not included in WSEC Table C403.3.2(1), C403.3.2(2), or C403.3.2 (14), then the system is not allowed to use this option).

b. The cooling equipment shall have a SEER/EER value and an IEER/IPLV value that each is a minimum of 15 percent greater than the value listed in WSEC Tables C403.3.2(1), C403.3.2(2), and C403.3.2 (14).

c. For units with a total cooling capacity over 85,000 Btu/h (89,680 kilojoules/h), the system shall utilize part-load capacity control schemes that are able to modulate to a part-load capacity of 50 percent of the load or less that results in the compressor operating at the same or higher EER at part loads than at full load (e.g., minimum of 2-stages of compressor unloading such as cylinder unloading, two-stage scrolls, dual tandem scrolls, but hot gas bypass is not credited as a compressor unloading system).

d. The cooling equipment shall have a SEER/EER value and an IEER/IPLV value that each is a minimum of 5 percent greater than the value listed in WSEC Tables C403.3.2(1), C403.3.2(2), and C403.3.2 (14).

e. The system shall include a water economizer in lieu of air economizer. Water economizers shall meet the requirements of WSEC C403.5.1 and C403.5.2 and be capable of providing the total concurrent cooling load served by the connected terminal equipment lacking airside economizer, at outside air temperatures of 50° Fahrenheit (10° Celsius) dry-bulb/45° Fahrenheit (7° Celsius) wet-bulb and below. For this calculation, all factors including solar and internal load shall be the same as those used for peak load calculations, except for the outside temperatures. The equipment shall be served by a dedicated condenser water system unless a nondedicated condenser water system exists

that can provide appropriate water temperatures during hours when waterside economizer cooling is available.

f. For a system where all cooling equipment is subject to ASHRAE Standard 127, the system shall comply with the higher equipment efficiency, part-load control, and economizer requirements of the row in which this footnote is located, including the associated footnotes.

g. The cooling equipment subject to the ASHRAE Standard 127 shall have an SCOP value that is a minimum of 10 percent greater than the value listed in WSEC Tables C403.3.2(1), C403.3.2(2), and C403.3.2 (14) ( $1.10 \times$  values in these tables) when determined in accordance with the rating conditions ASHRAE Standard 127 (i.e., not the rating conditions in AHRI Standard 210/240 or 340/360). This information shall be provided by an independent third party.

h. For a system with chillers subject to the AHRI standards listed in WSEC Table C403.3.2(7) (as an example, a chilled water system with fan coil units), the system shall comply with the higher equipment efficiency, part-load control, and economizer requirements of the row in which this footnote is located, including the associated footnotes.

i. The cooling equipment shall have an full-load EER value and an IPLV value that is a minimum of 25 percent greater than the value listed in WSEC Table C403.3.2(7) ( $1.25 \times$  value in Table C403.3.2(7) or a full-load and IPLV kilowatts per ton that is at least 25 percent lower than the value listed in WSEC Table C403.3.2(7) ( $0.75 \times$  value in Table C403.3.2(7))).

j. For all chillers, the system shall utilize part-load capacity control schemes that are able to modulate to a part-load capacity of 50 percent of the load or less and that result in the compressor operating at the same or higher EER at part loads than at full load (e.g., minimum of two-stages of compressor unloading such as cylinder unloading, two-stage scrolls, or dual tandem scrolls, but hot gas bypass is not a qualifying compressor unloading system).

k. For air-cooled chillers, the cooling equipment shall have an IPLV EER value that is a minimum of 10 percent greater than the IPLV EER value listed in WSEC Table C403.3.2(7) ( $1.10 \times$  values in Table C403.3.2(7)). For water-cooled chillers, the cooling equipment shall have an IPLV kilowatts per ton that is at least 15 percent lower than the IPLV kilowatts per ton value listed in WSEC Table C403.3.2(7) ( $0.85 \times$  values in Table C403.3.2(7)).

**Table C403.5(3)**

**Equipment Efficiency Performance**

| Climate Zones | Efficiency Improvement <sup>a</sup> |
|---------------|-------------------------------------|
| 4C            | 64%                                 |
| 5B            | 59%                                 |

Footnote:

a. If a unit is rated with an IPLV, IEER, or SEER then to eliminate the required air or water economizer, the minimum cooling efficiency of the HVAC unit must be increased by the percentage shown. If the HVAC unit is only rated with a full load metric like EER or COP cooling, then these must be increased by the percentage shown.

2089            NEW SECTION. SECTION 56. There is hereby added to K.C.C. chapter 16.07  
2090 a new section to read as follows:

2091            Section C403.7 of the Washington State Energy Code is not adopted.

2092            **Ventilation and exhaust systems (WSEC C403.7).** In addition to other  
2093 requirements of WSEC C403 applicable to the provisions of ventilation air or the exhaust  
2094 of air, ventilation, and exhaust systems shall be in accordance with WSEC C403.7.1  
2095 through C403.7.8 and WSEC C403.8.7.

2096            SECTION 57. Ordinance 19485, Section 86, and K.C.C. 16.07.180 are hereby  
2097 amended to read as follows:

2098            Section C403.7.6 of the ((~~International Energy Conservation~~)) Washington State  
2099 Energy Code is not adopted and the following is substituted:

2100            **Energy recovery ventilation systems (((IECC))) WSEC C403.7.6.** ((~~Any~~  
2101 ~~system with minimum outside air requirements at design conditions more than 5,000 cfm~~  
2102 ~~or any system where the system's supply airflow rate exceeds the value listed in IECC~~  
2103 ~~Tables C403.7.6(1) and C403.7.6(2), based on the climate zone and percentage of~~  
2104 ~~outdoor airflow rate at design conditions, shall include an energy recovery system. IECC~~  
2105 ~~Table C403.7.6(1) shall be used for all ventilation systems that operate less than 8,000~~  
2106 ~~hours per year, and IECC Table C403.7.6(2) shall be used for all ventilation systems that~~  
2107 ~~operate 8,000 hours or more per year. The energy recovery system shall have the~~  
2108 ~~capability to provide a change in the enthalpy of the outdoor air supply of not less than 60~~  
2109 ~~percent of the difference between the outdoor air and return air enthalpies, at design~~  
2110 ~~conditions. Where an air economizer is required, the energy recovery system shall~~  
2111 ~~include a bypass of the energy recovery media for both the outdoor air and exhaust air or~~

2112 ~~return air dampers and controls which permit operation of the air economizer as required~~  
2113 ~~by IECC C403.5. Where a single room or space is supplied by multiple units, the~~  
2114 ~~aggregate ventilation (cfm) of those units shall be used in applying this requirement. The~~  
2115 ~~return/exhaust air stream temperature for heat recovery device selection shall be 70° F~~  
2116 ~~(21° C) at 30 percent relative humidity, or as calculated by the registered design~~  
2117 ~~professional.~~

2118 ~~EXCEPTIONS:~~

2119 ~~1. The energy recovery systems for occupancy type I-2 hospitals, medical office~~  
2120 ~~buildings and buildings that primarily consist of technical laboratory spaces may provide~~  
2121 ~~a change of enthalpy of the outdoor air and return air of not less than 50 percent of the~~  
2122 ~~difference between the outdoor air and return air enthalpies, at design conditions. These~~  
2123 ~~occupancies may also use exception 3.~~

2124 ~~2. The energy recovery systems for R-1 and R-2 occupancies shall have a 60~~  
2125 ~~percent minimum sensible heat recovery effectiveness, in lieu of 60 percent enthalpy~~  
2126 ~~recovery effectiveness. The return/exhaust air stream temperature for heat recovery~~  
2127 ~~device selection shall be 70° F (21° C), or as calculated by the registered design~~  
2128 ~~professional.~~

2129 ~~3. An energy recovery ventilation system shall not be required under the~~  
2130 ~~following conditions:~~

2131 ~~3.1. Where energy recovery systems are restricted by International Mechanical~~  
2132 ~~Code Section 514 to sensible energy, recovery shall comply with the following:~~

2133 ~~a. Kitchen exhaust systems where they comply with IECC C403.7.7.1;~~

- 2134           b. ~~Laboratory fume hood systems where they comply with Exception 2 of~~  
2135 ~~IECC C403.7.6; or~~
- 2136           c. ~~Other sensible energy recovery systems with the capability to provide a~~  
2137 ~~change in dry bulb temperature of the outdoor air supply of not less than 50 percent of the~~  
2138 ~~difference between the outdoor air and the return air dry bulb temperatures, at design~~  
2139 ~~conditions.~~
- 2140           3.2. ~~Laboratory fume hood systems that include at least one of the following~~  
2141 ~~features and also comply with IECC C403.7.7.2:~~
- 2142           a. ~~Variable air volume hood exhaust and room supply systems capable of~~  
2143 ~~reducing exhaust and makeup air volume to 50 percent or less of design values; or~~
- 2144           b. ~~Direct makeup (auxiliary) air supply equal to at least 75 percent of the~~  
2145 ~~exhaust rate, heated no warmer than 2° F (1.1° C) above room set point, cooled to no~~  
2146 ~~cooler than 3° F (1.7° C) below room set point, no humidification added and no~~  
2147 ~~simultaneous heating and cooling used for dehumidification control.~~
- 2148           3.3. ~~Systems serving spaces that are heated to less than 60° F (15.5° C) and are~~  
2149 ~~not cooled.~~
- 2150           3.4. ~~Where more than 60 percent of the outdoor air heating energy is provided~~  
2151 ~~from site recovered energy.~~
- 2152           3.5. ~~Systems exhausting toxic, flammable, paint or corrosive fumes or dust.~~
- 2153           3.6. ~~Cooling energy recovery in Climate Zones 3C, 4C, 5B, 5C, 6B, 7 and 8.~~
- 2154           3.7. ~~Systems requiring dehumidification that use energy recovery in series with~~  
2155 ~~the cooling coil.~~

2156           ~~3.8. Multi-zone systems where the supply airflow rate is less than the values~~  
2157 ~~specified in IECC Tables C403.7.6(1) and C403.7.6(2) for the corresponding percent of~~  
2158 ~~outdoor air. Where a value of NR is listed, energy recovery shall not be required.~~

2159           ~~3.9. Equipment which meets the requirements of IECC C403.9.2.4.~~

2160           ~~3.10. Systems serving Group R-1 and R-3 dwelling or sleeping units where the~~  
2161 ~~largest source of air exhausted at a single location at the building exterior is less than 25~~  
2162 ~~percent of the design outdoor air flow rate.)) Energy recovery ventilation systems shall be~~  
2163 ~~provided as specified in WSEC C403.7.6.1 and C403.7.6.2.~~

2164           C403.7.6.1 Ventilation for Group R-2 occupancy. For all Group R-2 dwelling  
2165 and sleeping units, a balanced ventilation system with heat recovery system with  
2166 minimum 67 percent sensible recovery effectiveness shall provide outdoor air directly to  
2167 each habitable space in accordance with the IMC. The ventilation system shall allow for  
2168 the design flow rates to be tested and verified at each habitable space as part of the  
2169 commissioning process in accordance with WSEC C408.2.2. The return/exhaust air  
2170 stream temperature for heat recovery device selection shall be 70° Fahrenheit (21°  
2171 Celsius), or as calculated by the registered design professional.

2172           **EXCEPTION:** Heat recovery and energy recovery ventilators (H/ERVs) that are  
2173 rated and listed in accordance with HVI 920 can demonstrate compliance with the  
2174 sensible recovery effectiveness requirement using the sensible recovery effectiveness  
2175 (ASRE) rating of the equipment at 32° Fahrenheit (0° Celsius) test conditions. Applied  
2176 flow rate for ASRE rating shall be no less than the design flow rate or the closest value  
2177 interpolated between two listed flow rates.



C403.7.6.2. Spaces other than Group R-2 dwelling or sleeping units. Any system serving a space other than a Group R-2 dwelling or sleeping unit with minimum outside air requirements at design conditions greater than 5,000 cubic feet per minute (2,360 liters per second) or any system where the system's supply airflow rate exceeds the value listed in WSEC Tables C403.7.6(1) and C403.7.6(2), based on the climate zone and percentage of outdoor airflow rate at design conditions, shall include an energy recovery system. WSEC Table C403.7.6(1) shall be used for all ventilation systems that operate less than 8,000 hours per year, and WSEC Table C403.7.6(2) shall be used for all ventilation systems that operate 8,000 hours or more per year. The energy recovery system shall provide a 67 percent minimum sensible recovery effectiveness or have an enthalpy recovery ratio of not less than 60 percent at design conditions. Where an air economizer is required, the energy recovery system shall include a bypass of the energy recovery media for both the outdoor air and exhaust air, bypass of the energy recovery media for only the outdoor air controlled in accordance with WSEC C403.3.5.6, or return air dampers and controls which permit operation of the air economizer as required by WSEC C403.5. Where a single room or space is supplied by multiple units, the aggregate ventilation (cubic feet per minute or liters per second) of those units shall be used in applying this requirement. The return/exhaust air stream temperature for heat recovery device selection shall be 70° Fahrenheit (21° Celsius) at 30 percent relative humidity, or as calculated by the registered design professional.

**EXCEPTION:** An energy recovery ventilation system shall not be required in any of the following conditions:

2200           1. Where energy recovery systems are restricted in accordance with Section 514  
2201 of the IMC to sensible energy recovery, the system shall comply with one of the  
2202 following:

2203           1.1. Kitchen exhaust systems where they comply with WSEC C403.7.7.1.

2204           1.2. Laboratory fume exhaust systems where they comply with WSEC  
2205 C403.7.7.2.

2206           1.3. Other sensible energy recovery systems with the capability to provide a  
2207 change in dry-bulb temperature of the outdoor air supply of not less than 50 percent of  
2208 the difference between the outdoor air and the return air dry-bulb temperatures, at design  
2209 conditions. Where an air economizer is required, the energy recovery system shall  
2210 include a bypass of the energy recovery media for both the outdoor air and exhaust air or  
2211 bypass of the energy recovery media for only the outdoor air controlled in accordance  
2212 with WSEC C403.3.5.6.

2213           2. Buildings with laboratory fume exhaust systems having a total exhaust rate  
2214 less than or equal to 5,000 cubic feet per minute (2,360 liters per second) shall include at  
2215 least one of the following features or shall comply with WSEC C403.7.7.2:

2216           2.1 Variable-air-volume hood exhaust and room supply systems configured to  
2217 reduce exhaust and makeup air volume to 50 percent or less of design values.

2218           2.2. Direct makeup (auxiliary) air supply equal to at least 75 percent of the  
2219 exhaust rate, heated no warmer than 2° Fahrenheit (-17° Celsius) above room setpoint,  
2220 cooled to no cooler than 3° Fahrenheit (-16° Celsius) below room setpoint, no  
2221 humidification added, and no simultaneous heating and cooling used for dehumidification  
2222 control.

- 2223           3. Systems serving spaces that are heated to less than 60° Fahrenheit (16°  
2224 Celsius) and are not cooled.
- 2225           4. Where more than 60 percent of the outdoor air heating energy is provided from  
2226 site-recovered energy.
- 2227           5. Systems exhausting hazardous, toxic, flammable, paint or corrosive fumes, or  
2228 dust. This exception may not be used for laboratory fume exhaust systems required to  
2229 comply with Exception 2 of WSEC C403.7.6 or C403.7.7.2 without approval of the code  
2230 official.
- 2231           6. Cooling energy recovery.
- 2232           7. Systems requiring dehumidification that employ energy recovery in series with  
2233 the cooling coil.
- 2234           8. Multiple-zone systems where the supply airflow rate is less than the values  
2235 specified in WSEC Tables C403.7.6 (1) and (2), for the corresponding percent of outdoor  
2236 air. Where a value of NR is listed, energy recovery shall not be required.
- 2237           9. Equipment which meets the requirements of WSEC C403.9.2.4.
- 2238           10. Systems serving Group R-1 dwelling or sleeping units where the largest  
2239 source of air exhausted at a single location at the building exterior is less than 25 percent  
2240 of the design outdoor air flow rate.
- 2241           11. Systems serving Ambulatory Care Facilities and Group I-2 Occupancies  
2242 ventilated in accordance with IMC 407, systems exhausting environmental exhaust air in  
2243 research or education laboratory spaces complying with the Seattle Director's Rule  
2244 alternate of IMC 510, and systems exhausting environmental exhaust air in spaces that  
2245 have Hazardous Exhaust Systems complying with IMC 510, are permitted to provide a 60

2246 percent minimum sensible heat recovery effectiveness or have an enthalpy heat recovery  
 2247 ratio of not less than 50 percent at design conditions. Where an air economizer is  
 2248 required, the energy or heat recovery system shall include a bypass of the energy or heat  
 2249 recovery media for both the outdoor air and exhaust air or bypass of the energy recovery  
 2250 media for only the outdoor air controlled in accordance with WSEC C403.3.5.6.

2251 **Table C403.7.6(1)**

2252 **Energy Recovery Requirement**

| <u>Percent (%) Outdoor Air at Full Design Airflow Rate</u> |              |              |              |              |              |              |                |                |
|------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| <u>Climate</u>                                             | <u>≥ 10%</u> | <u>≥ 20%</u> | <u>≥ 30%</u> | <u>≥ 40%</u> | <u>≥ 50%</u> | <u>≥ 60%</u> | <u>≥ 70%</u>   | <u>≥ 80%</u>   |
| <u>zone</u>                                                | <u>and</u>   | <u>and</u>   | <u>and</u>   | <u>and</u>   | <u>and</u>   | <u>and</u>   | <u>and</u>     |                |
|                                                            | <u>≤ 20%</u> | <u>≤ 30%</u> | <u>≤ 40%</u> | <u>≤ 50%</u> | <u>≤ 60%</u> | <u>≤ 70%</u> | <u>≤ 80%</u>   |                |
| <u>Design Supply Fan Airflow Rate (cfm)</u>                |              |              |              |              |              |              |                |                |
| <u>4C, 5B</u>                                              | <u>NR</u>    | <u>NR</u>    | <u>NR</u>    | <u>NR</u>    | <u>NR</u>    | <u>NR</u>    | <u>≥ 5,000</u> | <u>≥ 5,000</u> |

2253 NR = Not required.

2254 **Table C403.7.6(2)**

2255 **Energy Recovery Requirement**

| <u>Percent (%) Outdoor Air at Full Design Airflow Rate</u> |                |                 |                |                |                |                |                |              |
|------------------------------------------------------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|--------------|
| <u>Climate</u>                                             | <u>≥ 10%</u>   | <u>≥ 20%</u>    | <u>≥ 30%</u>   | <u>≥ 40%</u>   | <u>≥ 50%</u>   | <u>≥ 60%</u>   | <u>≥ 70%</u>   | <u>≥ 80%</u> |
| <u>zone</u>                                                | <u>and</u>     | <u>and</u>      | <u>and</u>     | <u>and</u>     | <u>and</u>     | <u>and</u>     | <u>and</u>     |              |
|                                                            | <u>≤ 20%</u>   | <u>≤ 30%</u>    | <u>≤ 40%</u>   | <u>≤ 50%</u>   | <u>≤ 60%</u>   | <u>≤ 70%</u>   | <u>≤ 80%</u>   |              |
| <u>Design Supply Fan Airflow Rate (cfm)</u>                |                |                 |                |                |                |                |                |              |
| <u>4C</u>                                                  | <u>NR</u>      | <u>≥ 19,500</u> | <u>≥ 9,000</u> | <u>≥ 5,000</u> | <u>≥ 4,000</u> | <u>≥ 3,000</u> | <u>≥ 1,500</u> | <u>≥ 120</u> |
| <u>5B</u>                                                  | <u>≥ 2,500</u> | <u>≥ 2,000</u>  | <u>≥ 1,000</u> | <u>≥ 500</u>   | <u>≥ 140</u>   | <u>≥ 120</u>   | <u>≥ 100</u>   | <u>≥ 80</u>  |

2256 NR = Not required.

2257 NEW SECTION. SECTION 58. There is hereby added to K.C.C. chapter 16.07

2258 a new section to read as follows:

2259           Section C403.7.8.1 of the Washington State Energy Code is not adopted and the  
2260 following is substituted:

2261           **Shutoff dampers for building isolation (WSEC C403.7.8.1).** Outdoor air  
2262 supply, exhaust openings and relief outlets, and stairway and elevator hoistway shaft  
2263 vents shall be provided with Class I motorized dampers. See WSEC C403.10.1 and  
2264 C403.10.2 for ductwork insulation requirements upstream and downstream of the shutoff  
2265 damper.

2266           **EXCEPTIONS:**

2267           1. Gravity (nonmotorized) dampers shall be permitted in lieu of motorized  
2268 dampers as follows:

2269           1.1. Relief dampers serving systems less than 300 cubic feet per minute (142  
2270 liters per second) total supply shall be permitted.

2271           1.2. Gravity (nonmotorized) dampers where the design outdoor air intake or  
2272 exhaust capacity does not exceed 300 cubic feet per minute (142 liters per second).

2273           1.3. Systems serving areas which require continuous operation for continuous  
2274 occupancy schedules.

2275           2. Shutoff dampers are not required in:

2276           2.1. Combustion air intakes.

2277           2.2. Systems serving areas which require continuous operation in animal  
2278 hospitals, kennels and pounds, laboratories, and Group H, I and R occupancies.

2279           2.3. Subduct exhaust systems or other systems that are required to operate  
2280 continuously by the IMC.

2281           2.4. Type I grease exhaust systems or other systems where dampers are  
2282 prohibited by the IMC to be in the airstream.

2283           2.5. Unconditioned stairwells or unconditioned elevator hoistway shafts that are  
2284 only connected to unconditioned spaces.

2285           NEW SECTION. SECTION 59. There is hereby added to K.C.C. chapter 16.07  
2286 a new section to read as follows:

2287           Section C403.8.4 of the Washington State Energy Code is not adopted and the  
2288 following is substituted:

2289           **Low capacity fans (WSEC C403.8.4).** Mechanical ventilation system types  
2290 listed in WSEC Table C403.8.4 with an input power less than 746 watts or one  
2291 horsepower shall meet the efficacy requirements of WSEC Table C403.8.4. Airflow  
2292 shall be tested in accordance with the test procedure referenced in WSEC Table C403.8.4  
2293 and listed. The efficacy, airflow divided by power, shall be reported in the product listing  
2294 or shall be derived from the input power and airflow values reported in the product listing  
2295 or on the label. The efficacy shall be determined using the input power at a listed airflow  
2296 that is not less than the design airflow or shall be determined by interpolating between the  
2297 input power at the two nearest listed airflow rates. Design airflow, power, and efficacy  
2298 shall be reported on the mechanical equipment schedule submitted in the permit  
2299 documents.

2300           **EXCEPTIONS:**

2301           1. Where ventilation fans are a component of a listed heating or cooling  
2302 appliance.

2321 **Low-Capacity Ventilation Fan Efficacy<sup>a</sup>**

|                                                             |              |                  |                            |                                             |
|-------------------------------------------------------------|--------------|------------------|----------------------------|---------------------------------------------|
| Balanced ventilation system without heat or energy recovery | Any          | 1.2 <sup>a</sup> | 0.2 inch w.c.              | ASHRAE Standard 51 (ANSI/AMCA Standard 210) |
| HRV or ERV                                                  | Any          | 1.7 <sup>a</sup> | 0.2 inch w.c. <sup>b</sup> | CAN/CSA 439-18                              |
| Range hood                                                  | Any          | 2.8              | 0.1 inch w.c.              | ASHRAE 51 (ANSI/AMCA Standard 210)          |
| In-line supply or exhaust fan                               | Any          | 3.8              | 0.2 inch w.c.              |                                             |
| Other exhaust fan                                           | <90          | 2.8              | 0.1 inch w.c.              |                                             |
|                                                             | >90 and <200 | 3.5              | 0.1 inch w.c.              |                                             |
|                                                             | >200         | 4.0              | 0.1 inch w.c.              |                                             |

2322 w.c. = inches of water column

2323 For SI: 1 cubic foot per minute = 47.82 watts.

2324 Footnotes:

2325 a. For balanced systems, HRVs, and ERVs, the efficacy shall be determined as

2326 the outdoor airflow divided by the total fan power of the system.

2327 b. The minimum static pressure for determining HRV or ERV fan efficacy shall

2328 be 0.4 inch w.c. for airflows greater than or equal to 100 liters per second.

2329 NEW SECTION. SECTION 60. There is hereby added to K.C.C. chapter 16.07

2330 a new section to read as follows:

2331 Section C403.8 of the Washington State Energy Code is supplemented

2332 with the following:



2333           **Occupied standby controls (WSEC C403.8.7).** Occupied standby controls in  
2334 compliance with WSEC C403.8.7.1 and C403.8.7.2 are required for zones and systems  
2335 serving zones where no less than 90 percent of the floor area of the zone consists of use  
2336 types including those listed below and other space types with similar functions, and none  
2337 of the spaces within the zone are required by the IMC to have ventilation airflow greater  
2338 than zero when unoccupied:

- 2339           1. Classroom/lecture/training rooms.
- 2340           2. Conference/meeting/multipurpose rooms.
- 2341           3. Lounges and breakrooms.
- 2342           4. Enclosed offices/open office areas/reception areas/lobbies.
- 2343           5. Assembly areas.
- 2344           6. Library stacks.

2345           C403.8.7.1 Occupied standby zone controls. For zones meeting the occupied-  
2346 standby control criteria, within 5 minutes of all rooms in that zone entering occupied-  
2347 standby mode, the zone control shall operate as follows:

- 2348           1. Active heating set point shall be setback at least 1° Fahrenheit (-17° Celsius).
- 2349           2. Active cooling set point shall be setup at least 1° Fahrenheit (-17° Celsius).
- 2350           3. Airflow supplied to the zone shall be controlled as follows, depending on  
2351 system type:

2352           3.1. Spaces that are required to have occupancy sensors in accordance with  
2353 WSEC C403.7.2 are required to shut off the outdoor airflow in accordance with that  
2354 section.

2355           3.2. DOAS that serve multiple heating and cooling system zones without  
2356 automatic zone control dampers are not required to shut off the DOAS supply airflow by  
2357 zone. A system is considered a small DOAS when:

2358           a. The area served is no greater than 25,000 square feet (2,323.6 square  
2359 meters) of conditioned floor area; and

2360           b. The DOAS does not serve more than one floor.

2361           3.3. Other DOAS that serve multiple heating and cooling system zones without  
2362 automatic zone control dampers are required to shut off the DOAS supply airflow when  
2363 all the zones on any one floor or in any one area up to 25,000 square feet (2,323.6 square  
2364 meters) enter occupied-standby mode. The maximum zone sizes for DOAS supply  
2365 airflow shutoff are as follows:

2366           a. 25,000 square feet (2,323.6 square meters) of conditioned floor area; or

2367           b. not more than one floor.

2368           3.4. For systems other than those identified in subsections 3.2. and 3.3., all  
2369 airflow (outdoor airflow and supply airflow) supplied to the zone shall be shut off  
2370 whenever the space temperature is between the active heating and cooling set points.

2371           **EXCEPTION:** Airflow (outdoor airflow and supply airflow) for replacement air  
2372 or makeup air is permitted to be supplied during occupied-standby mode for any of the  
2373 space types identified in 3.1 through 3.4 above.

2374           C403.8.7.2. Occupied standby system controls. Multiple zone systems that are  
2375 capable of automatically resetting or that are required in accordance with WSEC  
2376 C403.6.10 to reset the effective minimum outdoor air setpoint and that serve zones with  
2377 occupied-standby zone controls shall reset the effective minimum outdoor air setpoint

2378 based on a zone outdoor air requirement of zero for all zones in occupied-standby mode.  
2379 Sequences of operation for system outside air reset shall comply with an approved  
2380 method.

2381 **EXCEPTION:** Airflow (outdoor airflow and supply airflow) for replacement air  
2382 or makeup air is permitted to be supplied during occupied-standby mode.

2383 NEW SECTION. SECTION 61. There is hereby added to K.C.C. chapter 16.07  
2384 a new section to read as follows:

2385 Section C403.10.1.2 of the Washington State Energy Code is not adopted  
2386 and is substituted with the following:

2387 **Other supply and return ducts (WSEC C403.10.1.2).** All other supply and  
2388 return air ducts and plenums shall be insulated with a minimum of R-6 insulation where  
2389 located in unconditioned spaces, and with a minimum of R-8 insulation where located  
2390 outside the building in Climate Zone 4. Ducts located underground beneath buildings  
2391 shall be insulated as required in this section or have an equivalent thermal distribution  
2392 efficiency. Underground ducts utilizing the thermal distribution efficiency method shall  
2393 be listed and labeled to indicate the R-value equivalency. Where located within a  
2394 building envelope assembly, the duct or plenum shall be separated from the building  
2395 exterior or unconditioned or exempt spaces by minimum insulation value as required for  
2396 exterior walls by WSEC C402.1.3.

2397 **EXCEPTIONS:**

- 2398 1. Where located within equipment.
- 2399 2. Supply and return ductwork located in unconditioned spaces where the design  
2400 temperature difference between the interior and exterior of the duct or plenum does not

2401 exceed 15° Fahrenheit (-9° Celsius) and are insulated in accordance with WSEC Table  
2402 C403.10.1.2.

2403 Where located within conditioned space, ducts that convey air from outside the  
2404 conditioned space shall be insulated with a minimum insulation R-value in accordance  
2405 with WSEC Table C403.10.1.2.

2406 Where located within conditioned space, ducts that convey ambient air to and  
2407 from outside for the condenser section of HVAC heat pumps, service hot water heat  
2408 pumps, or air conditioning units shall be insulated with a minimum insulation R-value in  
2409 accordance with WSEC Table C403.10.1.2.

2410 All ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall  
2411 comply with IMC 603.9.

2412 **Table C403.10.1.2**

2413 **Supply, Return, Exhaust, and Relief Air Ductwork Insulation**

| <b>Duct System</b>          | <b>Duct Location<br/>and Use</b>                                                | <b>Climate Zone</b> | <b>Minimum<br/>Installed Duct<br/>Insulation<br/>R-value<sup>a, b</sup></b> | <b>Notes</b>                           |
|-----------------------------|---------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------|----------------------------------------|
| Supply air or<br>return air | Outside the<br>building<br>(outdoors and<br>exposed to<br>weather) <sup>c</sup> | 4C                  | R-8                                                                         | See WSEC<br>C403.10.1.2 for<br>details |

|                          |                                                                                                                                  |           |       |                                                                                               |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------------------------------------------------------------------------------------------|
| Supply air or return air | Unconditioned space (enclosed but not in the building conditioned envelope)                                                      | 4C and 5B | R-6   | See WSEC C403.10.1.2 for details                                                              |
| Supply air or return air | Unconditioned space where the duct conveys air that is within 15°F of the air temperature of the surrounding unconditioned space | 4C and 5B | R-3.3 | See IMC Section 603.12 for additional requirements for condensation control at ductwork       |
| Supply air or return air | Where located in a building envelope assembly                                                                                    | 4C and 5B | R-16  | Duct or plenum is separated from building envelope assembly with the minimum insulation value |
| Supply air               | Within                                                                                                                           | 4C and 5B | R-3.3 | See WSEC                                                                                      |

|            |                                                                                                                                                               |           |      |                                        |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|----------------------------------------|
|            | conditioned space<br>where the supply<br>duct conveys air<br>that is less than<br>55°F or greater<br>than 105°F                                               |           |      | C403.10.1.2 for<br>details             |
| Supply air | Within<br>conditioned space<br>that the duct<br>directly serves<br>where the supply<br>duct conveys air<br>that is less than<br>55°F or greater<br>than 105°F | 4C and 5B | None | See WSEC<br>C403.10.1.2 for<br>details |
| Supply air | Within<br>conditioned space<br>where the supply<br>duct conveys air<br>that is 55°F or<br>greater and 105°F<br>or less                                        | 4C and 5B | None |                                        |

|                                 |                                                                                                           |           |                                                   |  |
|---------------------------------|-----------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------|--|
| Return or exhaust air           | Within conditioned space, downstream of an energy recovery media, upstream of an automatic shutoff damper | 4C        | R-8                                               |  |
| Relief or exhaust air           | Conditioned space and downstream of an automatic shutoff damper                                           | 4C and 5B | R-16                                              |  |
| Exhaust or other air duct       | Duct conveying air from unconditioned space through conditioned space                                     | 4C and 5B | R-16                                              |  |
| Condenser air intake and outlet | Conditioned space and conveys ambient air to or from the                                                  | 4C and 5B | < 2,800 CFM =<br>R-8<br><br>≥ 2,800 CFM =<br>R-16 |  |

|  |                                                  |  |  |  |
|--|--------------------------------------------------|--|--|--|
|  | outdoors to heat<br>pump or AC unit<br>condenser |  |  |  |
|--|--------------------------------------------------|--|--|--|

2414 Footnotes:

2415 a. Insulation R-values, measured in h•ft<sup>2</sup>•°F/Btu, are for the insulation as  
 2416 installed and do not include film resistance. The required minimum thicknesses do not  
 2417 consider water vapor transmission and possible surface condensation. Insulation  
 2418 resistance measured on a horizontal plane in accordance with ASTM C518 at a mean  
 2419 temperature of 75° Fahrenheit (24° Celsius) at the installed thickness.

2420 b. See IMC 603.12 and 604 for further details on duct insulation requirements.

2421 c. Includes attics above insulated ceilings, parking garages, and crawl spaces.

2422 NEW SECTION. SECTION 62. There is hereby added to K.C.C. chapter 16.07

2423 a new section to read as follows:

2424 Section C403.10.2 of the Washington State Energy Code is not adopted  
 2425 and is substituted with the following:

2426 **Duct construction (WSEC 403.10.2).** Ductwork shall be constructed and  
 2427 erected in accordance with the IMC. For the purposes of this section, longitudinal seams  
 2428 are joints oriented in the direction of airflow. Transverse joints are connections of two  
 2429 duct sections oriented perpendicular to airflow. Duct wall penetrations are openings  
 2430 made by any screw, fastener, pipe, rod, or wire. All other connections are considered  
 2431 transverse joints including, but not limited to, spin- ins, taps, and other branch  
 2432 connections, access door frames and jambs, and duct connections to equipment. Ducts  
 2433 shall be leak-tested where required by WSEC C403.10.2.4.



2434           NEW SECTION. SECTION 63. There is hereby added to K.C.C. chapter 16.07  
2435 a new section to read as follows:

2436                   Section C403.10.2 of the Washington State Energy Code is supplemented  
2437 with the following:

2438           **Duct leak testing (WSEC C403.10.2.4).** Ducts and plenums designed to operate  
2439 at static pressures equal to or greater than 3 inches water gauge (w.g.) (750 pascals) and  
2440 all supply and return ductwork that is located outside the building thermal envelope and  
2441 that serves conditioned space, regardless of the Design Construction Pressure Class level,  
2442 shall be leak-tested in accordance with the SMACNA HVAC Air Duct Leakage Test  
2443 Manual and shown to have a rate of air leakage (CL) less than or equal to 4, as  
2444 determined in accordance with Equation 4-12. Ducts shall be tested using a pressure  
2445 equal to the average operating pressure or the design Duct Construction Pressure Class  
2446 level in accordance with the SMACNA HVAC Air Duct Leakage Test Manual.

2447           **Equation 4-12:**

2448            $CL = F/P^{0.65}$

2449           Where:

2450           F = The measured leakage rate in cubic feet per minute per 100 square feet of duct  
2451 surface.

2452           P = The static pressure of the test.

2453           Documentation shall be furnished demonstrating that representative sections  
2454 totaling at least 25 percent of the duct area have been tested and that all tested sections  
2455 meet the requirements of this section.

2456           NEW SECTION. SECTION 64. There is hereby added to K.C.C. chapter 16.07  
2457 a new section to read as follows:

2458                   Section C403.11.1 of the Washington State Energy Code is not adopted  
2459 and is substituted with the following:

2460           **Heating outside a building or in unheated spaces (WSEC C403.11.1).**

2461 Systems installed to provide heat outside a building or in unheated spaces shall be radiant  
2462 systems.

2463 Such heating systems shall be controlled by an occupancy sensing device or a timer  
2464 switch, so that the system is automatically deenergized when no occupants are present in  
2465 the area heated by each individual device for a period not to exceed 20 minutes.

2466           NEW SECTION. SECTION 65. There is hereby added to K.C.C. chapter 16.07  
2467 a new section to read as follows:

2468                   Section C403 of the Washington State Energy Code is supplemented with  
2469 the following:

2470           **Clean water pumps (WSEC C403.15).** Clean water pumps meeting all the  
2471 following criteria shall achieve a PEI rating not greater than 1.0 and a Hydraulic Institute  
2472 Energy Rating (ER) greater than zero:

2473           1. Shaft input power is greater than or equal to 1 horsepower (1 metric  
2474 horsepower or 3/4 kilowatts) and less than or equal to 200 horsepower (203 metric  
2475 horsepower or 149.1 kilowatt) at its best efficiency point (BEP).

2476           2. Designated as either an End Suction Close-coupled, End Suction Frame  
2477 Mounted, In-line, Radially Split Vertical, or Submersible Turbine pump.

2478           3. A flow rate of 25 gallons per minute (2 liters per second) or greater at its BEP  
2479 at full impeller diameter.

2480           4. Maximum head of 459 feet (139,903 millimeters) at its BEP at full impeller  
2481 diameter and the number of stages required for testing.

2482           5. Design temperature range from 14° Fahrenheit (-10° Celsius) to 248°  
2483 Fahrenheit (120° Celsius).

2484           6. Designed to operate with either:

2485               6.1. A 2- or 4-pole induction motor; or

2486               6.2. A non-induction motor with a speed of rotation operating range that  
2487 includes speeds of rotation between 2,880 and 4,320 rpm or 1,440 and 2,160 rpm; and

2488               6.3. In either (1) or (2), the driver and impeller must rotate at the same speed.

2489           7. For submersible turbine pumps, a 6 inch (152 millimeter) or smaller bowl  
2490 diameter.

2491           8. For end-suction close-coupled pumps and end-suction frame-mounted/own  
2492 bearings pumps, specific speed less than or equal to 5,000 rpm when calculated using  
2493 U.S. customary units.

2494           **EXCEPTIONS:** The following pumps are exempt from these requirements:

2495               1. Fire pumps;

2496               2. Self-priming pumps;

2497               3. Prime-assisted pumps;

2498               4. Magnet-driven pumps;

2499               5. Pumps designed to be used in a nuclear facility subject to 10 CFR 50,  
2500 "Domestic Licensing of Production and Utilization Facilities"; and

2501           6. Pumps meeting the design and construction requirements set forth in U.S.  
2502 Military Specification MIL-P-17639F, "Pumps, Centrifugal, Miscellaneous Service,  
2503 Naval Shipboard Use" (as amended); MIL-P-17881D, "Pumps, Centrifugal, Boiler Feed,  
2504 (Multi-Stage)" (as amended); MIL-P-17840C, "Pumps, Centrifugal, Close-Coupled,  
2505 Navy Standard (For Surface Ship Application)" (as amended); MIL-P-18682D, "Pump,  
2506 Centrifugal, Main Condenser Circulating, Naval Shipboard" (as amended); MIL-P-  
2507 18472G, "Pumps, Centrifugal, Condensate, Feed Booster, Waste Heat Boiler, and  
2508 Distilling Plant" (as amended).

2509           NEW SECTION. SECTION 66. There is hereby added to K.C.C. chapter 16.07  
2510 a new section to read as follows:

2511           Section C404.1 of the Washington State Energy Code is not adopted and the  
2512 following is substituted:

2513           **General (WSEC C404.1).** This section covers the minimum efficiency of, and  
2514 controls for, service water-heating equipment and insulation of service hot water piping.

2515           **EXCEPTION:** Energy using equipment used by a manufacturing, industrial, or  
2516 commercial process other than maintaining comfort and amenities for the occupants are  
2517 exempt from all WSEC C404 subsections except WSEC C404.2, C404.6, and C404.13.  
2518 Laboratory sinks are considered to be process equipment for the purposes of this  
2519 exception.

2520           NEW SECTION. SECTION 67. There is hereby added to K.C.C. chapter 16.07  
2521 a new section to read as follows:

2522           Table C404.2 of the Washington State Energy Code is not adopted and the  
2523 following is substituted:

2524

Table C404.2

2525

## Minimum Performance of Water-Heating Equipment

| Equipment Type                                                        | Size Category (input)  | Subcategory or Rating Condition                 | Draw Pattern                        | Performance Required <sup>a, j</sup>                                                                                                                                                                                                         | Test Procedure <sup>b</sup>            |
|-----------------------------------------------------------------------|------------------------|-------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Electric table-top water heaters <sup>11</sup>                        | $\leq 12 \text{ kW}^c$ | $\geq 20 \text{ gal}$<br>$\leq 120 \text{ gal}$ | Very small<br>Low<br>Medium<br>High | $\text{UEF} \geq$<br>$0.6323 -$<br>$(0.0058 \times V_r)$<br>$\text{UEF} \geq$<br>$0.9188 -$<br>$(0.0031 \times V_r)$<br>$\text{UEF} \geq$<br>$0.9577 -$<br>$(0.0023 \times V_r)$<br>$\text{UEF} \geq$<br>$0.9884 -$<br>$(0.0016 \times V_r)$ | DOE 10<br>C.F.R.<br>Part 430<br>App. E |
| Electric storage water heaters <sup>g, i</sup><br>resistance and heat | $12 \text{ kW}^c$      | $\geq 20 \text{ gal}$<br>$\leq 55 \text{ gal}$  | Very small<br>Low<br>Medium<br>High | $\text{UEF} \geq$<br>$0.8808 -$<br>$(0.0008 \times V_r)$<br>$\text{UEF} \geq$<br>$0.9254 -$                                                                                                                                                  | DOE 10<br>C.F.R.<br>Part 430<br>App. E |

|                                             |              |                              |                                     |                                                                                                                                                                                                                  |                                      |
|---------------------------------------------|--------------|------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| pump                                        |              |                              |                                     | $(0.0003 \times V_r)$<br>$UEF \geq$<br>$0.9307 -$<br>$(0.0002 \times V_r)$<br>$UEF \geq$<br>$0.9349 -$<br>$(0.0001 \times V_r)$                                                                                  |                                      |
|                                             | $\leq 12$ kW | $> 55$ gal<br>$\leq 120$ gal | Very small<br>Low<br>Medium<br>High | $UEF \geq$<br>$1.9236 -$<br>$(0.0011 \times V_r)$<br>$UEF \geq$<br>$2.0440 -$<br>$(0.0011 \times V_r)$<br>$UEF \geq$<br>$2.1171 -$<br>$(0.0011 \times V_r)$<br>$UEF \geq$<br>$2.2418 -$<br>$(0.0011 \times V_r)$ | DOE 10<br>C.F.R.<br>Part 430<br>App. |
| Electric storage water heaters <sup>g</sup> | $> 12$ kW    |                              |                                     | $(0.3 +$<br>$27/V_m), \%^h$                                                                                                                                                                                      | DOE 10<br>C.F.R.<br>431.106          |

|                                                            |                                          |                                            |                                                 |                                                                                                                                                                                      |                                    |
|------------------------------------------------------------|------------------------------------------|--------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
|                                                            |                                          |                                            |                                                 |                                                                                                                                                                                      | App B.                             |
| Grid-enabled<br>water<br>heaters <sup>g, 1</sup>           |                                          | > 75 gal                                   | Very small<br><br>Low<br><br>Medium<br><br>High | $UEF \geq 1.0136 - (0.0028 \times V_r)$<br><br>$UEF \geq 0.9984 - (0.0014 \times V_r)$<br><br>$UEF \geq 0.9853 - (0.0010 \times V_r)$<br><br>$UEF \geq 0.9720 - (0.0007 \times V_r)$ | 10 C.F.R.<br>430<br><br>Appendix E |
| Electric<br>instantaneous<br>water<br>heaters <sup>h</sup> | $\leq 12$ kW                             | < 2 gal                                    | Very small<br><br>Low<br><br>Medium<br><br>High | $UEF \geq 0.91$<br><br>$UEF \geq 0.91$<br><br>$UEF \geq 0.91$<br><br>$UEF \geq 0.92$                                                                                                 | DOE 10<br>C.F.R.<br>Part 430       |
|                                                            | > 12 kW &<br>$\leq 58.6$ kW <sup>c</sup> | $\leq 2$ gal<br>$\leq 180^\circ\text{F}$   | All                                             | $UEF \geq 0.80$                                                                                                                                                                      | DOE 10<br>C.F.R.<br>Part 430       |
| Gas storage<br>water                                       | $\leq 75,000$ Btu/h                      | $\geq 20$ gal & $\leq 55$ gal <sup>f</sup> | Very small<br><br>Low                           | $UEF \geq 0.3456 -$                                                                                                                                                                  | DOE 10<br>C.F.R.                   |

|                      |                        |                                             |            |                                                                                                                               |          |
|----------------------|------------------------|---------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------|----------|
| heaters <sup>g</sup> |                        |                                             | Medium     | $(0.0020 \times V_r)$                                                                                                         | Part 430 |
|                      |                        |                                             | High       | $UEF \geq 0.5982 - (0.0019 \times V_r)$<br>$UEF \geq 0.6483 - (0.0017 \times V_r)$<br>$UEF \geq 0.6920 - (0.0013 \times V_r)$ | App. E   |
|                      | $\leq 75,000$<br>Btu/h | $> 55$ gal &<br>$\leq 100$ gal <sup>e</sup> | Very small | $UEF \geq 0.6470 - (0.0006 \times V_r)$                                                                                       | DOE 10   |
|                      |                        |                                             | Low        |                                                                                                                               | C.F.R.   |
|                      |                        |                                             | Medium     | $UEF \geq 0.7689 - (0.0005 \times V_r)$                                                                                       | Part 430 |
|                      |                        |                                             | High       | $UEF \geq 0.7897 - (0.0004 \times V_r)$<br>$UEF \geq 0.8072 - (0.0003 \times V_r)$                                            | App. E   |



|                                                       |                                                          |                          |                                                 |                                                                                                                                                                  |                                        |
|-------------------------------------------------------|----------------------------------------------------------|--------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                       | > 75,000<br>Btu/h and<br>≤ 105,000<br>Btu/h <sup>d</sup> | ≤ 120 gal<br><br>≤ 180°F | Very small<br><br>Low<br><br>Medium<br><br>High | $UEF \geq 0.2674 - 0.0009 \times V_r$<br>$UEF \geq 0.5362 - 0.0012 \times V_r$<br>$UEF \geq 0.6002 - 0.0011 \times V_r$<br>$UEF \geq 0.6597 - 0.0009 \times V_r$ | DOE 10<br>C.F.R.<br>Part 430<br>App. E |
|                                                       | > 105,000<br>Btu/h <sup>d, f</sup>                       |                          |                                                 | $80\% Et$<br>$SL \leq (Q/800 + 110\sqrt{V})$ ,<br>Btu/h                                                                                                          | DOE 10<br>C.F.R.<br>431.106            |
| Gas<br>instantaneous<br>water<br>heaters <sup>h</sup> | > 50,000<br>Btu/h and<br>< 200,000<br>Btu/h              | < 2 gal                  | Very small<br><br>Low<br><br>Medium<br><br>High | $UEF \geq 0.80$<br>$UEF \geq 0.81$<br>$UEF \geq 0.81$<br>$UEF \geq 0.81$                                                                                         | DOE 10<br>C.F.R.<br>Part 430<br>App. E |
|                                                       | ≥ 200,000<br>Btu/h <sup>d, f</sup>                       | < 10 gal                 |                                                 | 80% Et                                                                                                                                                           | DOE 10<br>C.F.R.                       |

|                                              |                                                                  |                                                  |                                                 |                                                                                                                                                                                                                                                                                  |                                                    |
|----------------------------------------------|------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
|                                              | $\geq 200,000$<br>Btu/h <sup>f</sup>                             | $\geq 10$ gal                                    |                                                 | 80% Et<br>$SL \leq (Q/800 + 110\sqrt{V})$ ,<br>Btu/h                                                                                                                                                                                                                             | 431.106                                            |
| Oil storage<br>water<br>heaters <sup>f</sup> | $\leq 105,000$<br>Btu/h                                          | $\leq 50$ gal                                    | Very small<br><br>Low<br><br>Medium<br><br>High | UEF =<br><br>0.2509 -<br><br>(0.0012 $\times$ V <sub>r</sub> )<br><br>UEF =<br><br>0.5330 -<br><br>(0.0016 $\times$ V <sub>r</sub> )<br><br>UEF =<br><br>0.6078 -<br><br>(0.0016 $\times$ V <sub>r</sub> )<br><br>UEF =<br><br>0.6815 -<br><br>(0.0014 $\times$ V <sub>r</sub> ) | DOE 10<br><br>C.F.R.<br><br>Part 430               |
|                                              | $> 105,000$<br>Btu/h and<br>$\leq 140,000$<br>Btu/h <sup>e</sup> | $\leq 120$ gal<br><br>$\leq 180^{\circ}\text{F}$ | Very small<br><br>Low<br><br>Medium<br><br>High | UEF $\geq$<br><br>0.2932-<br><br>0.0015 $\times$ V <sub>r</sub><br><br>UEF $\geq$<br><br>0.5596-<br><br>0.0018 $\times$ V <sub>r</sub>                                                                                                                                           | DOE 10<br><br>C.F.R.<br><br>Part 430<br><br>App. E |

|           |                         |               |  |                                                                                |                                        |
|-----------|-------------------------|---------------|--|--------------------------------------------------------------------------------|----------------------------------------|
|           |                         |               |  | $UEF \geq 0.6194 - 0.0016 \times V_r$<br>$UEF \geq 0.6740 - 0.0013 \times V_r$ |                                        |
|           | $> 140,000$<br>Btu/h    |               |  | $80\% E_t$<br>$SL \leq (Q/800 + 110\sqrt{V})$ ,<br>Btu/h                       | DOE 10<br>C.F.R.<br>431.106            |
|           | $\leq 210,000$<br>Btu/h | $< 2$ gal     |  | $80\% E_t$<br>$EF \geq 0.59 - 0.0005 \times V$                                 | DOE 10<br>C.F.R.<br>Part 430<br>App. E |
|           | $> 210,000$<br>Btu/h    | $< 10$ gal    |  | $80\% E_t$                                                                     | DOE 10<br>C.F.R.<br>431.106            |
|           | $> 210,000$<br>Btu/h    | $\geq 10$ gal |  | $78\% E_t$<br>$SL \leq (Q/800 + 110\sqrt{V})$ ,<br>Btu/h                       | DOE 10<br>C.F.R.<br>431.106            |
| Hot water | $\geq 300,000$          | $< 10$ gal    |  | $80\% E_t$                                                                     | DOE 10                                 |

|                                                  |                                                         |                                                       |  |                                                                              |                                                    |
|--------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------|--|------------------------------------------------------------------------------|----------------------------------------------------|
| supply<br>boilers, gas<br>and oil <sup>h</sup>   | Btu/h and<br><<br>12,500,000<br>Btu/h                   |                                                       |  |                                                                              | C.F.R.<br><br>431.106                              |
| Hot water<br>supply<br>boilers, gas <sup>h</sup> | $\geq 300,000$<br>Btu/h and<br><<br>12,500,000<br>Btu/h | $\geq 10$ gal                                         |  | 80% E <sub>t</sub>                                                           | DOE 10<br><br>C.F.R.<br><br>431.106                |
| Hot water<br>supply<br>boilers, oil <sup>h</sup> | $\geq 300,000$<br>Btu/h and<br><<br>12,500,000<br>Btu/h | $\geq 10$ gal                                         |  | 80% E <sub>t</sub><br><br>$SL \leq (Q/800$<br>$+110\sqrt{V})$ ,<br><br>Btu/h | DOE 10<br><br>C.F.R.<br><br>431.106                |
| Pool heaters,<br>gas                             | All                                                     |                                                       |  | 78% E <sub>t</sub><br><br>$SL \leq (Q/800$<br>$+110\sqrt{V})$ ,<br><br>Btu/h | DOE 10<br><br>C.F.                                 |
| Heat pump<br>pool heaters                        | All                                                     | 50°F db<br><br>44.2°F<br><br>wb outdoor<br>air 80.0°F |  | 4.0 COP                                                                      | DOE 10<br><br>C.F.R.<br><br>Part 430<br><br>App. P |

|                                          |     |                   |  |                                                                                |        |
|------------------------------------------|-----|-------------------|--|--------------------------------------------------------------------------------|--------|
|                                          |     | entering<br>water |  |                                                                                |        |
| Unfired<br>storage<br>tanks <sup>m</sup> | All |                   |  | Minimum<br>insulation<br>requirement<br>R-12.5 (h-<br>ft <sup>2</sup> -°F)/Btu | (none) |

2526 Footnotes:

2527 a. Thermal efficiency ( $E_t$ ) is a minimum requirement, while standby loss is a  
 2528 maximum requirement. In the standby loss equation, V is the rated volume in gallons and  
 2529 Q is the nameplate input rate in Btu/h.  $V_m$  is the measured volume in the tank in gallons.

2530 Standby loss for electric water heaters is in terms of %/h and denoted by the term "S,"  
 2531 and standby loss for gas and oil water heaters is in terms of Btu/h and denoted by the  
 2532 term "SL" Draw pattern (DP) refers to the water draw profile in the Uniform Energy.

2533 b. The 2021 WSEC-C Chapter 6, Reference Standards, contains a complete  
 2534 specification, including the year version, of the referenced test procedure.

2535 c. Electric instantaneous water heaters with input capacity greater than 12  
 2536 kilowatts and less than or equal to 58.6 kilowatts that have either (1) a storage volume  
 2537 greater than 2 gallons (6 liters); or (2) is designed to provide outlet hot water at  
 2538 temperatures greater than 180° Fahrenheit (82° Celsius); or (3) uses three-phase power.

2539 d. Gas storage water heaters with input capacity greater than 75,000 Btu/h  
 2540 (79,129 kilojoules/h) and less than or equal to 105,000 Btu/h (110,781 kilojoules/h) if the  
 2541 water heater either (1) has a storage volume greater than 120 gallons (454 liters); (2) is

2542 designed to provide outlet hot water at temperatures greater than 180° Fahrenheit (82°  
2543 Celsius); or (3) uses three-phase power.

2544 e. Oil storage water heaters with input capacity greater than 105,000 Btu/h  
2545 (110,781 kilojoules/h) and less than or equal to 140,000 Btu/h (147,708 kilojoules/h)  
2546 must comply with the requirements for the greater than 140,000 Btu/h (147,708  
2547 kilojoules/h) if the water heater either (1) has a storage volume greater than 120 gallons  
2548 (454 liters); (2) is designed to provide outlet hot water at temperatures greater than 180°  
2549 Fahrenheit (82° Celsius); or (3) uses three-phase power.

2550 f. Water heaters or gas pool heaters in this category are regulated as consumer  
2551 products by the USDOE as defined in 10 C.F.R. Part 430.

2552 g. Storage water heaters have a ratio of input capacity (Btu/h) to tank volume  
2553 (gallons) less than 4,000 (or (liters) less than 15,142).

2554 h. Instantaneous water heaters and hot water supply boilers have an input  
2555 capacity (Btu/h) divided by storage volume (gallons) greater than or equal to 4,000 Btu/h  
2556 (4,220 kilojoules/h) per gallon.

2557 i. There are no minimum efficiency requirements for electric heat pump water  
2558 heaters greater than 12 kilowatts or for gas heat pump water heaters.

2559 j. Refer to WSEC C404.2.1 for additional requirements for service water heat  
2560 system equipment.

2561 k. A tabletop water heater is a storage water heater that is enclosed in a  
2562 rectangular cabinet with a flat top surface not more than 3 feet (914 millimeters) in height  
2563 and have a ratio of input capacity (Btu/h) to tank volume (gallons) less than 4,000 (or  
2564 (liters) less than 15,142).

2565           1. A grid-enabled water heater is an electric resistance water heater that meets all  
2566 of the following:

- 2567           1. Has a rated storage tank volume of more than 75 gallons (284 liters);  
2568           2. Is manufactured on or after April 16, 2015;  
2569           3. Is equipped at the point of manufacture with an activation lock; and  
2570           4. Bears a permanent label applied by the manufacturer that complies with all of  
2571 the following:

- 2572           4.1. Is made of material not adversely affected by water;  
2573           4.2. Is attached by means of non-water soluble adhesive; and  
2574           4.3. Advises purchasers and end-users of the intended and appropriate use of  
2575 the product with the following notice printed in 16.5 point Arial Narrow Bold font:  
2576 "IMPORTANT INFORMATION: This water heater is intended only for use as a part of  
2577 an electric thermal storage or demand response program. It will not provide adequate hot  
2578 water unless enrolled in such a program and activated by your utility company or another  
2579 program operator. Confirm the availability of a program in your local area before  
2580 purchasing or installing this product."

2581           m. Unfired storage tanks shall be insulated with additional insulation beyond the  
2582 minimum insulation required by WSEC Table C404.2, in accordance with Section  
2583 C404.6.1.

2584           SECTION 68. Ordinance 19485, Section 90, and K.C.C. 16.07.220 are hereby  
2585 amended to read as follows:

Section((s)) C404.2.1 ((and C404.2.2)) of the ((International Energy Conservation Code are)) Washington State Energy Code is not adopted and the following is substituted:

**Service water heating system type (WSEC C404.2.1 ((and C404.2.2))).** ((In buildings with central service water heating systems serving four or more Group R-1 or R-2 dwelling or sleeping units, and in any other building that has a heated water circulation system or a combined water heating capacity greater than 15 kW (51,195 Btu/h) under a single permit, the primary service water heating equipment shall not use fossil fuel combustion or electric resistance.)) Service hot water shall be provided by an electric air-source HPWH system ((meeting the requirements of this section)), or a ground-source HPWH system, meeting the requirements of this section. Supplemental service water heating equipment is permitted to use electric resistance in compliance with ((IECC C404.2.1.2 and C404.2.2.2)) WSEC Section C404.2.1.4.

**EXCEPTIONS:**

1. ((Unitary heat pump water heaters located in conditioned space are permitted where they are sized to meet all calculated service water heating demand using the heat pump compressor, and not supplementary heat)) 24 kilowatts plus 0.1 watt per square foot (per 0.1 square meter) of building area electric resistance service water heating capacity is allowed per building.
2. ((A service water heating system in a tenant space under a separate permit with a total heating capacity no greater than 15 kW (51,195 Btu/h) is permitted to be electric resistance.



2608           ~~3. Point of use instantaneous electric water heaters serving fixtures no more than~~  
2609           ~~8 feet of developed pipe length from the water heater are permitted and do not contribute~~  
2610           ~~to the building combined water heating capacity calculation.~~

2611           4.)) Solar thermal, wastewater heat recovery, other approved waste heat recovery,  
2612           ground-source heat pumps, water-source heat pump system utilizing waste heat, or  
2613           combinations thereof, are permitted to offset all or any portion of the required HPWH  
2614           capacity where such systems comply with this code and the ~~((Plumbing Code))~~ UPC, and  
2615           are not claimed in WSEC Section C406.2.5, C407, or C411.

2616           ~~((5.))~~ 3. Systems ((meeting the requirements of)) that comply with the Northwest  
2617           Energy Efficiency Alliance (NEEA) Commercial Electric Advanced Water Heater  
2618           Specification((s for central service water heating systems)).

2619           4. Service hot water systems served by a district energy system that serves multiple  
2620           buildings and that was in service before the effective date of this code, including more  
2621           energy-efficient upgrades to such existing systems, are permitted to serve as the primary  
2622           heating energy source.

2623           5. Commercial dishwashers, commercial food service equipment, and other  
2624           approved process equipment are permitted to utilize electric booster heaters for supply  
2625           water temperatures 120° Fahrenheit (49° Celsius) or higher.

2626           6. Systems connected to a low-carbon district energy exchange system or a low-  
2627           carbon district heating and cooling or heating only system.

2628           7. Essential facilities. Groups I-2 and I-3 occupancies that by regulation are  
2629           required to have in place redundant emergency backup systems are permitted to use electric  
2630           resistance or fossil fuel combustion equipment for those emergency backup systems.

2631 8. Point of use instantaneous electric water heaters serving fixtures no more than  
2632 8 feet (2,438 millimeters) of developed pipe length from the water heater are permitted  
2633 and do not contribute to the building combined water heating capacity calculation.

2634 9. For occupancies other than Group R and Group I, unitary electric air-source  
2635 heat pump water heaters are permitted to extract heat from the conditioned space where  
2636 the primary source of space heating is electric heat pump or where heat recovery waste  
2637 heat is available, and where they are sized to meet all calculated service water heating  
2638 demand using the heat pump compressor, and not supplementary heat.

2639 10. Standby service water heating equipment provided in addition to the primary  
2640 heating system, and controlled such that it will only be used when the primary heating  
2641 equipment is not available, is permitted to be electric resistance.

2642 NEW SECTION. SECTION 69. There is hereby added to K.C.C. chapter 16.07  
2643 a new section to read as follows:

2644 Table C404.3.1 of the Washington State Energy Code is supplemented with the  
2645 following:

2646 **Table C404.3.1**

2647 **Piping Volume and Maximum Piping Lengths**

| Nominal Pipe Size<br>(inches) | Volume<br>(liquid ounces per<br>foot length) | Maximum Piping Length<br>(feet)         |                                  |
|-------------------------------|----------------------------------------------|-----------------------------------------|----------------------------------|
|                               |                                              | Public lavatory<br>faucets <sup>a</sup> | Other fixtures and<br>appliances |
| 1/4                           | 0.33                                         | 6                                       | 50                               |

| Nominal Pipe Size<br>(inches) | Volume<br>(liquid ounces per<br>foot length) | Maximum Piping Length<br>(feet)         |                                  |
|-------------------------------|----------------------------------------------|-----------------------------------------|----------------------------------|
|                               |                                              | Public lavatory<br>faucets <sup>a</sup> | Other fixtures and<br>appliances |
| 5/16                          | 0.5                                          | 4                                       | 50                               |
| 3/8                           | 0.75                                         | 8                                       | 50                               |
| 1/2                           | 1.5                                          | 8                                       | 43                               |
| 5/8                           | 2                                            | 8                                       | 32                               |
| 3/4                           | 3                                            | 0.5                                     | 21                               |
| 7/8                           | 4                                            | 0.5                                     | 16                               |
| 1                             | 5                                            | 0.5                                     | 13                               |
| 1 1/4                         | 8                                            | 0.5                                     | 8                                |
| 1 1/2                         | 11                                           | 0.5                                     | 6                                |
| 2 or larger                   | 18                                           | 0.5                                     | 4                                |

Footnote:

a. Includes hand sinks in foodservice establishments, hand washing sinks in labs and exam room sinks in hospitals.

NEW SECTION. SECTION 70. There is hereby added to K.C.C. chapter 16.07

a new section to read as follows:

Section C404.3 of the Washington State Energy Code is supplemented with the

following:

**Demand load for R-2 occupancies (WSEC C404.3.3).** Demand load for water supply serving dwelling units within R-2 occupancies shall be determined using Uniform Plumbing Code Appendix M. Piping shall be no more than one pipe size larger than the minimum size permitted when sized for maximum allowable velocity based upon the specified piping material in conjunction with the Uniform Plumbing Code Appendix M demand load flow rate at any specific node within the water distribution system.

**EXCEPTION:** Existing buildings are not required to comply with this section if the existing plumbing fixtures have higher flow rates than those listed in UPC Table M102.1.

**NEW SECTION. SECTION 71.** There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Section C404.6 of the Washington State Energy Code is not adopted and the following is substituted:

**Insulation of piping (WSEC C404.6).** Piping from a water heater to the termination of the heated water fixture supply pipe shall be insulated in accordance with WSEC Table C404.6. On both the inlet and outlet piping of a storage water heater or heated water storage tank, the piping to a heat trap or the first 8 feet (2,438 millimeters) of piping, whichever is less, shall be insulated. Piping that is heat traced shall be insulated in accordance with WSEC Table C404.6 or the heat trace manufacturer's instructions. Tubular pipe insulation shall be installed in accordance with the insulation manufacturer's instructions, or WSEC Table C404.6, whichever results in thicker insulation. Pipe insulation shall be continuous, including through hangers and supports, such that thermal bridging is prevented, except where the piping passes through a framing

member. The minimum insulation thickness requirements of this section shall not supersede any greater insulation thickness requirements necessary for the protection of piping from freezing temperatures or the protection of personnel against external surface temperatures on the insulation.

**EXCEPTION:** Tubular pipe insulation shall not be required on the following:

1. The tubing from the connection at the termination of the fixture supply piping to a plumbing fixture or plumbing appliance.
2. Valves, pumps, strainers, and threaded unions in piping that is 1 inch (25 millimeters) or less in nominal diameter.
3. Piping from user-controlled shower and bath mixing valves to the water outlets.
4. Reserved.
5. Tubing from a hot drinking-water heating unit to the water outlet.
6. Vertical pipe riser locations where a vertical support of the piping is installed.
7. Reserved.
8. Hot water piping that is part of the final pipe run to the plumbing fixture and is not part of the heated-water circulation system circulation path is not required to meet the minimum insulation requirements of WSEC C404.6.

**Table C404.6**

**Required Pipe Insulation Thickness for Service Water Heating**

|          |            | Nominal Pipe or Tube Size |           |              |          |             | Insulation Conductivity     |                |
|----------|------------|---------------------------|-----------|--------------|----------|-------------|-----------------------------|----------------|
| Location | Water Temp | < 1"                      | 1 to < 1- | 1-1/2 to < 4 | 4 to < 8 | 8 or larger | Conductivity<br>Btu • in. / | Mean<br>Rating |

|                                                         |                                          |     | 1/2 |     |     |     | $(h \cdot ft^2 \cdot F)^b$ | Temp, °F |
|---------------------------------------------------------|------------------------------------------|-----|-----|-----|-----|-----|----------------------------|----------|
| Circulation<br>Loop Piping<br>not in-partition          | 105 –<br>140°F or<br>40.56°C –<br>60 C°  | 2.0 | 2.0 | 2.5 | 2.5 | 2.5 | 0.21 - 0.28                | 100      |
|                                                         | 141 –<br>200°F or<br>60.56 C° –<br>93 C° | 2.5 | 2.5 | 3.0 | 3.0 | 3.0 | 0.25 - 0.29                | 125      |
| All other piping<br>not in-partition                    | 105 –<br>140°F or<br>40.56°C –<br>60 C°  | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 0.21 - 0.28                | 100      |
|                                                         | 141 –<br>200°F or<br>60.56 C° –<br>93 C° | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 0.25 - 0.29                | 125      |
| In-partition <sup>a</sup><br>Circulation<br>Loop Piping | 105 –<br>140°F or<br>40.56°C –<br>60 C°  | 1.0 | 1.0 | 2.5 | 2.5 | 2.5 | 0.21 - 0.28                | 100      |
|                                                         | 141 –<br>200°F or<br>60.56 C° –<br>93 C° | 1.5 | 1.5 | 3.0 | 3.0 | 3.0 | 0.25 - 0.29                | 125      |
| In-partition <sup>a</sup><br>All other piping           | 105 –<br>140°F or                        | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 0.21 - 0.28                | 100      |

|  |                                          |     |     |     |     |     |             |     |
|--|------------------------------------------|-----|-----|-----|-----|-----|-------------|-----|
|  | 40.56°C –<br>60 C°                       |     |     |     |     |     |             |     |
|  | 141 –<br>200°F or<br>60.56 C° –<br>93 C° | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 | 0.25 - 0.29 | 125 |

2698 Footnotes:

2699 a. In a partition within a conditioned space.

2700 b. For insulation outside the stated conductivity range, conform to requirements  
2701 of WSEC Table C403.10.3.

2702 NEW SECTION. SECTION 72. There is hereby added to K.C.C. chapter 16.07  
2703 a new section to read as follows:

2704 Section C404.7.1.2 of the Washington State Energy Code is not adopted and the  
2705 following is substituted:

2706 **Multiple riser systems (WSEC C404.7.1.2).** Where the circulation system  
2707 serves multiple domestic hot water risers or piping zones, the following equipment and  
2708 controls shall be provided:

2709 1. Controls shall be configured to automatically turn off the circulation pump  
2710 during periods of time exceeding 4 hours when hot water is not required. Pump  
2711 circulation may be automatically started a maximum of 4 hours before scheduled  
2712 occupancy time to warm up the system or may be automatically started and stopped to  
2713 run a maximum of 50 percent of each hour to maintain water circulation to reduce  
2714 legionella or other biological growth in circulated water.

2715 2. Reserved.

2716           3. At the end of each riser or piping zone before heated-water is returned to the  
2717 circulation pump, a thermostatic balancing valve that automatically controls the flow  
2718 through the riser or piping zone to maintain the domestic hot water supply temperature in  
2719 the riser at a maximum of 10° Fahrenheit (-12° Celsius) lower than the design supply  
2720 water temperature.

2721           4. A variable speed circulation pump that automatically adjusts speed to reduce  
2722 flow to maintain a constant pressure.

2723           **EXECPTION:** Multiple riser systems serving Group R and Group I occupancies  
2724 are not required to have controls that automatically turn off the circulation pump.

2725           NEW SECTION. SECTION 73. There is hereby added to K.C.C. chapter 16.07  
2726 a new section to read as follows:

2727           Section C404.11.4 of the Washington State Energy Code is not adopted and the  
2728 following is substituted:

2729           **Heat recovery (WSEC C404.11.4).** Heated indoor swimming pools, spas, or hot  
2730 tubs with water surface area greater than 200 square feet (18.6 square meters) shall  
2731 provide for energy conservation by an exhaust air heat recovery system that heats  
2732 ventilation air, pool water, or domestic hot water. The heat recovery system shall be  
2733 configured to decrease the exhaust air temperature at design heating conditions of 80°  
2734 Fahrenheit (27° Celsius) indoors by 36° Fahrenheit (2° Celsius).

2735           **EXCEPTION:** Pools, spas, or hot tubs that include system(s) that provide  
2736 equivalent recovered energy on an annual basis through one of the following methods:

- 2737           1. Solar water heating systems not claimed in WSEC C406.2.5, C407, or C411;  
2738           2. Dehumidification heat recovery;
-



2739           3. Waste heat recovery; or  
2740           4. A combination of these system sources capable of and configured to provide at  
2741 least 70 percent of the heating energy required over an operating season.

2742           NEW SECTION. SECTION 74. There is hereby added to K.C.C. chapter 16.07  
2743 a new section to read as follows:

2744           Section C405.1 of the Washington State Energy Code is not adopted and the  
2745 following is substituted:

2746           **General (WSEC C405.1).** Lighting system controls, the maximum lighting  
2747 power for interior and exterior applications, electrical energy consumption, vertical and  
2748 horizontal transportation systems, and minimum efficiencies for motors and transformers  
2749 shall comply with this section. Receptacles shall be controlled according to Section  
2750 C405.10. Controlled receptacles and lighting systems shall be commissioned according  
2751 to Section C405.12. Solar readiness shall be provided according to Section C411 and  
2752 renewable energy shall be provided according to Section C412.

2753           Dwelling units shall comply with Sections C405.1.1 and C405.7.

2754           Sleeping units shall comply with WSEC C405.2.6, item 2, and WSEC C405.1.1,  
2755 or C405.4.

2756           General lighting shall consist of all lighting included when calculating the total  
2757 connected interior lighting power in accordance with WSEC C405.4.1 and which does  
2758 not require specific application controls in accordance with WSEC C405.2.5.

2759           Lighting installed in walk-in coolers, walk-in freezers, refrigerated warehouse  
2760 coolers, and refrigerated warehouse freezers shall comply with the lighting requirements  
2761 of WSEC C410.2.

Transformers, uninterruptable power supplies, motors, and electrical power processing equipment in data center systems shall comply with Section 8 of ASHRAE Standard 90.4 in addition to this code.

**EXCEPTION:** Energy using equipment used by a manufacturing, industrial, or commercial process other than maintaining comfort and amenities for the occupants are exempt from all Section C405 subsections except Section C405.8. Data center and computer room HVAC equipment is not covered by this exemption.

**C405.1.1 Lighting for dwelling and sleeping units.** No less than 90 percent of the permanently installed lighting serving dwelling units or sleeping units, excluding kitchen appliance lighting, shall be provided by lamps with a minimum efficacy of 65 lumens per watt or luminaires with an efficacy of not less than 45 lumens per watt.

NEW SECTION. SECTION 75. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Table C405.2.1 of the Washington State Energy Code is not adopted and the following is substituted:

**Table C405.2.1**

**Occupant Sensor Compliance Requirements for Space Types**

| Space type <sup>1</sup>               | Comply with Section |
|---------------------------------------|---------------------|
| Classrooms/lecture/training rooms     | C405.2.1.1          |
| Conference/meeting/multipurpose rooms | C405.2.1.1          |
| Copy/print rooms                      | C405.2.1.1          |

| Space type <sup>1</sup>                                                                                           | Comply with Section |
|-------------------------------------------------------------------------------------------------------------------|---------------------|
| Lounge/breakrooms                                                                                                 | C405.2.1.1          |
| Enclosed offices                                                                                                  | C405.2.1.1          |
| Open plan office areas                                                                                            | C405.2.1.3          |
| Restrooms                                                                                                         | C405.2.1.1          |
| Storage rooms                                                                                                     | C405.2.1.1          |
| Locker rooms                                                                                                      | C405.2.1.1          |
| Other spaces 300 square feet (28 m <sup>2</sup> ) or less that are enclosed by floor-to-ceiling height partitions | C405.2.1.1          |
| Warehouse storage areas                                                                                           | C405.2.1.2          |
| Library stacks                                                                                                    | C405.2.1.2          |
| Enclosed fire rated stairways                                                                                     | C405.2.1.4          |
| Corridors                                                                                                         | C405.2.1.5          |
| Covered parking                                                                                                   | C405.2.10           |

Footnote:

1. The space types listed include other spaces with substantially similar uses.

NEW SECTION. SECTION 76. There is hereby added to K.C.C. chapter 16.07

a new section to read as follows:

Section C405.2.1.2 of the Washington State Energy Code is not adopted and the

following is substituted:

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2785           **Occupant sensor control function in warehouse storage areas and library**  
2786 **stacks (WSEC C405.2.1.2).** Lighting in library stacks and warehouse storage areas shall  
2787 be controlled as follows:

2788           1. Lighting in each aisleway shall be controlled independently of lighting in all  
2789 other aisleways and open areas.

2790           2. Occupant sensors shall automatically reduce lighting power within each  
2791 controlled area to an unoccupied setpoint of not more than 50 percent of full power  
2792 within 20 minutes after all occupants have left the controlled area.

2793           3. Lights which are not turned off by occupant sensors shall comply with Section  
2794 C405.2.2 to turn lighting off when the building is vacant.

2795           4. Restore lighting to full power or target light level when occupants enter the  
2796 space.

2797           5. A manual control shall be provided to allow occupants to turn off lights in the  
2798 space.

2799           NEW SECTION. SECTION 77. There is hereby added to K.C.C. chapter 16.07  
2800 a new section to read as follows:

2801           Section C405.2.2 of the Washington State Energy Code is not adopted and the  
2802 following is substituted:

2803           **Time switch controls (WSEC 405.2.2).** Each area of the building that is not  
2804 provided with occupant sensor controls complying with WSEC C405.2.1.1 through  
2805 C405.2.1.5 shall be provided with time switch controls complying with WSEC  
2806 C405.2.2.1.

2807           **EXCEPTIONS:**

2808           1. Luminaires that are required to have specific application controls in  
2809 accordance with WSEC C405.2.6 unless specifically required to comply with this section  
2810 by WSEC C405.2.6.

2811           2. Spaces where patient care is directly provided.

2812           3. Spaces where an automatic shutoff would endanger occupant safety or  
2813 security.

2814           4. Lighting intended for continuous operation.

2815           5. Shop and laboratory classrooms.

2816           **C405.2.2.1 Time switch control function.** Time switch controls shall provide  
2817 programmed shutoff for lighting when building areas are unoccupied and shall comply  
2818 with the following:

2819           1. Have a minimum 7-day clock.

2820           2. Be capable of being set for 7 different day types per week.

2821           3. Incorporate an automatic holiday "shut-off" feature, which turns off all  
2822 controlled lighting loads for at least 24 hours and then resumes normally scheduled  
2823 operations.

2824           4. Have program back-up capabilities, which prevent the loss of program and  
2825 time settings for at least 10 hours, if power is interrupted.

2826           5. Include an override switching device that complies with the following:

2827           5.1. The override switch shall be a manual control;

2828           5.2. The override switch, when initiated, shall permit the controlled lighting to  
2829 remain on for not more than 2 hours; and

2830           5.3. Any individual override switch shall control the lighting for an area not  
2831 larger than 2,500 square feet (232.3 square meters).

2832           6. Time switch controls are allowed to automatically turn on lighting to full  
2833 power in corridors, lobbies, restrooms, storage rooms less than 50 square feet (4.7 square  
2834 meters), and medical areas of health care facilities. In all other spaces, time switch  
2835 controls are allowed to automatically turn on the lighting to not more than 50 percent  
2836 power.

2837           **EXCEPTION:** Within mall concourses, auditoriums, sales areas, manufacturing  
2838 facilities, pools, gymnasiums, skating rinks, and sports arenas:

2839           1. The time limit shall be permitted to be greater than 2 hours, provided the  
2840 switch is a captive key device.

2841           2. The area controlled by the override switch shall not be limited to 5,000 square  
2842 feet (464.5 square meters), provided that such area is less than 20,000 square feet  
2843 (1,858.1 square meters).

2844           NEW SECTION. SECTION 78. There is hereby added to K.C.C. chapter 16.07  
2845 a new section to read as follows:

2846           Section C405.2.3 of the Washington State Energy Code is not adopted and the  
2847 following is substituted:

2848           **Manual controls (WSEC C405.2.3).** Stairwells and parking garages are not  
2849 permitted to use manual switches. All other lighting shall have manual controls  
2850 complying with the following:

2851           1. They shall be in a location with ready access to occupants;

2852           2. They shall be located where the controlled lights are visible or shall identify  
2853 the area served by the lights and indicate their status; and

2854           3. Each control device shall control an area no larger than a single room, or 2,500  
2855 square feet (232.3 square meters), whichever is less, if the room area is less than or equal  
2856 to 10,000 square feet (929 square meters); or one-quarter of the room area, whichever is  
2857 less, if the room area is greater than 10,000 square feet (929 square meters).

2858           **EXCEPTIONS:**

2859           1. A manual control may be installed in a remote location for the purpose of  
2860 safety or security provided that each remote control device has an indicator pilot light as  
2861 part of or next to the control device and the light is clearly labeled to identify the  
2862 controlled lighting.

2863           2. Restrooms.

2864           NEW SECTION. SECTION 79. There is hereby added to K.C.C. chapter 16.07  
2865 a new section to read as follows:

2866           Section C405.2.4 of the Washington State Energy Code is not adopted and the  
2867 following is substituted:

2868           **Dimming controls (WSEC C405.2.4).** Dimming controls complying with  
2869 WSEC C405.2.4.1 are required for general lighting in the following space types. The  
2870 space types listed include other spaces with substantially similar uses.

- 2871           1. Classroom/lecture hall/training room.
- 2872           2. Conference/multipurpose/meeting room.
- 2873           3. In a dining area for bar/lounge or leisure, family dining.
- 2874           4. Laboratory.

- 2875           5. Lobby.
- 2876           6. Lounge/break room.
- 2877           7. Offices.
- 2878           8. Gymnasium/fitness center.
- 2879           9. Library reading room.
- 2880           10. In a health care facility for imaging rooms, exam rooms, nursery, and nurses'
- 2881 stations.
- 2882           11. Spaces not provided with occupant sensor controls complying with WSEC
- 2883 C405.2.1.1.
- 2884           **EXCEPTIONS:**
- 2885           1. Luminaires controlled by daylight responsive controls complying with WSEC
- 2886 C405.2.5.
- 2887           2. Luminaires controlled by special application controls complying with WSEC
- 2888 C405.2.6.
- 2889           3. Where provided with manual control, the following areas are not required to
- 2890 have light reduction control:
- 2891           3.1. Spaces that have only one luminaire with a rated power of less than 60
- 2892 watts.
- 2893           3.2. Spaces that use less than 0.45 watts per square foot (4.9 watts per square
- 2894 meter).
- 2895           3.3. Corridors, lobbies, electrical rooms, and mechanical rooms.
- 2896           L. Spaces required to have dimming control shall be provided with manual
- 2897 controls that allow lights to be dimmed from full output to 10 percent of full power or



2898 lower with continuous dimming, as well as turning lights off. Manual control shall be  
2899 provided within each space to dim lights.

2900 NEW SECTION. SECTION 80. There is hereby added to K.C.C. chapter 16.07  
2901 a new section to read as follows:

2902 Section C405.2.4.1 of the Washing State Commercial Energy Code is not adopted  
2903 and the following is substituted:

2904 **Dimming control function (WSEC C405.2.4.1).** Spaces required to have  
2905 dimming control shall be provided with manual controls that allow lights to be dimmed  
2906 from full output to 10 percent of full power or lower with continuous dimming, as well as  
2907 turning lights off. Manual control shall be provided within each space to dim lights.

2908 NEW SECTION. SECTION 81. There is hereby added to K.C.C. chapter 16.07  
2909 a new section to read as follows:

2910 Section C405.2.5.1 of the Washington State Energy Code is not adopted and the  
2911 following is substituted:

2912 **Daylight responsive controls function (WSEC C405.2.5.1).** Where required,  
2913 daylight responsive controls shall be provided within each space for control of lights in  
2914 that space and shall comply with all of the following:

2915 1. Lights in primary sidelit daylight zones shall be controlled independently of  
2916 lights in secondary sidelit daylight zones in accordance with WSEC C405.2.5.2;

2917 2. Lights in toplit daylight zones in accordance with WSEC C405.2.5.3 shall be  
2918 controlled independently of lights in sidelit daylight zones in accordance with WSEC  
2919 C405.2.5.2;

2920           3. Daylight responsive controls within each space shall be configured so that they  
2921 can be calibrated from within that space by authorized personnel;

2922           4. Calibration mechanisms shall be in a location with ready access;

2923           5. Daylight responsive controls shall dim lights continuously from full light  
2924 output to 15 percent of full light output or lower;

2925           6. Daylight responsive controls shall be configured to completely shut off all  
2926 controlled lights in that zone;

2927           7. When occupant sensor controls have reduced the lighting power to an  
2928 unoccupied setpoint in accordance with WSEC C405.2.1.2 through C405.2.1.5, daylight  
2929 responsive controls shall continue to adjust electric light levels in response to available  
2930 daylight but shall be configured to not increase the lighting power above the specified  
2931 unoccupied setpoint;

2932           8. Lights in sidelit daylight zones in accordance with WSEC C405.2.5.2 facing  
2933 different cardinal orientations (i.e., within forty-five degrees of due north, east, south, and  
2934 west) shall be controlled independently of each other.

2935           **EXCEPTION:** Up to 75 watts of general lighting are permitted to be controlled  
2936 together with lighting in a daylight zone facing a different cardinal orientation.

2937           9. Incorporate time-delay circuits to prevent cycling of light level changes of less  
2938 than 3 minutes;

2939           10. The maximum area a single daylight responsive control device serves shall  
2940 not exceed 2,500 square feet (232.3 square meters) and no more than 60 lineal feet (18.3  
2941 lineal meters) of façade;

2942 11. Occupant override capability of daylight dimming controls is not permitted,  
2943 other than a reduction of light output from the level established by the daylighting  
2944 controls; and

2945 12. Daylight responsive controls shall be set initially to activate at 30 footcandles  
2946 (323 lux) or not more than 110 percent of the illuminance level specified on the  
2947 construction documents.

2948 NEW SECTION. SECTION 82. There is hereby added to K.C.C. chapter 16.07  
2949 a new section to read as follows:

2950 Section C405.2.5.1.1 of the Washington State Energy Code is not adopted and the  
2951 following is substituted:

2952 **Dimming (WSEC C405.2.5.1.1).** Daylight responsive controls shall be  
2953 configured to automatically reduce the power of general lighting in the daylight zone in  
2954 response to available daylight, while maintaining uniform illumination in the space  
2955 through continuous dimming using dimming ballasts, dimming drivers, and daylight-  
2956 sensing automatic controls. The system shall reduce lighting power continuously to less  
2957 than 10 percent of rated power at maximum light output.

2958 NEW SECTION. SECTION 83. There is hereby added to K.C.C. chapter 16.07  
2959 a new section to read as follows:

2960 Section C405.2.6 of the Washington State Energy Code is not adopted and the  
2961 following is substituted:

2962 **Additional lighting controls (WSEC C405.2.6).** Specific application lighting  
2963 shall be provided with controls, in addition to controls required by other sections, for the  
2964 following:

2965           1. The following lighting shall be controlled by an occupant sensor complying  
2966 with WSEC C405.2.1.1 or a time switch control complying with WSEC C405.2.2.1. In  
2967 addition, a manual control shall be provided to control such lighting separately from the  
2968 general lighting in the space:

2969           1.1. Luminaires for which additional lighting power is claimed in accordance  
2970 with WSEC C405.4.2.2.1.

2971           1.2. Display and accent.

2972           1.3. Lighting in display cases.

2973           1.4. Supplemental task lighting, including permanently installed under-shelf, or  
2974 under-cabinet lighting.

2975           1.5. Lighting equipment that is for sale or demonstration in lighting education.

2976           1.6. Display lighting for exhibits in galleries, museums, and monuments that is  
2977 in addition to general lighting.

2978           2. Sleeping units shall have control devices or systems configured to  
2979 automatically switch off all permanently installed luminaires and switched receptacles,  
2980 including those installed within furniture, within 20 minutes after all occupants have left  
2981 the unit.

2982           **EXCEPTIONS:**

2983           1. Lighting and switched receptacles controlled by card key controls.

2984           2. Spaces where patient care is directly provided.

2985           3. Lighting for life support of plants and animals and food warming, shall be  
2986 controlled by a dedicated control that is independent of the controls for other lighting  
2987 within the room or space.

2988 4. Task lighting for medical and dental purposes that is in addition to general  
2989 lighting shall be provided with a manual control.

2990 5. Luminaires serving the exit access and providing means of egress illumination  
2991 required by Section 1008.2 of the IBC, including luminaires that function as both normal  
2992 and emergency means of egress illumination shall be controlled by a combination of  
2993 listed emergency relay and occupancy sensors, or signal from another building control  
2994 system, that automatically shuts off the lighting when the areas served by that  
2995 illumination are unoccupied.

2996 **EXCEPTION:** Means of egress illumination serving the exit access that does not  
2997 exceed 0.01 watts per square foot (0.11 watts per square meter) of building area is  
2998 exempt from this requirement.

2999 SECTION 84. Ordinance 19485, Section 99, and K.C.C. 16.07.310 are hereby  
3000 amended to read as follows:

3001 Table C405.4.2(1) of the ((~~International Energy Conservation~~)) Washington State  
3002 Energy Code is not adopted and the following is substituted:

3003 **Table C405.4.2(1)**

3004 **Interior Lighting Power Allowances—Building Area Method**

| Building Area Type  | LPD (w/ft <sup>2</sup> ) |
|---------------------|--------------------------|
| Automotive facility | 0.58                     |
| Convention center   | 0.58                     |
| Court house         | ((0.71)) <u>0.68</u>     |

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|                                |                                   |
|--------------------------------|-----------------------------------|
| Dining: Bar lounge/leisure     | (( <del>0.71</del> )) <u>0.68</u> |
| Dining: Cafeteria/fast food    | (( <del>0.65</del> )) <u>0.63</u> |
| Dining: Family                 | (( <del>0.64</del> )) <u>0.59</u> |
| Dormitory <sup>((a,b))</sup>   | (( <del>0.41</del> )) <u>0.46</u> |
| Exercise center                | (( <del>0.60</del> )) <u>0.54</u> |
| Fire station <sup>((a))</sup>  | (( <del>0.49</del> )) <u>0.51</u> |
| Gymnasium                      | 0.68                              |
| Health care clinic             | (( <del>0.63</del> )) <u>0.69</u> |
| Hospital <sup>((a))</sup>      | (( <del>0.84</del> )) <u>0.83</u> |
| Hotel/motel <sup>((a,b))</sup> | (( <del>0.50</del> )) <u>0.48</u> |
| Library                        | 0.75                              |
| Manufacturing facility         | 0.74                              |
| Motion picture theater         | (( <del>0.40</del> )) <u>0.39</u> |
| Multifamily <sup>((e))</sup>   | (( <del>0.37</del> )) <u>0.41</u> |
| Museum                         | (( <del>0.50</del> )) <u>0.51</u> |
| Office                         | (( <del>0.58</del> )) <u>0.56</u> |
| Parking garage                 | (( <del>0.13</del> )) <u>0.14</u> |
| Penitentiary                   | 0.65                              |

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|                         |                                 |
|-------------------------|---------------------------------|
| Performing arts theater | <del>((0.76))</del> <u>0.74</u> |
| Police station          | <del>((0.60))</del> <u>0.56</u> |
| Post office             | <del>((0.59))</del> <u>0.58</u> |
| Religious building      | 0.60                            |
| Retail                  | <del>((0.76))</del> <u>0.70</u> |
| School/university       | 0.63                            |
| Sports arena            | <del>((0.54))</del> <u>0.62</u> |
| Town hall               | <del>((0.62))</del> <u>0.60</u> |
| Transportation          | <del>((0.45))</del> <u>0.50</u> |
| Warehouse               | <del>((0.36))</del> <u>0.40</u> |
| Workshop                | <del>((0.82))</del> <u>0.78</u> |

3005 ~~((Footnotes:~~

3006 ~~a. Where sleeping units are excluded from lighting power calculations by~~  
3007 ~~application of IECC R404.1, neither the area of the sleeping units nor the wattage of~~  
3008 ~~lighting in the sleeping units shall be counted.~~

3009 ~~b. Where dwelling units are excluded from lighting power calculations by~~  
3010 ~~application of IECC R404.1, neither the area of the dwelling units nor the wattage of~~  
3011 ~~lighting in the dwelling units shall be counted.~~

3012 ~~c. Dwelling units are excluded. Neither the area of the dwelling units nor the~~  
3013 ~~wattage of lighting in the dwelling units shall be counted.))~~

3015 amended to read as follows:

3016 Table C405.4.2(2) of the ((~~International Energy Conservation~~)) Washington State  
3017 Energy Code is not adopted and the following is substituted:

3018 **Table C405.4.2(2)**3019 **Interior Lighting Power Allowances—Space-by-Space Method**

| Common Space-by-Space Types <sup>a</sup>                                         | LPD (w/ft <sup>2</sup> )          |
|----------------------------------------------------------------------------------|-----------------------------------|
| Atrium - Less than 20 feet <u>or 6,096</u><br><u>millimeters</u> in height       | 0.35                              |
| Atrium - 20 to 40 feet <u>or 6,096 to 12,192</u><br><u>millimeters</u> in height | (( <del>0.43</del> )) <u>0.39</u> |
| Atrium - Above 40 feet <u>or 12,192</u><br><u>millimeters</u> in height          | (( <del>0.54</del> )) <u>0.46</u> |
| Audience/seating area – Permanent <sup>d</sup>                                   |                                   |
| In an auditorium                                                                 | (( <del>0.55</del> )) <u>0.52</u> |
| In a gymnasium                                                                   | 0.21                              |
| In a motion picture theater                                                      | 0.24                              |
| In a penitentiary                                                                | (( <del>0.67</del> )) <u>0.56</u> |
| In a performing arts theater                                                     | (( <del>1.04</del> )) <u>0.98</u> |
| In a religious building                                                          | 0.65                              |



|                                                                                               |                                 |
|-----------------------------------------------------------------------------------------------|---------------------------------|
| In a sports arena                                                                             | <del>((0.30))</del> <u>0.24</u> |
| Otherwise                                                                                     | <del>((0.21))</del> <u>0.23</u> |
| Banking activity area <sup>i</sup>                                                            | <del>((0.55))</del> <u>0.51</u> |
| Breakroom (see Lounge/breakroom)                                                              |                                 |
| Classroom/lecture hall/training room                                                          |                                 |
| In a penitentiary                                                                             | <del>((0.89))</del> <u>0.74</u> |
| Otherwise <sup>((m)) g</sup>                                                                  | <del>((0.64))</del> <u>0.65</u> |
| Computer room, data center                                                                    | <del>((0.85))</del> <u>0.68</u> |
| Conference/meeting/multipurpose                                                               | <del>((0.87))</del> <u>0.79</u> |
| Confinement cell                                                                              | 0.63                            |
| Copy/print room                                                                               | <del>((0.28))</del> <u>0.31</u> |
| Corridor                                                                                      |                                 |
| In a facility for the visually impaired<br>(and not used primarily by the staff) <sup>b</sup> | 0.71                            |
| In a hospital                                                                                 | <del>((0.71))</del> <u>0.61</u> |
| In a manufacturing facility                                                                   | 0.37                            |
| Otherwise <sup>c, ((f)) i</sup>                                                               | <del>((0.37))</del> <u>0.40</u> |
| Courtroom <sup>c</sup>                                                                        | <del>((1.08))</del> <u>0.97</u> |
| Dining area                                                                                   |                                 |

|                                                                                               |                                 |
|-----------------------------------------------------------------------------------------------|---------------------------------|
| In a penitentiary                                                                             | <del>((0.42))</del> <u>0.35</u> |
| In a facility for the visually impaired<br>(and not used primarily by the staff) <sup>b</sup> | <del>((1.27))</del> <u>1.22</u> |
| In a bar/lounge or leisure dining <sup>((#)) i</sup>                                          | <del>((0.77))</del> <u>0.69</u> |
| In cafeteria or fast food dining                                                              | <del>((0.36))</del> <u>0.33</u> |
| In a family dining area <sup>((#)) i</sup>                                                    | <del>((0.54))</del> <u>0.47</u> |
| Otherwise                                                                                     | <del>((0.39))</del> <u>0.38</u> |
| Electrical/mechanical                                                                         | <del>((0.39))</del> <u>0.43</u> |
| Emergency vehicle garage                                                                      | <del>((0.47))</del> <u>0.46</u> |
| Food preparation                                                                              | <del>((0.98))</del> <u>1.07</u> |
| Guest room <sup>a,b</sup>                                                                     | 0.37                            |
| Laboratory                                                                                    |                                 |
| In or as a classroom                                                                          | <del>((1.00))</del> <u>0.95</u> |
| Otherwise                                                                                     | <del>((1.20))</del> <u>1.09</u> |
| Laundry/washing area                                                                          | <del>((0.48))</del> <u>0.46</u> |
| Loading dock, interior                                                                        | 0.79                            |
| Lobby <sup>c</sup>                                                                            |                                 |
| In a facility for the visually impaired<br>(and not used primarily by the staff) <sup>b</sup> | <del>((1.69))</del> <u>1.44</u> |

|                                                                                               |                                 |
|-----------------------------------------------------------------------------------------------|---------------------------------|
| For an elevator                                                                               | <del>((0.59))</del> <u>0.58</u> |
| In a hotel                                                                                    | <del>((0.46))</del> <u>0.43</u> |
| In a motion picture theater                                                                   | <del>((0.21))</del> <u>0.18</u> |
| In a performing arts theater                                                                  | <del>((1.13))</del> <u>1.09</u> |
| Otherwise                                                                                     | <del>((0.76))</del> <u>0.72</u> |
| Locker room                                                                                   | <del>((0.47))</del> <u>0.39</u> |
| Lounge /breakroom <sup>((*)</sup> i                                                           |                                 |
| In a health care facility <sup>ci</sup>                                                       | 0.42                            |
| Otherwise <sup>i</sup>                                                                        | <del>((0.53))</del> <u>0.50</u> |
| Office                                                                                        |                                 |
| Enclosed $\leq 250$                                                                           | 0.67                            |
| Enclosed $\geq 250$                                                                           | 0.59                            |
| Open plan                                                                                     | <del>((0.55))</del> <u>0.51</u> |
| Parking area, interior                                                                        | <del>((0.14))</del> <u>0.10</u> |
| Pharmacy area                                                                                 | <del>((1.66))</del> <u>1.43</u> |
| Restroom                                                                                      |                                 |
| In a facility for the visually impaired<br>(and not used primarily by the staff) <sup>b</sup> | <del>((1.26))</del> <u>0.96</u> |
| Otherwise <sup>((*)</sup> i                                                                   | <del>((0.57))</del> <u>0.67</u> |

|                                                                                                                                               |                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Sales area                                                                                                                                    | <del>((0.95))</del> <u>0.87</u>                                                           |
| Seating area, general                                                                                                                         | <del>((0.21))</del> <u>0.19</u>                                                           |
| <u>Security screening general area</u>                                                                                                        | <u>0.64</u>                                                                               |
| <u>Security screening in transportation facilities</u>                                                                                        | <u>0.93</u>                                                                               |
| <u>Security screening transportation waiting area</u>                                                                                         | <u>0.56</u>                                                                               |
| Stairwell <sup>((#)) c.i</sup>                                                                                                                | <del>((0.44))</del> <u>0.43</u>                                                           |
| Storage room<br><br>( <del>(&lt; 50 ft<sup>2</sup></del><br>50-100 ft <sup>2</sup> ))<br><br>All ( <del>(of the)</del> ) storage <sup>b</sup> | <br><br><del>((0.46))</del><br><del>((0.34))</del><br><br><del>((0.34))</del> <u>0.32</u> |
| Vehicular maintenance                                                                                                                         | <del>((0.54))</del> <u>0.53</u>                                                           |
| Workshop                                                                                                                                      | <del>((1.13))</del> <u>1.05</u>                                                           |

3020

**Building Specific Space-by-Space Types<sup>a</sup>**

| <b>Building Specific Space-by-Space Types<sup>a</sup></b> | <b>LPD<sup>d</sup> (w/ft<sup>2</sup>)</b> |
|-----------------------------------------------------------|-------------------------------------------|
| Automotive - (See Vehicular maintenance, above)           |                                           |

|                                                                         |                                 |
|-------------------------------------------------------------------------|---------------------------------|
| Convention center - Exhibit space <sup>i</sup>                          | <del>((0.55))</del> <u>0.45</u> |
| Dormitory living quarters <sup>a,b</sup>                                | 0.45                            |
| Facility for the visually impaired <sup>b</sup>                         |                                 |
| In a chapel (and not used primarily by the staff) <sup>b</sup>          | <del>((0.70))</del> <u>0.58</u> |
| In a recreation room (and not used primarily by the staff) <sup>b</sup> | <del>((1.77))</del> <u>1.20</u> |
| Fire stations – Sleeping quarters <sup>((g))</sup>                      | 0.21                            |
| <u>Gaming establishments</u>                                            |                                 |
| <u>High limits game</u>                                                 | <u>1.51</u>                     |
| <u>Slots</u>                                                            | <u>0.49</u>                     |
| <u>Sportsbook</u>                                                       | <u>0.74</u>                     |
| <u>Table games</u>                                                      | <u>0.98</u>                     |
| Gymnasium/fitness center                                                |                                 |
| In an exercise area                                                     | <del>((0.83))</del> <u>0.74</u> |
| In a playing area                                                       | <del>((0.77))</del> <u>0.74</u> |
| Health care facility <sup>ei</sup>                                      |                                 |
| In an exam/treatment room                                               | <del>((1.40))</del> <u>1.33</u> |
| In an imaging room                                                      | 0.94                            |
| In a medical supply room                                                | <del>((0.62))</del> <u>0.56</u> |

|                                                                                                   |                                 |
|---------------------------------------------------------------------------------------------------|---------------------------------|
| In a nursery                                                                                      | <del>((0.92))</del> <u>0.87</u> |
| In a nurse's station                                                                              | <del>((1.17))</del> <u>1.07</u> |
| In an operating room                                                                              | 2.26                            |
| In a patient room <sup>((g))</sup>                                                                | 0.68                            |
| In a physical therapy room                                                                        | <del>((0.91))</del> <u>0.82</u> |
| In a recovery room                                                                                | <del>((1.25))</del> <u>1.18</u> |
| <u>In a telemedic room</u>                                                                        | <u>1.44</u>                     |
| Library <sup>((f))</sup>                                                                          |                                 |
| In a reading area <sup>((h)) i</sup>                                                              | <del>((0.86))</del> <u>0.78</u> |
| In the stacks                                                                                     | <del>((0.99))</del> <u>1.06</u> |
| Manufacturing facility                                                                            |                                 |
| In a detailed manufacturing area                                                                  | <del>((0.72))</del> <u>0.68</u> |
| In an equipment room                                                                              | <del>((0.68))</del> <u>0.66</u> |
| In an extra high bay area (more than 50-foot or <u>15,240-millimeter</u> floor-to-ceiling height) | <del>((1.28))</del> <u>1.22</u> |
| In a high bay area (25 - 50-foot or <u>7,620 - 15,240-millimeter</u> floor-to-ceiling height)     | 1.12                            |
| In a low bay area (< 25-foot or <u>7,620-millimeter</u> floor-to-ceiling height)                  | <del>((0.77))</del> <u>0.78</u> |

|                                                            |                                 |
|------------------------------------------------------------|---------------------------------|
| Museum                                                     |                                 |
| In a general exhibition area <sup>i</sup>                  | <del>((0.28))</del> <u>0.28</u> |
| In a restoration room                                      | <del>((0.99))</del> <u>1.10</u> |
| Performing arts theater dressing/fitting room              | <del>((0.37))</del> <u>0.35</u> |
| Post office - Sorting area                                 | <del>((0.69))</del> <u>0.64</u> |
| Religious building                                         |                                 |
| In a fellowship hall <sup>(h)</sup> <sup>i</sup>           | <del>((0.49))</del> <u>0.45</u> |
| In a worship pulpit/choir area <sup>(h)</sup> <sup>i</sup> | <del>((0.77))</del> <u>0.68</u> |
| Retail                                                     |                                 |
| In a dressing/fitting room                                 | <del>((0.46))</del> <u>0.41</u> |
| <u>Hair salon</u>                                          | <u>0.59</u>                     |
| <u>Nail salon</u>                                          | <u>0.68</u>                     |
| In a mall concourse                                        | <del>((0.74))</del> <u>0.52</u> |
| <u>Massage space</u>                                       | <u>0.73</u>                     |
| Sports arena—Playing area                                  |                                 |
| For a Class 1 facility <sup>(i)</sup> <sup>d</sup>         | <del>((2.94))</del> <u>2.63</u> |
| For a Class 2 facility <sup>(i)</sup> <sup>e</sup>         | <del>((2.01))</del> <u>1.78</u> |
| For a Class 3 facility <sup>(k)</sup> <sup>f</sup>         | <del>((1.30))</del> <u>1.16</u> |
| For a Class 4 facility <sup>(h)</sup> <sup>g</sup>         | <del>((0.86))</del> <u>0.78</u> |

|                                                                                                                                                                                                                               |                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Sports arena—Pools</u><br><br><u>For a Class 1 facility<sup>d</sup></u><br><br><u>For a Class 2 facility<sup>e</sup></u><br><br><u>For a Class 3 facility<sup>f</sup></u><br><br><u>For a Class 4 facility<sup>g</sup></u> | <u>1.98</u><br><br><u>1.32</u><br><br><u>0.89</u><br><br><u>0.53</u>                                                                                |
| <u>Transportation</u><br><br><u>Airport hangar</u><br><br>In a baggage/carousel area<br><br>In an airport concourse<br><br>At a terminal ticket counter <sup>((#)) i</sup><br><br><u>Passenger loading area</u>               | <u>1.22</u><br><br><del>((0.35))</del> <u>0.25</u><br><br><del>((0.23))</del> <u>0.44</u><br><br><del>((0.46))</del> <u>0.36</u><br><br><u>0.64</u> |
| <u>Warehouse—Storage area</u><br><br>For medium to bulky palletized items<br><br>For smaller, hand-carried items                                                                                                              | 0.30<br><br><del>((0.62))</del> <u>0.63</u>                                                                                                         |

3021 For SI: 1 foot = 304.8 mm, 1 watt per square foot = ~~((44))~~ 10.76 W/m<sup>2</sup>.

3022 Footnotes:

3023 a. ~~((H))~~ Where both a common space type and a building area specific space type  
3024 are listed, the building area specific space type shall be appl~~((y))~~ ied.



b. A facility for the visually impaired is a facility that is licensed or will be licensed by local or state authorities for senior long-term care, adult daycare, senior support, or people with special visual needs.

~~c. ((For spaces in which lighting is specified to be installed in addition to, and controlled separately from, the general lighting for the purpose of highlighting art or exhibits if the additional lighting power shall not exceed 0.5 W/ft<sup>2</sup> of such spaces.~~

~~d. For scientific laboratories, additional lighting power allowance of 0.35 W/ft<sup>2</sup> for specialized task work—lighting that provides for small scale, cognitive or fast performance visual tasks, lighting required for operating specialized equipment associated with pharmaceutical or laboratorial activities or both.~~

~~e. For offices, additional lighting power allowance of 0.20 W/ft<sup>2</sup> for portable lighting, which includes under shelf or furniture mounted supplemental task lighting qualifies when controlled by a time clock or an occupancy sensor.~~

~~f. For corridors, additional lighting power allowance of 0.25 W/ft<sup>2</sup> display lighting and decorative lighting where provided for aesthetic purposes. Decorative lighting fixtures in corridors may also provide general lighting. This additional allowance is not permitted to be used together with the allowance in footnote c for highlighting art or exhibits.~~

~~g. Where sleeping units are excluded from lighting power calculations by application of IECC R404.1, neither the area of the sleeping units nor the wattage of lighting in the sleeping units shall be counted.~~

3046 ~~h. Where dwelling units are excluded from lighting power calculations by~~  
3047 ~~application of IECC R404.1, neither the area of the dwelling units nor the wattage of~~  
3048 ~~lighting in the dwelling units shall be counted.~~

3049 ~~i.)~~ Additional lighting power allowance of 0.2 watts per square foot (0.1 of a  
3050 square meter) for the purpose of highlighting art or exhibits. This additional power shall  
3051 be permitted only where the specified lighting is installed in addition to and controlled  
3052 separately from general lighting in accordance with WSEC C405.2.6. This additional  
3053 power shall be used only for the specified luminaires and shall not be used for any other  
3054 purpose and it shall not be added to any other space or the interior power allowance.

3055 d. Class I facilities consist of professional facilities; and semiprofessional,  
3056 collegiate, or club facilities with seating for 5,000 or more spectators.

3057 ~~((j-))~~ e. Class II facilities consist of collegiate and semiprofessional facilities with  
3058 seating for fewer than 5,000 spectators; club facilities with seating between 2,000 and  
3059 5,000 spectators; and amateur league and high school facilities with seating for more than  
3060 2,000 spectators.

3061 ~~((k-))~~ f. Class III facilities consist of club, amateur league, and high school  
3062 facilities with seating for 2,000 or fewer spectators.

3063 ~~((l-))~~ g. Class IV facilities consist of elementary school and recreational facilities;  
3064 and amateur league and high school facilities without provisions for spectators.

3065 ~~((m-))~~ h. For classrooms, additional lighting power allowance of 4.50 ~~((W/))~~  
3066 watts per lineal foot (0.3 lineal meter) of white or chalk boards for directional lighting  
3067 dedicated to white or chalk boards.

3068           ~~((n-))~~ i. Additional lighting power allowance of ~~((0.30 W/ft<sup>2</sup>))~~ 0.15 watts per  
3069 square foot (0.1 of a square meter) for ornamental lighting. Qualifying ornamental  
3070 lighting includes luminaires ~~((such as chandeliers, sconces, lanterns, neon and cold~~  
3071 ~~cathode, light emitting diodes, theatrical projectors, moving lights and light color panels~~  
3072 ~~when any of these lights))~~ that are specifically used in a decorative manner ~~((that does~~  
3073 ~~not serve as display lighting or general lighting. Ornamental lighting shall be controlled~~  
3074 ~~separately from general lighting)).~~ This additional power shall be permitted only where  
3075 the specified lighting is installed in addition to and controlled separately from display or  
3076 general lighting in accordance with WSEC C405.2.6. This additional power shall be used  
3077 only for the specified luminaires and it shall not be added to any other space or the  
3078 interior power allowance.

3079           j. Where a space is designated as unfinished, neither the area nor the lighting  
3080 power in the space shall be calculated as part of the Lighting Power Alliance.

3081           k. For corridors, additional lighting power allowance of 0.25 watts per square  
3082 foot (0.1 of a square meter) for display lighting and decorative lighting is permitted  
3083 where provided for aesthetic purposes. Decorative lighting fixtures in corridors are also  
3084 permitted to provide general lighting.

3085           NEW SECTION. SECTION 86. There is hereby added to K.C.C. chapter 16.07  
3086 a new section to read as follows:

3087           Section C405.4.2.2.1 of the Washington State Energy Code is not adopted and the  
3088 following is substituted:

3089           **Additional interior lighting power (WSEC C405.4.2.2.1).** Where using the  
3090 Space-by-Space Method, an increase in the interior lighting power allowance is permitted

for specific lighting functions. Additional power shall be permitted only where the specified lighting is installed in addition to and automatically controlled separately from general lighting, in accordance with WSEC C405.2.6. This additional power shall be used only for the specified luminaires and shall not be used for any other purpose.

An increase in the interior lighting power allowance is permitted for lighting equipment to be installed in sales areas specifically to highlight merchandise. The additional lighting power shall be determined in accordance with Equation 4-14.

**Equation 4-14:**

Additional Interior Lighting Power Allowance = 500 watts + (Retail Area 1 × ((0.45)) 0.40 watts/square foot) + (Retail Area 2 × ((0.45)) 0.40 watts/square foot) + (Retail Area 3 × ((1.05)) 0.70 watts/square foot) + (Retail Area 4 × ((1.87)) 1.00 watts/square foot)

Where:

Retail Area 1 = The floor area for all products not listed in Retail Area 2, 3 or 4.

Retail Area 2 = The floor area used for the sale of vehicles, sporting goods, and small electronics.

Retail Area 3 = The floor area used for the sale of furniture, clothing, cosmetics, and artwork.

Retail Area 4 = The floor area used for the sale of jewelry, crystal, and china.

**EXCEPTION:** Other merchandise categories are permitted to be included in Retail Areas 2 through 4, provided that justification documenting the need for additional lighting power based on visual inspection, contrast, or other critical display requirement is approved by the code official.

3114           NEW SECTION. SECTION 87. There is hereby added to K.C.C. chapter 16.07  
3115 a new section to read as follows:

3116           Section C405.5 of the Washington State Energy Code is supplemented with the  
3117 following:

3118           **Full cutoff luminaires (WSEC C405.5.5).** For open parking and outdoor areas  
3119 and roadways, luminaires mounted more than 15 feet (4,572 millimeters) above the  
3120 ground shall have a luminaire light distribution in which zero candela intensity occurs at  
3121 angles equal to or greater than 90 degrees above nadir.

3122           NEW SECTION. SECTION 88. There is hereby added to K.C.C. chapter 16.07  
3123 a new section to read as follows:

3124           Section C405.8 of the Washington State Energy Code is not adopted and the  
3125 following is substituted:

3126           **Electric motor efficiency (WSEC C405.8).** All electric motors, fractional or  
3127 otherwise, shall meet the minimum efficiency requirements of WSEC Tables C405.8(1)  
3128 through C405.8(4) when tested and rated in accordance with DOE 10 C.F.R 431. The  
3129 efficiency shall be verified through certification under an approved certification program.  
3130 Where no certification program exists, the equipment efficiency rating shall be supported  
3131 by data furnished by the motor manufacturer.

3132           **EXCEPTION:** The standards in this section shall not apply to the following  
3133 exempt electric motors.

- 3134           1. Air-over electric motors.
- 3135           2. Component sets of an electric motor.
- 3136           3. Liquid-cooled electric motors.

3137           4. Submersible electric motors.

3138           5. Inverter-only electric motors.

3139           6. Mechanical ventilation system types with an input power less than 746 watts

3140 that comply with the requirements of WSEC C403.8.4.

3141           Fractional horsepower fan motors that are 1/12 horsepower (0.1 metric

3142 horsepower) or greater and less than 1 horsepower (1 metric horsepower) (based on

3143 output power) which are not covered by WSEC Tables C405.8(3) and C405.8(4) shall be

3144 electronically commutated motors or shall have a minimum motor efficiency of 70

3145 percent when rated in accordance with DOE 10 C.F.R. 431. These motors shall also have

3146 the means to adjust motor speed for either balancing or remote control. Belt-driven fans

3147 may use sheave adjustment for airflow balancing in lieu of a varying motor speed.

3148           **EXCEPTIONS:**

3149           1. Motors that are an integral part of specialized process equipment.

3150           2. Where the motor is integral to a listed piece of equipment for which no

3151 complying motor has been approved.

3152           3. Motors used as a component of the equipment meeting the minimum

3153 efficiency requirements of WSEC C403.3.2 and WSEC Tables C403.3.2(1) through

3154 C403.3.2(16), provided that the motor input is included when determining the equipment

3155 efficiency.

3156           4. Motors in the airstream within fan coils and terminal units that operate only

3157 when providing heating to the space served.

3158           5. Mechanical ventilation system types with an input power less than 746 watts

3159 that comply with the requirements of WSEC C403.8.4.

3160           6. Domestic use of clothes dryer booster fans, range hood exhaust fans, and range  
3161 booster fans that operate intermittently.

3162           7. Radon and contaminated soil exhaust fans.

3163           NEW SECTION. SECTION 89. There is hereby added to K.C.C. chapter 16.07  
3164 a new section to read as follows:

3165           Section C405 of the Washington State Energy Code is supplemented with the  
3166 following:

3167           **Commercial food service (WSEC C405.14).** The following types of equipment  
3168 within the scope of the applicable Energy Star program shall comply with the energy-  
3169 efficiency and water-efficiency criteria required to achieve the Energy Star label:

3170           A. Commercial fryers: Energy Star Program Requirements for Commercial  
3171 Fryers.

3172           B. Commercial hot food holding cabinets: Energy Star Program Requirements  
3173 for Hot Food Holding Cabinets.

3174           C. Commercial steam cookers: Energy Star Program Requirements for  
3175 Commercial Steam Cookers.

3176           D. Commercial dishwashers: Energy Star Program Requirements for  
3177 Commercial Dishwashers.

3178           NEW SECTION. SECTION 90. There is hereby added to K.C.C. chapter 16.07  
3179 a new section to read as follows:

3180           Section C405 of the Washington State Energy Code is supplemented with the  
3181 following:

3182           **Electric power at gas-fired commercial cooking appliances (WSEC**

3183 **C405.14.1).** Where gas-fired commercial cooking appliances in commercial kitchens are  
3184 provided, an electrical panel shall be provided within or adjacent to each space in which  
3185 commercial cooking appliances are located, sized to serve future electric appliances to  
3186 replace all gas-fired appliances in the space with a minimum capacity of 293 volt-  
3187 amperes (VA) per Btu/h of gas appliance input capacity. The main electric service panel  
3188 for the building shall be wired and sized to accommodate all such commercial cooking  
3189 appliance panels. Permit documents shall include a table listing each gas-fired  
3190 commercial cooking appliance as well as an equivalent electric appliance providing the  
3191 same or greater cooking capacity, and the total amperage required for the commercial  
3192 kitchen electrical panel. This information shall be provided in both the mechanical and  
3193 the electrical permit documents.

3194 **EXCEPTION:** This requirement does not apply to gas-fired cooking appliances  
3195 installed in buildings originally permitted in compliance with an earlier edition of the  
3196 Energy Code, if the building's main service panel lacks sufficient capacity to provide  
3197 power for equivalent electric versions of all the gas-fired equipment identified in the  
3198 permit application.

3199 **NEW SECTION. SECTION 91.** There is hereby added to K.C.C. chapter 16.07  
3200 a new section to read as follows:

3201 Table C406.1 of the Washington State Energy Code is not adopted and the  
3202 following is substituted:

3203 **Table C406.1**

3204 **Energy Measure Credit Requirements**



| Required Credits<br>for Projects                              |                 | Occupancy Group |               |         |            |            |              |
|---------------------------------------------------------------|-----------------|-----------------|---------------|---------|------------|------------|--------------|
|                                                               | WSEC<br>Section | Group<br>R-1    | Group R-<br>2 | Group B | Group<br>E | Group<br>M | All<br>Other |
| New building<br>energy efficiency<br>credit requirement       | C406.2          | 59              | 45            | 46      | 53         | 61         | 54           |
| Building additions<br>energy efficiency<br>credit requirement | C406.2          | 30              | 22            | 23      | 25         | 30         | 23           |
| New building load<br>management credit<br>requirement         | C406.3          | 12              | 15            | 27      | 15         | 13         | 26           |

3205 NEW SECTION. SECTION 92. There is hereby added to K.C.C. chapter 16.07

3206 a new section to read as follows:

3207 Section C406.1.1.1 of the Washington State Energy Code is not adopted and the

3208 following is substituted:

3209 **Applicable envelope, renewable, and elevator energy credits (WSEC**

3210 **C406.1.1.1).** Where an entire building or building addition complies with WSEC

3211 C406.2.5, C406.2.12, C406.2.13, or C406.2.18, under an initial tenant improvement

3212 permit, tenant spaces within the building qualify for the number of credits assigned to the

3213 occupancy group of the tenant space in accordance with WSEC Table C406.2(1). Where

3214 prior energy credits were achieved under the 2018 Washington State Energy Code, they  
3215 shall be multiplied by 6 for applicability to this code.

3216 NEW SECTION. SECTION 93. There is hereby added to K.C.C. chapter 16.07  
3217 a new section to read as follows:

3218 Section C406.1.1.2 of the Washington State Energy Code is not adopted and the  
3219 following is substituted:

3220 **Applicable HVAC and service water heating credits (WSEC C406.1.1.2).**

3221 Where HVAC and service water heating systems and services are installed and comply  
3222 with WSEC C406.2.2, C406.2.8, or C406.2.9, under an initial tenant improvement  
3223 permit, those systems and services shall be considered a part of the tenant space. Tenant  
3224 spaces qualify for the credits assigned to the occupancy group of the tenant space in  
3225 accordance with WSEC Table C406.2(1) if the tenant space includes the distribution  
3226 system and equipment that the central HVAC systems or service water heating systems  
3227 were designed to support.

3228 NEW SECTION. SECTION 94. There is hereby added to K.C.C. chapter 16.07  
3229 a new section to read as follows:

3230 Table C406.2(1) of the Washington State Energy Code is not adopted and the  
3231 following is substituted:

3232 **Table C406.2(1)**

3233 **Efficiency Measure Credits**

| Measure | Applicable | Prorating | Occupancy Group |
|---------|------------|-----------|-----------------|
| Title   | WSEC       | Flag      |                 |
|         | Section    |           |                 |

|                                                                         |            |      | <b>Group<br/>R-1</b> | <b>Group<br/>R-2</b> | <b>Group<br/>B</b> | <b>Group<br/>E</b> | <b>Group<br/>M</b> | <b>All<br/>Other</b> |
|-------------------------------------------------------------------------|------------|------|----------------------|----------------------|--------------------|--------------------|--------------------|----------------------|
| 1. Dwelling<br>Unit HVAC<br>control                                     | C406.2.1   | Heat | NA                   | 7                    | NA                 | NA                 | NA                 | NA                   |
| 2. Improved<br>HVAC TSPR                                                | C406.2.2.1 | Heat | NA                   | 8                    | 11                 | 17                 | 22                 | NA                   |
| 3. Improved<br>cooling and<br>fan efficiency                            | C406.2.2.2 | Heat | 8                    | 5                    | 10                 | 10                 | 8                  | 8                    |
| 4. Improved<br>heating<br>efficiency                                    | C406.2.2.3 | Heat | 1                    | 1                    | 1                  | 1                  | 2                  | 1                    |
| 5. Improved<br>low-carbon<br>district energy<br>system (100%<br>better) | C406.2.2.4 |      | 3                    | 3                    | 4                  | 11                 | 17                 | 8                    |
| 6. Improved<br>low-carbon<br>district energy<br>system (20%<br>better)  | C406.2.2.5 |      | 9                    | 10                   | 12                 | 33                 | 52                 | 24                   |
| 7. High                                                                 | C406.2.2.6 | Heat | 31                   | 31                   | 21                 | 39                 | 40                 | 21/                  |

| Measure<br>Title                                     | Applicable<br>WSEC<br>Section | Prorating<br>Flag | Occupancy Group |              |            |            |            |                              |
|------------------------------------------------------|-------------------------------|-------------------|-----------------|--------------|------------|------------|------------|------------------------------|
|                                                      |                               |                   | Group<br>R-1    | Group<br>R-2 | Group<br>B | Group<br>E | Group<br>M | All<br>Other                 |
| performance<br>DOAS                                  |                               |                   |                 |              |            |            |            | (Group<br>A:40) <sup>c</sup> |
| 8. Fault<br>detection &<br>diagnostics<br>(FDD)      | C406.2.2.7                    | Heat              | 2               | 2            | 2          | 6          | 9          | 4                            |
| 9. 10%<br>reduced<br>lighting power                  | C406.2.3.1                    | Heat              | 7               | 4            | 18         | 16         | 36         | 16                           |
| 10. 20%<br>reduced<br>lighting<br>power <sup>d</sup> | C406.2.3.2                    | Heat              | 13              | 8            | 36         | 32         | 72         | 32                           |
| 11. Lamp<br>efficacy<br>improvement                  | C406.2.3.3                    | Heat              | 5               | 6            | NA         | NA         | NA         | NA                           |
| 12.<br>Residential<br>lighting                       | C406.2.4.1                    | Heat              | NA              | 8            | NA         | NA         | NA         | NA                           |

| Measure<br>Title                                     | Applicable<br>WSEC<br>Section | Prorating<br>Flag | Occupancy Group |              |            |            |                              |              |
|------------------------------------------------------|-------------------------------|-------------------|-----------------|--------------|------------|------------|------------------------------|--------------|
|                                                      |                               |                   | Group<br>R-1    | Group<br>R-2 | Group<br>B | Group<br>E | Group<br>M                   | All<br>Other |
| control                                              |                               |                   |                 |              |            |            |                              |              |
| 13. Enhanced lighting control                        | C406.2.4.2                    | Heat              | 1               | 1            | 6          | 6          | 11                           | 5            |
| 14. Renewable energy                                 | C406.2.5                      |                   | 7               | 12           | 13         | 13         | 10                           | 11           |
| 15. Shower drain heat recovery                       | C406.2.6.1                    | SWH               | 9               | 30           | NA         | 3          | NA                           | NA           |
| 16. Service water heat recovery                      | C406.2.6.2                    | SWH               | 35              | 111          | 13         | 14         | (Grocery)<br>41 <sup>e</sup> | NA           |
| 17. Reserved                                         |                               |                   |                 |              |            |            |                              |              |
| 18. High efficiency service water heating, gas-fired | C406.2.6.4                    | SWH               | NA              | NA           | NA         | NA         | NA                           | NA           |

| Measure<br>Title                                                      | Applicable<br>WSEC<br>Section | Prorating<br>Flag | Occupancy Group |              |            |            |            |              |
|-----------------------------------------------------------------------|-------------------------------|-------------------|-----------------|--------------|------------|------------|------------|--------------|
|                                                                       |                               |                   | Group<br>R-1    | Group<br>R-2 | Group<br>B | Group<br>E | Group<br>M | All<br>Other |
| 19. Heat trace system                                                 | C406.2.7.1                    | SWH               | 6               | 13           | 4          | 1          | NA         | 6            |
| 20. Point of use water heater                                         | C406.2.7.2                    | SWH               | NA              | NA           | 19         | 5          | NA         | NA           |
| 21. Service hot water distribution right sizing                       | C406.2.8                      |                   | 13              | 10           | NA         | NA         | NA         | NA           |
| 22. High performance service hot water temperature maintenance system | C406.2.9                      |                   | 6               | 13           | 4          | 1          | NA         | 6            |
| 23. Reserved                                                          |                               |                   |                 |              |            |            |            |              |
| 24. Low flow residential                                              | C406.2.11                     | SWH               | 3               | 3            | NA         | NA         | NA         | NA           |

| Measure<br>Title                               | Applicable<br>WSEC<br>Section | Prorating<br>Flag | Occupancy Group |              |            |            |            |              |
|------------------------------------------------|-------------------------------|-------------------|-----------------|--------------|------------|------------|------------|--------------|
|                                                |                               |                   | Group<br>R-1    | Group<br>R-2 | Group<br>B | Group<br>E | Group<br>M | All<br>Other |
| showerhead                                     |                               |                   |                 |              |            |            |            |              |
| 25. Enhanced envelope performance <sup>g</sup> | C406.2.12                     | Heat              | 24              | 20           | 13         | 5          | 19         | 16           |
| 26. Base reduced air leakage <sup>g</sup>      | C406.2.13.1                   |                   | 29              | 24           | 6          | 3          | 9          | 14           |
| 27. Enhanced reduced air leakage <sup>g</sup>  | C406.2.13.2                   | Heat              | 53              | 44           | 11         | 5          | 16         | 26           |
| 28. Reserved                                   |                               |                   |                 |              |            |            |            |              |
| 29. Enhanced residential kitchen equipment     | C406.2.15                     | Heat              | 12              | 19           | NA         | NA         | NA         | NA           |
| 30. Enhanced residential laundry equipment     | C406.2.16                     | Heat              | NA              | 6            | NA         | NA         | NA         | NA           |

| Measure<br>Title                 | Applicable<br>WSEC<br>Section | Prorating<br>Flag | Occupancy Group |              |            |            |            |              |
|----------------------------------|-------------------------------|-------------------|-----------------|--------------|------------|------------|------------|--------------|
|                                  |                               |                   | Group<br>R-1    | Group<br>R-2 | Group<br>B | Group<br>E | Group<br>M | All<br>Other |
| 31. Heat pump clothes dryers     | C406.2.17                     | Heat              | 6               | 6            | NA         | NA         | NA         | NA           |
| 32. Efficient elevator equipment | C406.2.18                     | Heat              | 3               | 5            | 5          | 5          | 4          | 4            |

Footnotes:

a. Projects using Item 2 shall not use Items 3, 4, or 7.

b. Projects using WSEC C406.2.2.5 shall not use WSEC C406.2.2.4.

c. For WSEC C406.2.2.6, Group A occupancies achieve 40 credits. Other occupancy groups within the "all other" category achieve 21 credits.

d. Projects using WSEC C406.2.3.2 shall not use WSEC C406.2.3.1.

e. Service water heat recovery and heat pump water heating are available in Group M occupancies only for grocery stores larger than 10,000 square feet (929.0 square meters). Large mixed retail uses with full grocery and butcher sections shall achieve half the credits. This credit is not available where refrigeration recovery to heat service hot water is used to meet the requirements of WSEC C403.9.2.3.

f. Reserved.

g. Buildings or building areas that are exempt from the thermal envelope



3247 requirements in accordance with WSEC C402.1.1 and C402.1.2 do not qualify for this  
 3248 package.

3249 NEW SECTION. SECTION 95. There is hereby added to K.C.C. chapter 16.07  
 3250 a new section to read as follows:

3251 Table C406.2(2) of the Washington State Energy Code is not adopted and the  
 3252 following is substituted:

**Table C406.2(2)**

**Efficiency Measure Credits for use with Fossil Fuel Compliance Path**

| Measure Title                                                           | Applicable<br>WSEC<br>Section | Prorating<br>Flag | Occupancy Group |              |            |            |            |              |
|-------------------------------------------------------------------------|-------------------------------|-------------------|-----------------|--------------|------------|------------|------------|--------------|
|                                                                         |                               |                   | Group<br>R-1    | Group<br>R-2 | Group<br>B | Group<br>E | Group<br>M | All<br>Other |
| 1. Dwelling unit HVAC control                                           | C406.2.1                      | Heat              | NA              | 8            | NA         | NA         | NA         | NA           |
| 2. Improved HVAC TSPR <sup>a</sup>                                      | C406.2.2.1                    | Heat              | NA              | 9            | 12         | 19         | 24         | NA           |
| 3. Improved cooling and fan efficiency                                  | C406.2.2.2                    | Heat              | 12              | 8            | 14         | 8          | 10         | 10           |
| 4. Improved heating efficiency                                          | C406.2.2.3                    | Heat              | 2               | 3            | 3          | 11         | 18         | 8            |
| 5. Improved low-carbon district energy system (10% better)              | C406.2.2.4                    |                   | 3               | 3            | 4          | 12         | 19         | 9            |
| 6. Improved low-carbon district energy system (20% better) <sup>b</sup> | C406.2.2.5                    |                   | 10              | 11           | 13         | 36         | 57         | 26           |

|                                                      |            |      |     |     |    |    |                              |                           |
|------------------------------------------------------|------------|------|-----|-----|----|----|------------------------------|---------------------------|
| 7. High performance DOAS                             | C406.2.2.6 | Heat | 34  | 34  | 23 | 43 | 44                           | 23/(A)<br>40 <sup>c</sup> |
| 8. Fault detection & diagnostics (FDD)               | C406.2.2.7 | Heat | 2   | 2   | 2  | 6  | 9                            | 4                         |
| 9. 10% reduced lighting power                        | C406.2.3.1 | Heat | 7   | 4   | 18 | 16 | 20                           | 15                        |
| 10. 20% reduced lighting power <sup>d</sup>          | C406.2.3.2 | Heat | 13  | 8   | 36 | 32 | 40                           | 29                        |
| 11. Lamp efficacy improvement                        | C406.2.3.3 | Heat | 5   | 6   | NA | NA | NA                           | NA                        |
| 12. Residential lighting control                     | C406.2.4.1 | Heat | NA  | 8   | NA | NA | NA                           | NA                        |
| 13. Enhanced lighting control                        | C405.2.4.2 | Heat | 1   | 1   | 6  | 6  | 11                           | 6                         |
| 14. Renewable energy                                 | C406.2.5   |      | 7   | 12  | 13 | 13 | 10                           | 11                        |
| 15. Shower drain heat recovery                       | C406.2.6.1 | SWH  | 10  | 33  | NA | 3  | NA                           | NA                        |
| 16. Service water heat recovery                      | C406.2.6.2 | SWH  | 35  | 111 | 13 | 14 | (Grocery)<br>41 <sup>c</sup> | NA                        |
| 17. Heat pump water heating                          | C406.2.3   | SWH  | 135 | 163 | 17 | 33 | (Grocery)<br>95 <sup>e</sup> | (A-2)<br>95 <sup>f</sup>  |
| 18. High efficiency service water heating, gas-fired | C406.2.4   | SWH  | 59  | 65  | 6  | 11 | 18                           | 32                        |
| 19. Heat trace system                                | C406.2.7.1 | SWH  | 6   | 13  | 4  | 1  | NA                           | 6                         |
| 20. Point of use water heater                        | C406.2.7.2 | SWH  | NA  | NA  | 19 | 5  | NA                           | NA                        |

|                                                                       |             |      |    |    |    |    |    |    |
|-----------------------------------------------------------------------|-------------|------|----|----|----|----|----|----|
| 21. Service hot water distribution right sizing                       | C406.2.8    |      | 13 | 10 | NA | NA | NA | NA |
| 22. High performance service hot water temperature maintenance system | C406.2.9    |      | 6  | 13 | 4  | 1  | NA | 6  |
| 23. Reserved                                                          |             |      |    |    |    |    |    |    |
| 24. Low flow residential showerheads                                  | C406.2.11   | SWH  | 3  | 3  | NA | NA | NA | NA |
| 25. Enhanced envelope performance <sup>g</sup>                        | C406.2.12   | Heat | 24 | 20 | 13 | 5  | 19 | 14 |
| 26. Base reduced air leakage <sup>g</sup>                             | C406.2.13.1 |      | 29 | 24 | 6  | 3  | 9  | 11 |
| 27. Enhanced reduced air leakage <sup>g</sup>                         | C406.2.13.2 | Heat | 53 | 44 | 11 | 5  | 16 | 20 |
| 28. Reserved                                                          |             |      |    |    |    |    |    |    |
| 29. Enhanced residential kitchen equipment                            | C406.2.15   | Heat | 12 | 19 | NA | NA | NA | NA |
| 30. Enhanced residential laundry equipment                            | C406.2.16   | Heat | NA | 6  | NA | NA | NA | NA |
| 31. Heat pump clothes dryers                                          | C406.2.17   | Heat | 6  | 6  | NA | NA | NA | NA |
| 32. Efficient elevator equipment                                      | C406.2.18   | Heat | 3  | 5  | 5  | 5  | 4  | 4  |

Footnotes:

a. Projects using Item 2 shall not use Items 3, 4, or 7.

- 3257           b. Projects using WSEC C406.2.2.5 shall not use WSEC C406.2.2.4.
- 3258           c. For WSEC C406.2.2.6, Group A occupancies achieve 40 credits. Other  
3259 occupancy groups within the "all other" category achieve 21 credits.
- 3260           d. Projects using WSEC C406.2.3.2 shall not use WSEC C406.2.3.1.
- 3261           e. Service water heat recovery and heat pump water heating are available in  
3262 Group M occupancies only for grocery stores larger than 10,000 square feet (929.0  
3263 square meters). Large mixed retail uses with full grocery and butcher sections shall  
3264 achieve half the credits. This credit is not available where refrigeration recovery to heat  
3265 service hot water is used to meet the requirements of WSEC C403.9.2.3.
- 3266           f. Reserved.
- 3267           g. Buildings or building areas that are exempt from the thermal envelope  
3268 requirements in accordance with WSEC C402.1.1 and C402.1.2, do not qualify for this  
3269 package.
- 3270           NEW SECTION. SECTION 96. There is hereby added to K.C.C. chapter 16.07  
3271 a new section to read as follows:
- 3272           Section C406.2.1 of the Washington State Energy Code is not adopted and the  
3273 following is substituted:
- 3274           **Dwelling unit and Group R-1 sleeping unit HVAC controls (WSEC**  
3275 **C406.2.1).** HVAC systems serving dwelling units or Group R-1 sleeping units shall be  
3276 controlled with a programmable thermostat that is configured to automatically activate a  
3277 setback condition of at least 5° Fahrenheit (-15° Celsius) for both heating and cooling.  
3278 The programmable thermostat shall be configured to provide setback during occupied

3279 sleep periods. The unoccupied setback mode shall be configured to operate in  
3280 conjunction with one of the following:

3281 1. A manual main control device by each dwelling unit or Group R-1 sleeping  
3282 unit main entrance that initiates setback for all HVAC units in the dwelling unit and is  
3283 clearly identified as "Heating/Cooling Master Setback."

3284 2. Occupancy sensors in each room of the dwelling unit or Group R-1 sleeping  
3285 unit combined with a door switch to initiate setback for all HVAC units in the dwelling  
3286 within 20 minutes of all spaces being vacant immediately following a door switch  
3287 operation. Where separate room HVAC units are used, an individual occupancy sensor  
3288 on each unit that is configured to provide setback shall meet this requirement.

3289 3. An advanced learning thermostat that senses occupant presence and  
3290 automatically creates a schedule for occupancy and provides a dynamic setback schedule  
3291 based on when the spaces are generally unoccupied.

3292 4. An automated control and sensing system that uses geographic sensing  
3293 connected to the dwelling unit occupants' cell phones and initiates the setback condition  
3294 when all occupants are away from the building.

3295 NEW SECTION. SECTION 97. There is hereby added to K.C.C. chapter 16.07  
3296 a new section to read as follows:

3297 Section C406.2.2 of the Washington State Energy Code is not adopted and the  
3298 following is substituted:

3299 **More efficient HVAC system performance (WSEC C406.2.2).** All heating and  
3300 cooling systems shall meet the minimum requirements of WSEC C403 and efficiency  
3301 improvements shall be referenced to the minimum efficiency requirements listed in the

tables in WSEC C403.3.2. Where multiple efficiency requirements are listed, equipment shall meet the seasonal efficiencies including SEER, EER/IEER, IPLV, or AFUE. Equipment that is larger than the maximum capacity range indicated in the tables in WSEC C403.3.2 shall utilize the values listed for the largest capacity equipment for the associated equipment type shown in the table. Where multiple individual heating or cooling systems serve the project, the improvement shall be the weighted average improvement based on individual system capacity. This credit shall not be utilized for low energy or semi-heated space conditioning categories. No HVAC systems incorporating fossil fuel-fired equipment, or heat from district energy systems that are primarily heated by fossil fuel combustion, are permitted to utilize this credit.

For occupancies and systems required to comply with WSEC C403.1.1, credits are permitted to be achieved by meeting the requirements of WSEC C406.2.2.1. Other systems are permitted to achieve credits by meeting the requirements of either:

1. WSEC C406.2.2.2, More efficient HVAC equipment cooling and fan performance;
  2. WSEC C406.2.2.3, More efficient HVAC equipment heating performance;
  3. WSEC C406.2.2.4, High performance dedicated outdoor air system (DOAS);
- or
4. Any combination of WSEC C406.2.2.2, C406.2.2.3, and C406.2.2.4.

In addition, energy credits are permitted to be achieved for WSEC C406.2.2.7, Fault detection and diagnostics, where not otherwise required by WSEC C403.2.3 or C403.6.10(15).

NEW SECTION. SECTION 98. There is hereby added to K.C.C. chapter 16.07

3325 a new section to read as follows:

3326 Section C406.2.2.3 of the Washington State Energy Code is not adopted and the  
3327 following is substituted:

3328 **More efficient HVAC equipment heating performance (WSEC C406.2.2.3).**

3329 No less than 90 percent of the total HVAC capacity serving the total conditioned floor  
3330 area of the entire building, building addition, or tenant space in accordance with WSEC  
3331 C406.1.1 shall comply with the following:

3332 C.406.2.2.3.1. HVAC system selection. Equipment installed shall be types that  
3333 are listed in the tables in WSEC C403.3.2. Electrical resistance heating shall be limited  
3334 to 20 percent of system capacity with the exception of heat pump supplemental heating.  
3335 No HVAC systems incorporating fossil fuel-fired equipment, or heat from district energy  
3336 systems that are primarily heated by fossil fuel combustion, are permitted to utilize this  
3337 credit.

3338 C.406.2.2.3.2. Heating equipment efficiency. Equipment shall exceed the  
3339 minimum heating efficiency requirements of the tables in WSEC C403.3.2 by at least 5  
3340 percent. Where equipment exceeds the minimum annual heating efficiency requirements  
3341 by more than 5 percent, energy efficiency credits for heating shall be determined using  
3342 Equation 4-16, rounded to the nearest whole number.

3343 **Equation 4-16:**

|                                 |           |   |
|---------------------------------|-----------|---|
| $EEC_{HEH} = EEC_5 \times [1 +$ | HEI- 0.05 | ] |
|                                 | 0.05      |   |

3344 Where:

3345  $EEC_{HEH}$  = Energy efficiency credits for heating efficiency improvement.

3346  $EEC_5 = \text{WSEC C406.2.2.2 credits from WSEC Table C406.2(1)}.$

3347  $HEI = \text{The lesser of the improvement above minimum heating efficiency}$   
3348  $\text{requirements or 20 percent or 0.2. Where heating efficiency varies by system, use the}$   
3349  $\text{capacity weighted average percentage for all heating equipment combined. For metrics}$   
3350  $\text{that increase as efficiency increases, HEI shall be calculated as follows:}$

|         |            |      |
|---------|------------|------|
| $HEI =$ | $HM_{DES}$ | $-1$ |
|         | $HM_{MIN}$ |      |

3351 Where:

3352  $HM_{DES} = \text{Design heating efficiency metric, part-load, or annualized where}$   
3353  $\text{available.}$

3354  $HM_{MIN} = \text{Minimum required heating efficiency metric, part-load, or annualized}$   
3355  $\text{where available from WSEC C403.3.2.}$

3356 **EXCEPTION:** In low energy spaces complying with WSEC C402.1.1 and semi-  
3357 heated spaces complying with WSEC C402.1.1.2, no less than 90 percent of the installed  
3358 heating capacity is provided by electric infrared or gas-fired radiant heating equipment  
3359 for localized heating applications. Such spaces shall achieve credits for  $EEC_5$ .

3360 NEW SECTION. SECTION 99. There is hereby added to K.C.C. chapter 16.07  
3361 a new section to read as follows:

3362 Section C406.2.2.6 of the Washington State Energy Code is not adopted and the  
3363 following is substituted:

3364 **High performance dedicated outdoor air system (DOAS) (WSEC C406.2.2.6).**

3365 No less than 90 percent of the total conditioned floor area of the whole project,  
3366 excluding floor area of unoccupied spaces that do not require ventilation as specified by



the IMC, shall be served by DOAS installed in accordance with WSEC C403.3.5 with the following adjustments:

1. Minimum heat recovery sensible effectiveness of 80 percent, calculated in accordance with WSEC C403.3.5.1, or C403.7.6.1 for R-2 occupancies.

2. Where design outdoor airflow is greater than 500 cubic feet per minute (250 liters per second), the DOAS shall be equipped with an economizer bypass, damper control, or wheel speed control that is active between 50° Fahrenheit (10° Celsius) and 75° Fahrenheit (24° Celsius) outdoor air temperature and minimizes energy recovery or maintains an appropriate DOAS leaving air temperature when the building is generally in cooling, based either on outdoor air temperature or a DDC zone-based cooling system reset.

3. DOAS total combined fan power shall comply with the fan power limits in WSEC Table C403.8.4 where applicable and shall be less than either:

3.1. 0.769 watts per cubic feet per minute (1.55 watts per liter per second) when calculated in accordance with WSEC C403.3.5.2; or

3.2. 80 percent of fan power allowance for a constant volume system when calculated in accordance with WSEC C403.8.1.

This option (High performance DOAS per C406.2.2.6) is not available to areas served by systems utilizing WSEC C403.2.2.1, exception 5. No HVAC systems incorporating fossil fuel-fired equipment, or heat from district energy systems that are primarily heated by fossil fuel combustion, are permitted to utilize this credit.

NEW SECTION. SECTION 100. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

3390           Section C406.2.4.2 of the Washington State Energy Code is not adopted and the  
3391 following is substituted:

3392           **Enhanced digital lighting controls (WSEC C406.2.4.2).** Measure credits shall  
3393 be achieved where no less than 50 percent of the gross floor area within the project has  
3394 luminaires and lighting controls that include high end trim in compliance with WSEC  
3395 C405.2.8.3 and either luminaire-level lighting controls in compliance with WSEC  
3396 C405.2.8.1 or networked lighting controls in accordance with WSEC C405.2.8.2. Open  
3397 office areas subject to the requirements of WSEC C405.2.8 are not permitted to take  
3398 credit for this option. Where general lighting in more than 50 percent of the gross floor  
3399 area complies, the base credits from WSEC Table C406.2(1) shall be prorated as follows:

3400           
$$[\text{Floor area with high end trim, \%}] \times [\text{Base energy credits for WSEC C406.2.4.2}] /$$
  
3401 50%

3402           NEW SECTION. SECTION 101. There is hereby added to K.C.C. chapter 16.07  
3403 a new section to read as follows:

3404           Section C406.2.6 of the Washington State Energy Code is not adopted and the  
3405 following is substituted:

3406           **Reduced energy use in service water heating (WSEC C406.2.6).** Buildings with  
3407 service hot water heating equipment that serves the whole building, building addition, or  
3408 tenant space shall achieve credits through compliance with:

- 3409           1. WSEC C406.2.6.1, C406.2.6.2, or C406.2.6.3.  
3410           2. WSEC C406.2.6.1 and C406.2.6.2.  
3411           3. WSEC C406.2.6.1 and C406.2.6.3.

3412 No service water heating systems incorporating fossil fuel-fired equipment, or  
3413 heat from district energy systems that are primarily heated by fossil fuel combustion, are  
3414 permitted to utilize this credit.

3415 NEW SECTION. SECTION 102. There is hereby added to K.C.C. chapter 16.07  
3416 a new section to read as follows:

3417 Section C406.2.6.3.1 of the Washington State Energy Code is not adopted and the  
3418 following is substituted:

3419 **Heat pump water heater (WSEC C406.2.6.3.1).** Credit shall be achieved where  
3420 the primary heat pump service water heating system is sized to deliver no less than 100  
3421 percent of the net calculated demand for the service water production during the peak  
3422 demand period with entering dry bulb or wet bulb outdoor air temperature at 40°  
3423 Fahrenheit (4°Celsius) for air-source heat pumps, or 44° Fahrenheit (7° Celsius) ground  
3424 temperature for ground-source heat pumps, as calculated using the equipment  
3425 manufacturer's selection criteria or another approved methodology. For this credit, the  
3426 net calculated demand shall be the gross building demand less any portion of the demand  
3427 complying with the exceptions to Section C404.2.1. Supplemental heating is permitted in  
3428 accordance with Section C404.2.1, but cannot use fossil fuels. The refrigerant used in the  
3429 heat pump system must have a global warming potential (GWP) no greater than 680.

3430 Heat pump water heaters shall comply with one of the following:

3431 1. The COP rating shall be a minimum COP of three reported at the design  
3432 leaving heat pump water temperature with an entering air temperature of 60° Fahrenheit  
3433 (16° Celsius) or lower. For water-source equipment, the COP rating will be reported at  
3434 the design leaving load water temperature with an entering load water temperature of 74°

3435 Fahrenheit (23 ° Celsius) or lower.

3436           2. The uniform energy factor (UEF) shall be a minimum of 3.4 rated based on

3437 U.S. Department of Energy requirements.

3438           NEW SECTION. SECTION 103. There is hereby added to K.C.C. chapter 16.07

3439 a new section to read as follows:

3440           Section C406.2.10 of the Washington State Energy Code is not adopted.

3441           NEW SECTION. SECTION 104. There is hereby added to K.C.C. chapter 16.07

3442 a new section to read as follows:

3443           Section C406.2.14 of the Washington State Energy Code is not adopted.

3444           NEW SECTION. SECTION 105. There is hereby added to K.C.C. chapter 16.07

3445 a new section to read as follows:

3446           Section C407.2 of the Washington State Energy Code is not adopted and the

3447 following is substituted:

3448           **Mandatory requirements (WSEC C407.2).** Compliance with WSEC C407 also

3449 requires compliance with those sections shown in WSEC Table C407.2. The building

3450 permit application for projects utilizing this method shall include in one submittal all

3451 building and mechanical drawings and all information necessary to verify that the

3452 building envelope and mechanical design for the project corresponds with the annual

3453 energy analysis. If credit is proposed to be taken for lighting energy savings, then an

3454 electrical permit application shall also be submitted and approved prior to the start of

3455 building construction. If credit is proposed to be taken for energy savings from other

3456 components, then the corresponding permit application (e.g., plumbing, boiler, etc.) shall

3457 also be submitted and approved prior to the building permit issuance. Otherwise,

3458 components of the project that would not be approved as part of a building permit  
3459 application shall be modeled in the baseline in accordance with ANSI/ASHRAE/IESNA  
3460 90.1 Appendix G and in the proposed model in accordance with the requirements of the  
3461 Washington State Energy Code.

3462 **Table C407.2**

3463 **Mandatory Compliance Measures for Total Building Performance Method**

| Section <sup>a</sup> | Title                                    | Comments |
|----------------------|------------------------------------------|----------|
| <b>Envelope</b>      |                                          |          |
| C401                 | Thermal envelope certificate             |          |
| C402.2.7             | Airspaces                                |          |
| C402.5               | Air leakage                              |          |
| <b>Mechanical</b>    |                                          |          |
| C403.1.2             | Calculation of heating and cooling loads |          |
| C403.1.3             | Data centers                             |          |
| C403.2               | System design                            |          |
| C403.3.1             | Equipment and system sizing              |          |
| C403.3.2             | HVAC equipment performance requirements  |          |
| C403.3.3             | Hot gas bypass limitation                |          |
| C403.3.4.4           | Boiler turndown                          |          |
| C403.4.1             | Thermostatic controls                    |          |
| C403.4.2             | Off-hour controls                        |          |
| C403.4.7             | Combustion heating equipment controls    |          |

|                                |                                                                        |                                         |
|--------------------------------|------------------------------------------------------------------------|-----------------------------------------|
| C403.4.8                       | Group R-1 hotel/motel guestrooms                                       | See Section C403.7.4                    |
| C403.4.9                       | Group R-2 and R-3 dwelling units                                       |                                         |
| C403.4.10                      | Group R-2 sleeping units                                               |                                         |
| C403.4.11                      | Direct digital control systems                                         |                                         |
| C403.5.5                       | Economizer fault detection and diagnostics (FDD)                       |                                         |
| C403.7                         | Ventilation and exhaust systems                                        | Except for C403.7.6.2                   |
| C403.8                         | Fan and fan controls                                                   |                                         |
| C403.9.1.1                     | Variable flow controls                                                 | For cooling tower fans<br>$\geq 7.5$ hp |
| C403.9.1.3                     | Limitation on centrifugal fan cooling towers                           | For open cooling<br>towers              |
| C403.10                        | Construction of HVAC elements                                          |                                         |
| C403.11                        | Mechanical systems located outside of the building<br>thermal envelope |                                         |
| C403.14                        | Commissioning                                                          |                                         |
| <b>Service Water Heating</b>   |                                                                        |                                         |
| C404                           | Service water heating                                                  | Except for C404.2.1                     |
| <b>Lighting and Electrical</b> |                                                                        |                                         |
| C405                           | Electrical power and lighting systems                                  |                                         |
| <b>Other Requirements</b>      |                                                                        |                                         |
| C407                           | Total building performance                                             |                                         |
| C408                           | System commissioning                                                   |                                         |

|                   |                            |  |
|-------------------|----------------------------|--|
| C409              | Energy metering            |  |
| C410              | Refrigeration requirements |  |
| C411 <sup>b</sup> | Renewable energy           |  |
| C412              | Compressed air systems     |  |

3464 Footnotes:

3465 a. Reference to a code section includes all the relative subsections except as  
3466 indicated in the table.

3467 b. Compliance with any of these sections includes compliance with any exception  
3468 to that section.

3469 SECTION 106. Ordinance 19485, Section 117, and K.C.C. 16.07.490 are hereby  
3470 amended to read as follows:

3471 Table C407.3(2) of the (~~International Energy Conservation~~) Washington State  
3472 Energy Code is not adopted and the following is substituted:

3473 **Table C407.3(2)**

3474 **Performance Factors (BPF) to be used for Compliance with Section C407.3**

| <b>Building Area Type</b> | <b>Building<br/>Performance Factor</b> |
|---------------------------|----------------------------------------|
| Multifamily               | <del>((0.52))</del> <u>0.50</u>        |
| Healthcare/hospital       | <del>((0.49))</del> <u>0.64</u>        |
| Hotel/motel               | <del>((0.58))</del> <u>0.48</u>        |
| Office                    | <del>((0.51))</del> <u>0.41</u>        |

| <b>Building Area Type</b> | <b>Building Performance Factor</b> |
|---------------------------|------------------------------------|
| Restaurant                | <del>((0.63))</del> <u>0.32</u>    |
| Retail                    | <del>((0.43))</del> <u>0.37</u>    |
| School                    | 0.32                               |
| Warehouse                 | <del>((0.43))</del> <u>0.17</u>    |
| All others                | <del>((0.49))</del> <u>0.40</u>    |

3475 NEW SECTION. SECTION 107. There is hereby added to K.C.C. chapter 16.07

3476 a new section to read as follows:

3477 Table C407.3(3) of the Washington State Energy Code is not adopted and the  
3478 following is substituted:

3479 **Table C407.3(3)**

3480 **Site Energy Performance Targets to be used for Compliance with Section C407.3**

| <b>Building Area Type</b> | <b>Site Energy Performance Targets</b> |
|---------------------------|----------------------------------------|
| Multifamily               | 0.53                                   |
| Health care/hospital      | 0.65                                   |
| Hotel/motel               | 0.56                                   |
| Office                    | 0.52                                   |
| Restaurant                | 0.53                                   |

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| <b>Building Area Type</b> | <b>Site Energy<br/>Performance<br/>Targets</b> |
|---------------------------|------------------------------------------------|
| Retail                    | 0.42                                           |
| School                    | 0.47                                           |
| Warehouse                 | 0.26                                           |
| All others                | 0.50                                           |

3481        NEW SECTION. SECTION 108. There is hereby added to K.C.C. chapter 16.07

3482        a new section to read as follows:

3483                Section C407.3.1 of Washington State Energy Code is not adopted and the  
3484        following is substituted:

3485                **Limits on substandard building envelopes (WSEC C407.3.1).** The Proposed  
3486        Total UA of the proposed building shall be no more than 10 percent higher than the  
3487        Allowed Total UA as defined in WSEC C402.1.5. The requirement in WSEC C402.4 for  
3488        20 percent of fenestration to be high-performance, or 35 percent for compliance with  
3489        exception 1 to WSEC C402.4.1, shall be maintained and that fenestration is not permitted  
3490        to have a U-factor higher than permitted by WSEC C402.4.

3491        NEW SECTION. SECTION 109. There is hereby added to K.C.C. chapter 16.07

3492        a new section to read as follows:

3493                Section C407.3.4 of the Washington State Energy Code is supplemented with the  
3494        following:

3495           **Approved unregulated load types (WSEC C407.3.4.1).** Unregulated load types  
3496 for which reductions of energy use or carbon emissions are claimed shall be one of those  
3497 listed in WSEC Table C407.3.4.1 or shall be approved and publicly listed by the code  
3498 official. Requests for approval of such load types shall identify predicted energy use and  
3499 carbon emissions of the baseline case in addition to identifying predicted energy use and  
3500 carbon emissions of the proposed alternate. Listings for specific load types may be  
3501 withdrawn and made unavailable for subsequent permit applications in cases by the code  
3502 official where it is considered that the unregulated load type listed has become accepted  
3503 conventional practice. Unregulated load savings shall follow the methodology outlined  
3504 in this section, and not use the language from ASHRAE Appendix G Table G3.1 - No. 12  
3505 Receptacle and Other Load Baseline Building Performance Exception.

3506                                   **Table C407.3.4.1**

3507                                   **Approved Unregulated Load Types**

| In compliance with the requirements of<br>section         | Predicted energy and carbon emission<br>reductions (%) |           |
|-----------------------------------------------------------|--------------------------------------------------------|-----------|
|                                                           | Group R-1                                              | Group R-2 |
| WSEC C406.2.15, Enhanced residential<br>kitchen equipment | 1.2                                                    | 1.9       |
| WSEC C406.2.16, Enhanced residential<br>laundry equipment | N/A                                                    | 0.6       |
| WSEC C406.2.17, Heat pump clothes<br>dryers               | 0.6                                                    | 0.6       |

3508           NEW SECTION. SECTION 110. There is hereby added to K.C.C. chapter 16.07

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3509 a new section to read as follows:

3510           Section C408.1.1 of Washington State Energy Code is not adopted and substituted  
3511 with the following:

3512           **C408.1.1 Commissioning in construction documents.** Construction documents  
3513 shall clearly indicate provisions for commissioning process. Electrical permit documents  
3514 shall indicate required commissioning work for lighting and metering systems, and  
3515 mechanical permit documents shall indicate required commissioning work for  
3516 mechanical and water heating systems. The construction documents shall minimally  
3517 include the following:

3518           1. A narrative description of the activities that will be accomplished during the  
3519 commissioning process. At a minimum, the commissioning process is required to  
3520 include:

3521           1.1 Development and execution of the commissioning plan, including all  
3522 subsections of Section C408.1.2;

3523           1.2 The certified commissioning professional's review of the building  
3524 documentation and close out submittals in accordance with Section C103.6; and

3525           1.3 The commissioning report in accordance with Section C408.13.

3526           2. Roles, responsibilities, and required qualifications of the certified  
3527 commissioning professional.

3528           3. A listing of the specific equipment, appliances, or systems to be tested.

3529           NEW SECTION. SECTION 111. There is hereby added to K.C.C. chapter 16.07

3530 a new section to read as follows:

3531           Section C408.1.2 of Washington State Energy Code is supplemented with the  
3532 following:

3533           **Commissioning plan (WSEC C408.1.2.5)** When a commissioning plan is  
3534 required, it shall be submitted to the department before the first mechanical inspection.

3535           NEW SECTION. SECTION 112. There is hereby added to K.C.C. chapter 16.07  
3536 a new section to read as follows:

3537           Section C408.1.3 of Washington State Energy Code is supplemented with the  
3538 following:

3539           **Commissioning plan (WSEC C408.1.3.1)** When a commissioning report is  
3540 required, it shall be submitted to the department before the final inspection.

3541           NEW SECTION. SECTION 113. There is hereby added to K.C.C. chapter 16.07  
3542 a new section to read as follows:

3543           Section C408.1.4.1 of the Washington State Energy Code is not adopted and the  
3544 following is substituted:

3545           **C408.1.4.1 Commissioning compliance.** The mechanical and water heating  
3546 portions of the commissioning report, in compliance with Sections C408.2, C408.3, and  
3547 C408.7, shall be submitted to the department before mechanical permit final inspection is  
3548 complete and approved. The controlled receptacle, lighting, and metering portions of the  
3549 commissioning report, in compliance with Sections C408.4 and C408.6, shall be  
3550 submitted to the department before building permit final inspection is completed and  
3551 approved. To demonstrate compliance, the following items shall be submitted to the  
3552 department before building permit final inspection is completed and approved:

- 3553           1. Full commissioning report, in compliance with Section C408.1.3 that includes:

3554           a. A list of all unresolved deficiencies and any incomplete commissioning work  
3555 required by Section C408, with description and anticipated date of completion for each,  
3556 or a statement signed by the certified commissioning professional attesting to successful  
3557 commissioning of the entire project with no unresolved deficiencies or incomplete tests.

3558           b. Where tenant spaces will be built out under separate permits, a description of  
3559 the certified commissioning professional's scope of work required to complete  
3560 commissioning of the central building HVAC systems and lighting control systems as the  
3561 tenant spaces are completed.

3562           2. Commissioning checklist, from Figure C408.1.4.1, signed by the certified  
3563 commissioning professional.

3564           3. Statement that the owner has received a copy of the commissioning report,  
3565 signed by the owner or owner's authorized agent.

3566           **C408.1.4.1.1 Post-occupancy commissioning completion.** Where there are  
3567 unresolved deficiencies or other incomplete commissioning tasks that conflict with  
3568 requirements of this code, the applicant shall comply with one of the following:

3569           1. In addition to the Temporary Certificate of Occupancy requirements of IBC  
3570 111.3, the department may issue a temporary certificate of occupancy (TCO) to remain in  
3571 effect pending resolution of commissioning issues. Applicant must complete all  
3572 outstanding commissioning work and complete a revised commissioning report before  
3573 the department will issue a final Certificate of Occupancy.

3574           2. Applicant must obtain separate mechanical permit(s) as required to incorporate  
3575 all remaining mechanical work, including required commissioning of those systems.  
3576 Applicant must complete all outstanding mechanical commissioning work and complete a

3577 revised commissioning report prior to completion and approval of final inspection for  
3578 those permits.

3579 NEW SECTION. SECTION 114. There is hereby added to K.C.C. chapter 16.07  
3580 a new section to read as follows:

3581 Section C408.4 of the Washington State Energy Code is supplemented with the  
3582 following:

3583 **High-end trim (WSEC C408.4.2).** Where lighting controls are configured for  
3584 high-end trims, verify the following:

- 3585 1. High-end trim has been set.
- 3586 2. Lighting controls with ready access for users cannot increase the lighting  
3587 power above the maximum level established by the high-end trim controls.

3588 NEW SECTION. SECTION 115. There is hereby added to K.C.C. chapter 16.07  
3589 a new section to read as follows:

3590 Section C409.1 of the Washington State Energy Code is not adopted and the  
3591 following is substituted:

3592 **General (WSEC C409.1).** All new buildings and additions shall have the  
3593 capability of metering all source energy usage in accordance with WSEC C409.2 in  
3594 addition to the source energy for on-site renewable energy production in accordance with  
3595 WSEC C409.2.4 and the end-use energy usage for electric vehicle charging in accordance  
3596 with WSEC C409.3.4. New buildings and additions with a gross conditioned floor area  
3597 over 20,000 square feet (1,858.1 square meters) shall comply with WSEC C409.2,  
3598 C409.3, and C409.4. New buildings and additions shall be equipped to measure,  
3599 monitor, record and display energy consumption data for each energy source and end use

3600 category per the provisions of this section, to enable effective energy management.  
3601 Existing buildings shall comply with the energy metering provisions of WSEC C506.1.  
3602 For Group R-2 occupancy buildings, the floor area of dwelling units and sleeping units  
3603 shall be excluded from the total conditioned floor area for the purposes of determining  
3604 the 20,000 square foot (1,858.1 square meter) threshold. Alterations and additions to  
3605 existing buildings shall conform to WSEC C506.

3606 **EXCEPTIONS:**

3607 1. Tenant spaces smaller than 20,000 square feet (1,858.1 square meters) within  
3608 buildings served by its own utility services and utility meters complying with WSEC  
3609 C409.2, and are exempt from the end-use metering, measurement devices, data  
3610 acquisition system, and energy display requirements of WSEC C409.3 and C409.4.  
3611 2. Buildings without gross conditioned floor area over 10,000 square feet (929.0  
3612 square meters), including building common areas, served by its own utility services and  
3613 utility meters complying with WSEC C409.2, and are exempt from the end-use metering,  
3614 measurement devices, data acquisition system and energy display requirements of WSEC  
3615 C409.3 and C409.4.

3616 NEW SECTION. SECTION 116. There is hereby added to K.C.C. chapter 16.07  
3617 a new section to read as follows:

3618 Section C409.2.1 of the Washington State Energy Code is not adopted and the  
3619 following is substituted:

3620 **Electrical energy (WSEC C409.2.1).** This category shall include all electrical  
3621 energy supplied to the building and its associated site, including site lighting, parking,  
3622 recreational facilities, and other areas that serve the building and its occupants.

3623           **EXCEPTION:** Where site lighting and other exterior non-building electrical  
3624 loads are served by an electrical service and meter that are separate from the building  
3625 service and meter, the metering data from those loads is permitted to be either combined  
3626 with the building's electrical service load data or delivered to a separate data acquisition  
3627 system.

3628           NEW SECTION. SECTION 117. There is hereby added to K.C.C. chapter 16.07  
3629 a new section to read as follows:

3630           Section C409.2.4 of the Washington State Energy Code is not adopted and the  
3631 following is substituted:

3632           **Site-generated renewable energy (WSEC C409.2.4).** This category shall  
3633 include all net energy generated from on-site solar, wind, geothermal, tidal, or other  
3634 natural sources, and waste heat reclaimed from sewers or other off-site sources. For  
3635 buildings exempt from data collection systems, the data from these meters is permitted to  
3636 either be stored locally using a manual totalizing meter or other means at the meter or fed  
3637 into a central data collection system.

3638           NEW SECTION. SECTION 118. There is hereby added to K.C.C. chapter 16.07  
3639 a new section to read as follows:

3640           Section C409.3 of the Washington State Energy Code is supplemented with the  
3641 following:

3642           **Parking garage fan energy (WSEC C409.3.1.1).** Ventilation fan energy and  
3643 any other HVAC energy use within enclosed parking garages larger than 3,000 square  
3644 feet (278.7 square meters) shall be submetered separately.

3645           **EXCEPTION:** Where the total maximum circuit amps (MCA) of equipment



3646 served equates to less than ten kilovolt-amperes (kVA).

3647 NEW SECTION. SECTION 119. There is hereby added to K.C.C. chapter 16.07

3648 a new section to read as follows:

3649 Section C409.3.3 of the Washington State Energy Code is not adopted and the

3650 following is substituted:

3651 **Parking garage lighting energy. (WSEC C409.3.3.1).** Lighting energy use

3652 within parking facilities larger than 3,000 square feet (278.7 square meters) shall be

3653 submetered separately.

3654 NEW SECTION. SECTION 120. There is hereby added to K.C.C. chapter 16.07

3655 a new section to read as follows:

3656 Section C409.3.5 of the Washington State Energy Code is not adopted and the

3657 following is substituted:

3658 **Plug load system energy use (WSEC C409.3.5).** This category shall include all

3659 energy used by appliances, computers, plug-in task lighting, and other equipment or

3660 equipment covered by other end-use metering categories listed in WSEC C409.3. In a

3661 building where the main service is 480/277 volt, each 208/120 volt panel is permitted to

3662 be assumed to serve only plug load for the purpose of WSEC C409, unless it serves

3663 nonresidential refrigeration or cooking equipment.

3664 **EXCEPTIONS:**

3665 1. Where the total connected load of all plug load circuits is less than 50 kVA,  
3666 end-use metering is not required.

3667 2. Electric receptacles located in fire-rated or smoke-rated corridors, enclosed  
3668 stairwells, or egress passageways are not required to be submetered.

3669           NEW SECTION. SECTION 121. There is hereby added to K.C.C. chapter 16.07  
3670 a new section to read as follows:

3671           Section C409.4.1 of the Washington State Energy Code is not adopted and the  
3672 following is substituted:

3673           **Meters (WSEC C409.4.1).** Meters and other measurement devices required by  
3674 this section shall be configured to automatically communicate energy data to a data  
3675 acquisition system and energy display. Source meters may be any digital-type meters.  
3676 Current sensors or flow meters are allowed for end use metering, provided that they have  
3677 an accuracy of +/- 5 percent. All required metering systems and equipment shall provide  
3678 data that is fully integrated into the data acquisition and display system per the  
3679 requirements of WSEC C409. Electrical meters shall be configured to communicate data  
3680 to the data acquisition system and energy display for both consumption (e.g., kilowatt  
3681 hours) and consumption rate (e.g., kilowatts). Other meters and measurement devices  
3682 shall be configured to communicate data to the data acquisition system for consumption.

3683           **EXCEPTION:** Where site lighting and other exterior non-building electrical  
3684 loads are served by an electrical service and meter that are separate from the building  
3685 service and meter, the metering data from those loads is permitted to be either combined  
3686 with the building's electrical service load data or delivered to a separate data acquisition  
3687 system.

3688           NEW SECTION. SECTION 122. There is hereby added to K.C.C. chapter 16.07  
3689 a new section to read as follows:

3690           Section C410.1 of the Washington State Energy Code is not adopted and the  
3691 following is substituted:

3692           **General (WSEC C410.1).** Walk-in coolers, walk-in freezers, refrigerated  
3693 warehouse coolers, refrigerated warehouse freezers, and refrigerated display cases shall  
3694 comply with this Section. Where they comprise any portion of the thermal envelope of  
3695 the building, they shall also comply with the requirements of WSEC C402, using the R-  
3696 values or U-values listed in WSEC C410. WSEC C402.1.5 component performance  
3697 alternative is permitted to be used for the thermal envelope of the refrigerated space  
3698 where approved by the code official.

3699           NEW SECTION. SECTION 123. There is hereby added to K.C.C. chapter 16.07  
3700 a new section to read as follows:

3701           Section C410.3 of the Washington State Energy Code is not adopted and the  
3702 following is substituted:

3703           **Walk-in coolers, walk-in freezers, refrigerated warehouse coolers and**  
3704 **refrigerated warehouse freezers (WSEC C410.3).** Site- assembled and site-  
3705 constructed walk-in coolers and walk-in freezers and refrigerated warehouse coolers and  
3706 refrigerated warehouse freezers shall comply with the following:

3707           1. Automatic door-closers shall be provided that fully close walk-in doors that  
3708 have been closed to within 1 inch (25 millimeters) of full closure.

3709           **EXCEPTION:** Automatic closers are not required for doors more than 45 inches  
3710 (1,143 millimeters) in width or more than 7 feet (2,134 millimeters) in height.

3711           2. Doorways shall be provided with strip doors, curtains, spring-hinged doors, or  
3712 other method of minimizing infiltration when doors are open.

3713           3. Walk-in coolers and refrigerated warehouse coolers shall be provided with  
3714 wall, ceiling, and door insulation of not less than R-25 or have wall, ceiling, and door

assembly U-factors no greater than U-0.039. Walk-in freezers and refrigerated warehouse freezers shall be provided with wall, ceiling and door insulation of not less than R-32 or have wall, ceiling, and door assembly U-factors no greater than U-0.030.

**EXCEPTION:** Insulation is not required for glazed portions of doors or at structural members associated with the walls, ceiling, or door frame.

4. The floor of walk-in coolers shall be provided with floor insulation of not less than R-25 or have a floor assembly U- factor no greater than U-0.40. The floor of walk-in freezers shall be provided with floor insulation of not less than R-28 or have a floor assembly U-factor no greater than U-0.035.

**EXCEPTION:** Insulation is not required in the floor of a walk-in cooler that is mounted directly on a slab on grade.

5. Transparent fixed window and reach-in doors for walk-in freezers and windows in walk-in freezer doors shall be provided with triple-pane glass, with the interstitial spaces filled with inert gas or be provided with heat-reflective treated glass.

6. Transparent fixed window and reach-in doors for walk-in coolers and windows for walk-in coolers doors shall be provided with double-pane or triple-pane glass, with interstitial space filled with inert gas, or be provided with heat- reflective treated glass.

7. Evaporator fan motors that are less than 1 horsepower (746 kilowatts) and less than 460 volts shall be provided with electronically commutated motors, brushless direct-current motors, or three-phase motors.

8. Condenser fan motors that are less than 1 horsepower (746 kilowatts) shall use electronically commutated motors, permanent split capacitor-type motors or 3-phase motors.

3738           9. Antisweat heaters that are not provided with antisweat heater controls shall  
3739 have a total door rail, glass, and frame heater power draw of not greater than 7.1 watts per  
3740 square foot (76 watts per square meter) of door opening for walk-in freezers and not  
3741 greater than 3 watts per square foot (32 watts per square meter) of door opening for walk-  
3742 in coolers.

3743           10. Where antisweat heater controls are provided, they shall be capable of  
3744 reducing the energy use of the antisweat heater as a function of the relative humidity in  
3745 the air outside the door or to the condensation on the inner glass pane.

3746           11. Lights in walk-in coolers, walk-in freezers, refrigerated warehouse coolers,  
3747 and refrigerated warehouse freezers shall either be provided with light sources with an  
3748 efficacy of not less than 40 lumens per watt, including ballast losses, or shall be provided  
3749 with a device that automatically turns off the lights within 15 minutes of when the walk-  
3750 in cooler or walk-in freezer space is not occupied.

3751           12. Evaporator fans in refrigerated warehouses shall be variable speed, and the  
3752 speed shall be controlled in response to space conditions.

3753           **EXCEPTION:** Evaporators served by a single compressor without unloading  
3754 capability.

3755           13. Where they comprise any portion of the thermal envelope of the building, the  
3756 floor, wall, and ceiling components shall also comply with the requirements of WSEC  
3757 C402, using the R-values or U-values listed in this WSEC C410.2. WSEC C402.1.5  
3758 component performance alternative is permitted to be used where approved by the code  
3759 official.

3760           NEW SECTION. SECTION 124. There is hereby added to K.C.C. chapter 16.07

3761 a new section to read as follows:

3762       Section C410.5.2 of the Washington State Energy Code is not adopted and the  
3763 following is substituted:

3764       **Compressor systems (WSEC C410.5.2).** Refrigeration compressor systems  
3765 shall comply with the following:

3766       1. Compressors and multiple-compressor system suction groups shall include  
3767 control systems that use floating suction pressure control logic to reset the target suction  
3768 pressure temperature based on the temperature requirements of the attached refrigeration  
3769 display cases or walk-ins.

3770       **EXCEPTION:** Controls are not required for the following:

3771       1. Single-compressor systems that do not have variable capacity capability.

3772       2. Suction groups that have a design saturated suction temperature of 30°  
3773 Fahrenheit (-1° Celsius) or higher, suction groups that comprise the high stage of a two-  
3774 stage or cascade system, or suction groups that primarily serve chillers for secondary  
3775 cooling fluids.

3776       2. Liquid subcooling shall be provided for all low-temperature compressor  
3777 systems with a design cooling capacity equal to or greater than 1,000 Btu/h (1,055  
3778 kilojoules/h or 29.3 kilowatts) with a design-saturated suction temperature of -10°  
3779 Fahrenheit (-23° Celsius) or lower. The subcooled liquid temperature shall be controlled  
3780 at a maximum temperature setpoint of 50° Fahrenheit (10° Celsius) at the exit of the  
3781 subcooler using either compressor economizer (interstage) ports or a separate compressor  
3782 suction group operating at a saturated suction temperature of 18° Fahrenheit (-8° Celsius)  
3783 or higher.

3784           2.1. Insulation for liquid lines with a fluid operating temperature less than 60°  
3785 Fahrenheit (16° Celsius) shall comply with WSEC Table C403.2.10.

3786           3. Compressors that incorporate internal or external crankcase heaters shall  
3787 provide a means to cycle the heaters off during compressor operation.

3788           4. Compressor systems utilized in refrigerated warehouses shall conform to the  
3789 following:

3790           4.1. Compressors shall be designed to operate at a minimum condensing  
3791 temperature of 70° Fahrenheit (21° Celsius) or less.

3792           4.2. The compressor speed of a screw compressor greater than 50 horsepower  
3793 (50.7 metric horsepower) shall be controllable in response to the refrigeration load, or the  
3794 input power to the compressor shall be controlled to use no more than 60 percent of full  
3795 load input power when operated at 50 percent of full refrigeration capacity.

3796           **EXCEPTION:** Refrigeration plants with more than one dedicated compressor  
3797 per suction group.

3798           NEW SECTION. SECTION 125. There is hereby added to K.C.C. chapter 16.07  
3799 a new section to read as follows:

3800           Section C411.1 of the Washington State Energy Code is not adopted and the  
3801 following is substituted:

3802           **On-site renewable energy (WSEC C411.1).** Each new building or addition  
3803 larger than 5,000 square feet (464.5 square meters) of gross conditioned floor area shall  
3804 include a renewable energy generation system consisting of not less than 0.75 watts per  
3805 square foot (8.07 watts per square meter) or 2.6 Btu/h per square foot (30 kilojoules/h per  
3806 square meter) multiplied by the sum of the gross conditioned floor area.

3807           **EXCEPTIONS:**

3808           1. Where a building's net roof area is not large enough to accommodate the entire  
3809 on-site renewable energy generation system required by this section, the portion of the  
3810 system that cannot be accommodated within the net roof area is permitted to be provided  
3811 by:

3812           1.1. Additional efficiency credits in accordance with WSEC C411.1.1; or

3813           1.2. Off-site renewable energy in accordance with WSEC C411.2.1, including  
3814 the requirements of WSEC C411.2 and C411.2.2.

3815           For the purposes of this exception, the net roof area excludes the following:

3816           a. Areas shaded by existing natural or built objects in accordance with exception  
3817 1 of WSEC C C411.3.

3818           b. Areas occupied by mechanical equipment, including adjacent equipment  
3819 service areas required by the manufacturer or by applicable code.

3820           c. Areas required by applicable codes to remain clear for egress, fire department  
3821 access, or equipment access.

3822           d. Areas with slopes greater than 2 to 12.

3823           e. Planted or vegetated areas.

3824           f. Skylights.

3825           g. Occupied roof decks.

3826           2. Reduced Building Performance Factor. For projects utilizing the WSEC C407  
3827 Total Building Performance compliance path, the on-site renewable energy generation  
3828 system is not required where the building performance factor (BPF) is at least 3 percent  
3829 below the maximum BPF permitted cumulatively by all other sections of this code.



3830           2.1. Where the BPF is at least 1 percent below the BPF required cumulatively  
3831 by other sections of this code, the on-site renewable energy generation system size is  
3832 permitted to be reduced by 1/3.

3833           2.2. Where the BPF is not less than 2 percent lower than the BPF required  
3834 cumulatively by other sections of this code, the size of the on-site renewable energy  
3835 generation system is permitted to be reduced by 2/3.

3836           3. Transfer to an affordable housing project. Where approved by the code  
3837 official, all or part of the required on-site renewable energy generation system is  
3838 permitted to be replaced by a system that is at least 50 percent of the required system size  
3839 when located on an existing affordable housing project within unincorporated King  
3840 County, or at least 75 percent of the required system size when located on a new  
3841 construction affordable housing project within unincorporated King County.  
3842 Documentation demonstrating that the renewable energy generation system has been  
3843 installed on the affordable housing project site, the system is fully operational, and  
3844 ownership has been transferred to the affordable housing project owner, must be  
3845 submitted prior to issuance of the certificate of occupancy.

3846           4. Transfer to a Washington State agency program. Where approved by the code  
3847 official, all or part of the required renewable energy generation system is permitted to be  
3848 replaced by a contribution of two dollars and fifty cents for each required watt of  
3849 installed capacity, to a solar energy fund managed by a Washington State agency that will  
3850 provide solar energy installations for affordable housing projects. Documentation  
3851 demonstrating that the contribution has been received by the state agency must be  
3852 submitted prior to issuance of the certificate of occupancy.

3853           5. Affordable housing. The on-site renewable energy generation system is not  
3854 required for affordable housing projects.

3855           NEW SECTION. SECTION 126. There is hereby added to K.C.C. chapter 16.07  
3856 a new section to read as follows:

3857           Section C411.1.1 of the Washington State Energy Code is not adopted and the  
3858 following is substituted:

3859           **Additional efficiency credits (WSEC C411.1.1).** Buildings that qualify for  
3860 exception 1 in WSEC C411.1 to omit installation of on-site renewable energy are allowed  
3861 to achieve an additional 27 efficiency package credits from WSEC Table C406.2 instead of  
3862 installing the on-site renewable energy system. The additional 27 credits can be reduced  
3863 based on a prorated fraction of renewable capacity that is installed on-site.

3864           On-site renewable energy installations of lower than required capacity can be  
3865 counted proportionally toward achievement of required or additional efficiency credits in  
3866 WSEC C411.1.1 based on the capacity of renewable energy installed compared to the  
3867 requirements of WSEC C411.1.

3868           NEW SECTION. SECTION 127. There is hereby added to K.C.C. chapter 16.07  
3869 a new section to read as follows:

3870           Section C411.2 of the Washington State Energy Code is not adopted and the  
3871 following is substituted:

3872           **On-site and off-site renewable energy accounting (WSEC C411.2).**  
3873 Qualifying on-site and off-site renewable energy delivered or credited to the building  
3874 project to comply with this code shall meet the requirements of this section. Renewable  
3875 energy certificates for an on-site or off-site renewable energy system shall be retired on

3876 behalf of the building owner for a period of not less than 15 years and tracked in  
3877 accordance with WSEC C411.2.3 and submitted to the code official before the final  
3878 inspection. Renewable energy certificates (RECs) themselves are not a qualifying type of  
3879 off-site renewable energy system.

3880 **C411.2.1 Qualifying types of off-site renewable energy systems.** The  
3881 following are considered qualifying off-site renewable energy systems:

- 3882 1. Self-generation (an off-site renewable energy system owned by the building  
3883 project owner) systems complying with WSEC C411.2.2.
- 3884 2. Community renewable energy facility systems complying with Section  
3885 C411.2.2.
- 3886 3. Renewable power purchase agreement (PPA) contracts complying with WSEC  
3887 C411.2.2 and, where applicable, WSEC C411.2.3.
- 3888 4. Each source of renewable energy delivered to or credited to the building  
3889 project shall be connected to the Western Interconnection and energy or capacity  
3890 multiplied by the factors in WSEC Table C411.2.1.

3891 **Table C411.2.1**

3892 **Multipliers for Renewable Energy Procurement Methods**

| Location | Renewable<br>Energy Source | Renewable Energy Factor       |                           |                                        |
|----------|----------------------------|-------------------------------|---------------------------|----------------------------------------|
|          |                            | In the State of<br>Washington | Western<br>Interconnected | In the States of<br>Oregon or<br>Idaho |
| On-site  | On-site                    | 1                             | NA                        | NA                                     |

|          |                                                                                                                                                             |      |      |      |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|
|          | renewable<br>energy system                                                                                                                                  |      |      |      |
| Off-site | Directly owned<br><br>off-site<br><br>renewable<br>energy system<br>that begins<br>operation after<br>submission of<br>the initial<br>permit<br>application | 0.95 | 0.75 | 0.85 |
| Off-site | Community<br><br>renewable<br>energy facility<br>that begins<br>operation after<br>submission of<br>the initial<br>permit<br>application                    | 0.95 | 0.75 | 0.85 |
| Off-site | Directly owned                                                                                                                                              | 0.75 | 0.55 | 0.65 |

|          |                                                                                                                                          |      |      |      |
|----------|------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|
|          | off-site<br>renewable<br>energy system<br>that begins<br>operation<br>before<br>submission of<br>the initial<br>permit<br>application    |      |      |      |
| Off-site | Community<br>renewable<br>energy facility<br>that begins<br>operation<br>before<br>submission of<br>the initial<br>permit<br>application | 0.75 | 0.55 | 0.65 |
| Off-site | Renewable<br>Power Purchase                                                                                                              | 0.75 | 0.55 | 0.65 |

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|  |                    |  |  |  |
|--|--------------------|--|--|--|
|  | Agreement<br>(PPA) |  |  |  |
|--|--------------------|--|--|--|

3893 NEW SECTION. SECTION 128. There is hereby added to K.C.C. chapter 16.07

3894 a new section to read as follows:

3895 Section C411.2.2 of the Washington State Energy Code is not adopted and the

3896 following is substituted:

3897 **Documentation requirements for off-site renewable energy systems (WSEC**

3898 **C411.2.2).** Off-site renewable energy delivered or credited to the building project to

3899 comply with WSEC C407.3 item 2.2, or other requirements of this code, shall be subject

3900 to a legally binding contract to procure qualifying off-site renewable energy. Qualifying

3901 off-site renewable energy shall meet the following requirements:

3902 1. Documentation of off-site renewable energy procurement shall be submitted to  
3903 the code official before the final inspection;

3904 2. The purchase contract shall have a duration of not less than 15 years. The  
3905 contract shall be structured to survive a partial or full transfer of ownership of the  
3906 building property;

3907 3. Records on renewable power purchased by the building owner from the off-  
3908 site renewable energy generator that specifically assign the RECs to the building owner  
3909 shall be retained or retired by the building owner on behalf of the entity demonstrating  
3910 financial or operational control over the building seeking compliance to this standard and  
3911 made available for inspection by the code official upon request; and

3912 4. Where multiple buildings in a building project are allocated energy procured  
3913 by a contract subject to this section, the owner shall allocate for not less than 15 years the

energy procured by the contract to the buildings in the building project. A plan on operation shall be developed which shall indicate how renewable energy produced from on-site or off-site systems that is not allocated before issuance of the certificate of occupancy will be allocated to new or existing buildings included in the building project.

NEW SECTION. SECTION 129. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Section C411.3.1 of the Washington State Energy Code is not adopted and the following is substituted:

**Minimum area (WSEC C411.3.1).** The minimum area of the solar zone shall be determined by one of the following methods, whichever results in the smaller area:

1. 40 percent of roof area. The roof area shall be calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, mechanical equipment, mechanical equipment service clearances required by equipment manufacturer or by code, and planted areas.

2. 20 percent of electrical service size. The electrical service size is the rated capacity of the total of all electrical services to the building, and the required solar zone size shall be based upon 10 peak watts of photovoltaic per square foot (107.64 peak watts of photovoltaic per square meter).

**EXCEPTION:** Subject to the code official's approval, buildings with extensive rooftop equipment that would make full compliance with this section impractical shall be permitted to reduce the size of the solar zone required by WSEC C411.3 to the maximum practicable area.

NEW SECTION. SECTION 130. There is hereby added to K.C.C. chapter 16.07

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3937 a new section to read as follows:

3938       Section C411.3.3 of the Washington State Energy Code is not adopted and the  
3939 following is substituted:

3940       **Obstructions (WSEC C411.3.3).** The solar zone shall be free of pipes, vents,  
3941 ducts, HVAC equipment, skylights, and other obstructions, except those serving  
3942 photovoltaic systems within the solar zone. The solar zone is permitted to be located  
3943 above any such obstructions, provided that the racking of the future system support is  
3944 installed at the time of construction, the elevated solar zone does not shade other portions  
3945 of the solar zone, and its height is permitted by the IBC and the K.C.C. Photovoltaic or  
3946 solar water heating systems are permitted to be installed within the solar zone.

3947       NEW SECTION. SECTION 131. There is hereby added to K.C.C. chapter 16.07  
3948 a new section to read as follows:

3949       Section C411.3.7 of the Washington State Energy Code is not adopted and the  
3950 following is substituted:

3951       **Photovoltaic interconnection (WSEC C411.3.7).** A minimum 2-inch (51  
3952 millimeters) diameter roof penetration conduit shall be provided, with threaded caps  
3953 above and below the roof deck and minimum R-10 insulation wrapping the lower portion,  
3954 within each 2,500 square foot (232.3 square meters) section of the required solar zone  
3955 area. Interconnection of the future photovoltaic system shall be provided for at the main  
3956 service panel, either ahead of the service disconnecting means or at the end of the bus  
3957 opposite the service disconnecting means, in one of the following forms:

3958       1. A space for the mounting of a future overcurrent device, sized to accommodate  
3959 the largest standard rated overcurrent device that is less than 20 percent of the bus rating.



2. Lugs sized to accommodate conductors with an ampacity of at least 20 percent of the bus rating, to enable the mounting of an external overcurrent device for interconnection.

The electrical construction documents shall include the following:

- a. Solar zone boundaries and access pathways;
- b. Location for future inverters and metering equipment; and
- c. Route for future wiring between the photovoltaic panels and the inverter, and between the inverter and the main service panel.

NEW SECTION. SECTION 132. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Section C502.3 of the Washington State Energy Code is not adopted and the following is substituted:

**Building envelope (WSEC C502.3).** Additions shall comply with WSEC C402.1 through C402.5, C502.3.1, and C502.3.2.

**EXCEPTION:** Air leakage testing is not required for additions smaller than 500 square feet (46.5 square meters).

NEW SECTION. SECTION 133. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Section C503.3 of the Washington State Energy Code is not adopted and the following is substituted:

**Building envelope (WSEC C503.3).** New building envelope assemblies that are part of the alteration shall comply with WSEC C402.1 through C402.5 and WSEC C503.3.1 through C503.3.3. Where an opaque envelope assembly is altered or replaced,

3983 the new assembly shall have an equal or lower overall U-value than the existing  
3984 assembly.

3985       **EXCEPTION:** Air leakage testing is not required for alterations and repairs,  
3986 unless the project includes a change in space conditioning according to WSEC C505.2 or  
3987 a change of occupancy or use according to WSEC C505.3.

3988       NEW SECTION. SECTION 134. There is hereby added to K.C.C. chapter 16.07  
3989 a new section to read as follows:

3990       Section C503.3.2 of the Washington State Energy Code is not adopted and the  
3991 following is substituted:

3992       **Vertical fenestration (WSEC 503.3.2).** Alterations that include the addition of  
3993 new vertical fenestration area shall comply with the following:

3994       1. Where the addition of new vertical fenestration area results in a total building  
3995 vertical fenestration area less than or equal to the maximum allowed by WSEC C402.4.1,  
3996 the alteration shall comply with WSEC C402.4.

3997       2. Where the addition of new vertical fenestration area results in a total building  
3998 vertical fenestration area greater than the maximum allowed by WSEC C402.4.1  
3999 (regardless of the ratio prior to the addition), the alteration shall comply with one of the  
4000 following:

4001       2.1. Vertical fenestration alternate in accordance with WSEC C402.4.1.1 for the  
4002 new vertical fenestration added, where the calculation of vertical fenestration area and  
4003 gross above-grade wall area shall include either the entire building or, where approved,  
4004 only those areas of the building involved in the alteration.

4005       2.2. Reserved.

4006           2.3. Existing building and alteration areas are combined to demonstrate  
4007 compliance with the component performance alternate in accordance with WSEC  
4008 C402.1.5 for the whole building. U-factors applied to existing envelope assemblies in the  
4009 UA calculation shall comply with WSEC C501.2.1. The Proposed Total UA is allowed  
4010 to be up to 110 percent of the Allowed Total UA.

4011           2.4. Total building performance in accordance with WSEC C407 for the whole  
4012 building. The total annual carbon emissions from energy consumption of the proposed  
4013 design is allowed to be up to 110 percent of the annual carbon emissions from energy  
4014 consumption allowed in accordance with WSEC C407.3.

4015           2.5. The alteration does not increase the existing fenestration area.

4016           **EXCEPTION:** Where approved by the code official additional fenestration is  
4017 permitted where sufficient envelope upgrades beyond those required by other sections of  
4018 this code are included in the project so that the addition of the new vertical fenestration  
4019 does not cause an increase in the overall energy use of the building.

4020           NEW SECTION. SECTION 135. There is hereby added to K.C.C. chapter 16.07  
4021 a new section to read as follows:

4022           Section C503.3.2.1 of the Washington State Energy Code is not adopted and the  
4023 following is substituted:

4024           **Replacement fenestration products (WSEC C503.3.2.1).** Where some or all of  
4025 an existing fenestration unit is replaced with a new fenestration product, including sash  
4026 and glazing, the replacement fenestration unit shall meet the applicable requirements for  
4027 U-factor and SHGC in WSEC Table C402.4. In addition, the area-weighted U-value of

4028 the new fenestration shall be equal to or lower than the U-value of the existing  
4029 fenestration.

4030       **EXCEPTION:** An area-weighted average of the U-factor of replacement  
4031 fenestration products being installed in the building for each fenestration product  
4032 category listed in WSEC Table C402.4 shall be permitted to satisfy the U-factor  
4033 requirements for each fenestration product category listed in WSEC Table C402.4.  
4034 Individual fenestration products from different product categories listed in WSEC Table  
4035 C402.4 shall not be combined in calculating the area-weighted average U-factor.

4036       NEW SECTION. SECTION 136. There is hereby added to K.C.C. chapter 16.07  
4037 a new section to read as follows:

4038       Sections C503.4.2, C503.4.3, and C503.4.6 of the Washington State Energy Code  
4039 are not adopted and the following is substituted:

4040       **Addition of cooling capacity (WSEC C503.4.2).** Where mechanical cooling is  
4041 added to a space that was not previously cooled, the mechanical system shall comply  
4042 with either WSEC C403.3.5 or C403.5.

4043       **EXCEPTIONS:**

4044       1. Qualifying small equipment: Economizers are not required for cooling units  
4045 and split systems serving one zone with a total cooling capacity rated in accordance with  
4046 WSEC C403.3.2 of less than 33,000 Btu/h (34,817 kilojoules/h) (hereafter referred to as  
4047 qualifying small systems) provided that these are high-efficiency cooling equipment with  
4048 SEER and EER values more than 15 percent higher than minimum efficiencies listed in  
4049 WSEC Tables C403.3.2(1), C403.3.2 (2), C403.3.2 (4), C403.3.2 (8), C403.3.2 (9), and  
4050 C403.3.2 (14), in the appropriate size category, using the same test procedures.

Equipment shall be listed in the appropriate certification program to qualify for this exception. The total capacity of all qualifying small equipment without economizers shall not exceed 72,000 Btu/h (75,964 kilojoules/h) per building, or 5 percent of the building total air economizer capacity, whichever is greater.

1.1. The portion of the equipment serving Group R occupancies is not included in determining the total capacity of all units without economizers in a building.

1.2. Redundant units are not counted in the capacity limitations.

1.3. This exception shall not be used for the initial tenant improvement of a shell-and-core building or space, or for Total Building Performance in accordance with WSEC C407.

1.4. This exception shall not be used for unitary cooling equipment installed outdoors or in a mechanical room adjacent to the outdoors.

2. Chilled water terminal units connected to systems with chilled water generation equipment with IPLV values more than 25 percent higher than minimum part load equipment efficiencies listed in WSEC Table C403.3.2 (3), in the appropriate size category, using the same test procedures. Equipment shall be listed in the appropriate certification program to qualify for this exception. The total capacity of all systems without economizers shall not exceed 72,000 Btu/h (75,964 kilojoules/h or 141 kilowatts) per building, or 20 percent of the building total air economizer capacity, whichever is greater.

2.1. The portion of the equipment serving Group R occupancy is not included in determining the total capacity of all units without economizers in a building.

4073 2.2. This exception shall not be used for the initial tenant improvement of a  
 4074 shell-and-core building or space, or for total building performance in accordance with  
 4075 WSEC C407.

4076 **Alterations or replacement of existing cooling systems (WSEC C503.4.3).**

4077 Alterations to, or replacement of, existing mechanical cooling systems shall not decrease  
 4078 the building total economizer capacity unless the system complies with either WSEC  
 4079 C403.3.5 or C403.5. System alterations or replacement shall comply with WSEC Table  
 4080 C503.4.3 when either the individual cooling unit capacity or the building total capacity of  
 4081 all cooling equipment without economizer does not comply with the exceptions in WSEC  
 4082 C403.5. Equipment replacements that include space heating shall also comply with  
 4083 WSEC C503.4.6. Replacement of air-cooled chillers shall also comply with WSEC  
 4084 C503.4.3.1.

4085 **Table C503.4.3**

4086 **Economizer Compliance Options for Mechanical Alterations**

| Unit Type         | Option A                                                         | Option B<br>(alternate to A)                                                           | Option C<br>(alternate to A)                                             | Option D<br>(alternate to A)                                                               |
|-------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
|                   | Any alteration<br>with new or<br>replacement<br>equipment        | Replacement unit<br>of the same type<br>with the same or<br>smaller output<br>capacity | Replacement unit<br>of the same type<br>with a larger<br>output capacity | New equipment<br>added to existing<br>system or<br>replacement unit<br>of a different type |
| 1. Packaged units | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                       | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>         | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                           |

|                                                                            |                                                                  |                                                                                                                                                                                   |                                                                                                                                                                                                                              |                                                                                                                         |
|----------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 2. Split systems                                                           | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | For units ≤ 60,000 Btuh, comply with both of two measures:<br>1. Efficiency: +10% <sup>e</sup><br>2. Economizer: shall not decrease existing economizer capability                | For units ≤ 60,000 Btuh replacing unit installed prior to 1991 comply with at least one of two measures:<br>1. Efficiency: +10% <sup>e</sup><br>2. Economizer: 50% <sup>f</sup>                                              | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                        |
|                                                                            |                                                                  | For all other capacities:<br>Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                     | For all other capacities:<br>Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                                                                |                                                                                                                         |
| 3. Water source heat pump                                                  | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | For units ≤ 72,000 Btuh, comply with at least two of three measures:<br>1. Efficiency: +10% <sup>e</sup><br>2. Flow control valve <sup>g</sup><br>3. Economizer: 50% <sup>f</sup> | For units ≤ 72,000 Btuh, comply with all three measures:<br>1. Efficiency: +10% <sup>e</sup><br>2. Flow control valve <sup>g</sup><br>3. Economizer: 50% <sup>f</sup><br>(except for certain pre-1991 systems <sup>h</sup> ) | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup><br>(except for certain pre-1991 systems <sup>g</sup> ) |
|                                                                            |                                                                  | For all other capacities:<br>Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                     | For all other capacities:<br>Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                                                                |                                                                                                                         |
| 4. Water economizer using air-cooled heat rejection equipment (dry cooler) | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | Efficiency: +5% <sup>d</sup><br>Economizer: shall not decrease existing economizer capability                                                                                     | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                                                                                             | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                        |
| 5. Air-handling unit                                                       | Efficiency: min. <sup>a</sup>                                    | Economizer: shall not                                                                                                                                                             | Efficiency: min. <sup>a</sup>                                                                                                                                                                                                | Efficiency: min. <sup>a</sup>                                                                                           |

|                                                                                                                                              |                                                                  |                                                                                                    |                                                                                                                                                                       |                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (including fan coil units) where the system has an air-cooled chiller                                                                        | Economizer: C403.5 <sup>b</sup>                                  | decrease existing economizer capacity                                                              | Economizer: C403.5 <sup>b</sup><br>(except for certain pre-1991 systems <sup>q</sup> )                                                                                | Economizer: C403.5 <sup>b</sup><br>(except for certain pre-1991 systems <sup>q</sup> )                                                                             |
| 6. Air-handling unit (including fan coil units) and water-cooled process equipment, where the system has a water-cooled chiller <sup>j</sup> | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | Economizer: shall not decrease existing economizer capacity                                        | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup><br>(except for certain pre-1991 systems <sup>h</sup> and certain 1991-2017 systems <sup>i</sup> )    | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup><br>(except for certain pre-1991 systems <sup>h</sup> and certain 1991-2017 systems <sup>i</sup> ) |
| 7. Cooling tower                                                                                                                             | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | No requirements                                                                                    | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                                      | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                                   |
| 8. Air-cooled chiller                                                                                                                        | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | Efficiency: +10% <sup>k</sup><br>Economizer: shall not decrease existing economizer capability     | Efficiency: comply with both measures:<br>1. +10% <sup>k, l</sup> ; and<br>2. Multistage compressor(s)<br>Economizer: shall not decrease existing economizer capacity | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                                   |
| 9. Water-cooled chiller                                                                                                                      | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | Efficiency: comply with at least one of two measures:<br>1. Part load IPLV + 15% <sup>n</sup> ; or | Efficiency: comply with at least one of two measures:<br>1. Part load IPLV + 15% <sup>n</sup> ; or                                                                    | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup>                                                                                                   |



|                                      |                                                                  |                                                                                                                                  |                                                                                                                                  |                                                                  |
|--------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
|                                      |                                                                  | 2. Plate frame heat exchanger <sup>o</sup><br>Economizer: shall not decrease existing economizer capacity                        | 2. Plate frame heat exchanger <sup>o</sup><br>Economizer: shall not decrease existing economizer capacity                        |                                                                  |
| 10. Package terminal air conditioner | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | Efficiency: +5% <sup>a</sup><br>Economizer: shall not decrease existing economizer capability                                    | Efficiency: +5% <sup>a</sup><br>Economizer: shall not decrease existing economizer capability                                    | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> |
| 11. Package terminal heat pump       | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> | Cooling efficiency: +5% <sup>d</sup><br>Heating efficiency: +10% <sup>c</sup><br>Shall not decrease existing economizer capacity | Cooling efficiency: +5% <sup>d</sup><br>Heating efficiency: +10% <sup>c</sup><br>Shall not decrease existing economizer capacity | Efficiency: min. <sup>a</sup><br>Economizer: C403.5 <sup>b</sup> |

4087 Footnotes:

4088 a. Minimum equipment efficiency shall comply with WSEC C403.3.2 and the  
4089 tables in WSEC C403.3.2.

4090 b. All separate new equipment and replacement equipment shall have air  
4091 economizer complying with WSEC C403.5 including both the individual unit size limits  
4092 and the total building capacity limits on units without economizer. It is acceptable to  
4093 comply using one of the exceptions to WSEC C403.5.

4094 c. Reserved.

4095           d. Equipment shall have a capacity-weighted average cooling system efficiency  
4096 that is 5% better than the requirements in the tables in WSEC C403.3.2 ( $1.05 \times$  values in  
4097 the tables).

4098           e. Equipment shall have a capacity-weighted average cooling system efficiency  
4099 that is 10% better than the requirements in the tables in WSEC C403.3.2 ( $1.10 \times$  values in  
4100 the tables).

4101           f. Minimum of 50 percent air economizer that is ducted in a fully enclosed path  
4102 directly to every heat pump unit in each zone, except that ducts may terminate within 12  
4103 inches (305 millimeters) of the intake to an HVAC unit provided that they are physically  
4104 fastened so that the outside air duct is directed into the unit intake. If this is an increase  
4105 in the amount of outside air supplied to this unit, the outside air supply system shall be  
4106 configured to provide this additional outside air and be equipped with economizer  
4107 control.

4108           g. Water-source heat pump systems shall have a flow control valve to eliminate  
4109 flow through the heat pumps that are not in operation and variable speed pumping control  
4110 complying with WSEC C403.4.3 for that heat pump.

4111           1. When the total capacity of all units with flow control valves exceeds 15  
4112 percent of the total system capacity, a variable frequency drive shall be installed on the  
4113 main loop pump.

4114           2. As an alternate to this requirement, the capacity-weighted average cooling  
4115 system efficiency shall be 5 percent better than the requirements in footnote e for water-  
4116 source heat pumps (i.e., a minimum of 15 percent greater than the requirements in WSEC  
4117 Table C403.3.2 (14)).

4118           h. Water economizer equipment shall have a capacity-weighted average cooling  
4119 system efficiency that is 10 percent better than the requirements in WSEC Tables  
4120 C403.3.2 (7), C403.3.2(10), and C403.3.2 (16) ( $1.10 \times$  values in WSEC Tables C403.3.2  
4121 (7), C403.3.2(10), and C403.3.2 (16)).

4122           i. Air economizer is not required for systems installed with water economizer  
4123 plate and frame heat exchanger complying with previous codes between 1991 and June  
4124 2016, provided that the total fan coil load does not exceed the existing or added capacity  
4125 of the heat exchangers.

4126           j. For water-cooled process equipment where the manufacturers specifications  
4127 require colder temperatures than available with waterside economizer, that portion of the  
4128 load is exempt from the economizer requirements.

4129           k. The air-cooled chiller shall have an IPLV efficiency that is a minimum of 10  
4130 percent greater than the IPLV requirements in EER in WSEC Table C403.3.2 (3) ( $1.10 \times$   
4131 IPLV values in EER in WSEC Table C403.3.2 (3)).

4132           l. The air-cooled chiller shall be multistage with a minimum of two compressors.

4133           m. Reserved

4134           n. The water-cooled chiller shall have an IPLV value that is a minimum of 15  
4135 percent lower than the IPLV requirements in WSEC Table C403.3.2(3) ( $0.85 \times$  IPLV  
4136 values in WSEC Table C403.3.2(3)). Water-cooled centrifugal chillers designed for  
4137 nonstandard conditions shall have an NPLV value that is at least 15 lower than the  
4138 adjusted maximum NPLV rating in kW per ton defined in WSEC C403.3.2.3 ( $0.85 \times$   
4139 NPLV).

4140           o. Economizer cooling shall be provided by adding a plate-frame heat exchanger  
4141 on the waterside with a capacity that is a minimum of 20 percent of the chiller capacity at  
4142 standard AHRI rating conditions.

4143           p. Reserved.

4144           q. Systems installed prior to 1991 without fully utilized capacity are allowed to  
4145 comply with Option B, provided that the individual unit cooling capacity does not exceed  
4146 90,000 Btu/h (94,955 kilojoules/h).

4147           **Addition or replacement of HVAC heating appliances (WSEC C503.4.6 ).**

4148           New HVAC heating systems shall comply with WSEC C403.1.4. Where one or  
4149 more HVAC mechanical heating appliances are added or replaced, the added or replaced  
4150 appliances shall comply with WSEC C401.3 and C403.1.4 or with an alternate  
4151 compliance option in WSEC Table C503.4.6. When complying with the alternate  
4152 compliance option in WSEC Table C503.4.6, added or replaced HVAC heating  
4153 appliances must select HVAC heating appliances from one of the Proposed Heating Type  
4154 Options and the applicable Heating Efficiency Tables. Additions, alterations, or  
4155 replacements shall not be made to an existing HVAC heating system that will cause the  
4156 existing system to become out of compliance. Where use of heat pump equipment for  
4157 space heating is required by this section, it is permissible to utilize the Fossil Fuel  
4158 Compliance Path in WSEC C401.3 to attain the credits required for building additions  
4159 shown in WSEC Table C401.3.3.

4160           1. Exempt buildings and occupancies. Replacement heating equipment serving  
4161 any of the following building categories is permitted to use the same fuel type as the  
4162 existing equipment, provided the replacement equipment complies with the minimum

4163 efficiency in WSEC Table C503.4.6 and the same or lower capacity than the existing, and  
4164 that the requirements of WSEC C503.4.6.2 are met.

4165 a. Affordable housing.

4166 b. Group I-1, I-2, and I-3 occupancies.

4167 c. Buildings with more than 50 percent of conditioned floor area occupied by  
4168 organizations recognized as nonprofit by the State of Washington or by federal tax law.

4169 d. Buildings with no more than 20,000 square feet (1,858.1 square meters) of  
4170 conditioned floor area.

4171 2. Retention of portion of existing system capacity. For buildings not exempted  
4172 by Exception 1 above, a maximum of 50 percent of the existing fossil fuel or electric  
4173 resistance heating capacity is permitted to be retained or replaced to serve as  
4174 supplemental heat for the new heat pump heating system, provided that the supplemental  
4175 heat is controlled to be used only when the heat pump system capacity is insufficient to  
4176 meet the load, in compliance with the applicable exception 5, 6, or 7 to WSEC C403.1.4,  
4177 and that the requirements of WSEC C503.4.6.2 are met. Where an alteration replaces  
4178 less than 50 percent of the existing fossil fuel or electric resistance heating capacity, the  
4179 remaining heating appliances are permitted to be retained. Where the alteration project  
4180 decreases the peak heating load, the fossil fuel or electric resistance heating capacity shall  
4181 be limited to 50 percent of the calculated peak heating load. The replacement equipment  
4182 shall comply with the minimum efficiency in WSEC Table C503.4.6.

4183 3. Temporary replacement of failing equipment. Temporary like-for-like  
4184 replacement of one or more heating appliances, in excess of the 50 percent capacity  
4185 permitted by exception 2 above, is permitted where those appliances require immediate

4186 replacement, and where no other work on the HVAC system is planned. When using this  
4187 exception, it is acceptable to replace a single appliance with two or more smaller  
4188 appliances, provided the total capacity is not greater than that of the original appliance.  
4189 In addition, the requirements of WSEC C503.4.6.2 shall be met, and the applicant shall  
4190 ensure completion of the required heat pump system in compliance with one of the  
4191 following options.

4192           a. The code official issuing a temporary certificate of occupancy (TCO), which  
4193 will remain in force until the heat pump heating system is installed and the final  
4194 inspection of the system has been completed; or

4195           b. Posting a performance bond for the full estimated cost of the required heat  
4196 pump system installation, to ensure the heat pump system installation completion within  
4197 48 months.

4198           4. Utility service upgrade. Compliance with WSEC C403.1.4 is not required  
4199 where the requirements of WSEC C503.4.6.2 are met, and where such compliance would  
4200 trigger an unplanned utility electrical service upgrade, based on the 2023 Edition of the  
4201 National Electrical Code Section 220.87 method for determining existing loads, where  
4202 one or more of the following is required:

4203           a. A new utility transformer vault located in the existing building or on the site,  
4204 or an enlargement of the floor area of such a vault.

4205           b. Trenching across the vehicle lanes of a public way.

4206           c. The estimated construction cost for the required electrical service  
4207 enlargement exceeds 50 percent of the project valuation for the remainder of the work, as  
4208 determined in accordance with the fee subtitle. Construction cost shall be documented by

4209 an Association for the Advancement of Cost Engineering (AACE) Level 3 or equivalent  
4210 cost estimate, including required demolition, construction, site work, and utility fees.

4211 The replacement equipment shall comply with the minimum efficiency in WSEC  
4212 Table C503.4.6.

4213 5. Exempt equipment. Alterations to the following equipment types are not  
4214 required to comply with this section.

4215 a. Terminal unit equipment including but not limited to hydronic VAV  
4216 terminal units, electric resistance VAV boxes, electric duct heaters, water source heat  
4217 pumps, fan coils, or VRF indoor units, except such modifications to terminal equipment  
4218 with hydronic heating coils as are required to accommodate lower-temperature fluids  
4219 circulated from new central heat pump systems in accordance with WSEC C403.3.8.2.

4220 b. Air handling equipment with hydronic heating coils, except such  
4221 modifications to the air handling equipment as are required to accommodate lower-  
4222 temperature fluids circulated from central heat pump systems in accordance with WSEC  
4223 C403.3.8.2.

4224 c. Replacement of existing steam boilers with steam distribution piping to  
4225 terminal units and replacement of the existing associated boiler feed equipment.

4226 D. Hydronic system alteration supply water temperature (WSEC C503.4.6.1).  
4227 Hydronic heating coils and appliances subject to WSEC C503.4.5 or C503.4.6 shall  
4228 comply with WSEC C403.3.8.2.

4229 E. Future decarbonization plan (WSEC C503.4.6.2). For buildings with more  
4230 than 20,000 square feet (1,858.1 square meters) of conditioned space, a schematic-level  
4231 design of a heat pump system to replace the existing system shall be prepared by a

professional engineer and submitted to the code official. The professional engineer must be identified on the schematic design documents, but the engineer's signature and date are not required, and no party is obligated to provide any further development of the schematic design. Documents submitted with the schematic design must include:

1. Completed decarbonization planning form, available on the King County permitting website.

2. Mechanical and electrical one-line system diagrams, showing only the impacted portions of systems.

3. Equipment sized and laid out to scale on plans of the existing facility. Only the impacted areas need be depicted, at a simple schematic level of detail.

4. Required louvers, ducts, and air handling equipment.

5. Required structural modifications.

6. Required partitions, doors, and other architectural modifications.

7. Required electrical infrastructure, including any electrical service upgrade and vault.

8. Schematic-level cost estimate, AACE Class 5, or equivalent, including separate line items for structural, mechanical, electrical, architectural, and utility costs.

9. Applicable compliance dates for Washington State Clean Buildings Performance Standards with maximum allowable energy use index (EUI) and carbon emissions.

#### **Table C503.4.6**

#### **Compliance Options for HVAC Heating Equipment Alterations**



|   | <b>Proposed Heating Equipment Type<sup>a</sup></b>                              | <b>Heating Efficiency WSEC Table Reference</b> | <b>Alternate Compliance Options to WSEC C403.1.4</b>                                                                                                                                                                                                                                                                                                                        |
|---|---------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Air-cooled unitary heat pumps                                                   | Table C403.3.2(2)                              | <p>1. Compliance with WSEC C403.1.4, except heat pump rated capacity in accordance with WSEC C403.1.4</p> <p>Exception 5d is permitted to be sized equal to the supplemental internal resistance heating capacity in Climate Zone 4 or 5<sup>c</sup>.</p> <p>2. Compliance with WSEC C403.1.4, except electric resistance mixed air preheat is permissible<sup>c</sup>.</p> |
| 2 | Packaged terminal, single-package vertical, and room air-conditioner heat pumps | Table C403.3.2(4)                              | Compliance with WSEC C403.1.4, except heat pump rated capacity in accordance with WSEC C403.1.4 Exception 5d is permitted to be sized equal to the supplemental internal resistance heating capacity in Climate Zone 4 or 5                                                                                                                                                 |
| 3 | Furnaces, duct furnaces, and unit heaters                                       | Table C403.3.2(5)                              | <p>1. Permitted only when qualifying for and complying with WSEC C503.4.6</p> <p>Exceptions 1, 2, 3, or 4</p>                                                                                                                                                                                                                                                               |

|   | <b>Proposed Heating Equipment Type<sup>a</sup></b>          | <b>Heating Efficiency WSEC Table Reference</b> | <b>Alternate Compliance Options to WSEC C403.1.4</b>                                                                                   |
|---|-------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|   |                                                             |                                                | 2. Efficiency: +10% <sup>b</sup>                                                                                                       |
| 4 | Gas-fired hot water boilers                                 | Table C403.3.2(6)                              | 1. Permitted only when qualifying for and complying with WSEC C503.4.6<br>Exceptions 1, 2, 3, or 4<br>2. Efficiency: +10% <sup>b</sup> |
| 5 | Variable refrigerant flow air-to-air and applied heat pumps | Table C403.3.2(9)                              | No alternate compliance option                                                                                                         |
| 6 | DX-DOAS equipment                                           | Table C403.3.2(12) and Table C403.3.2(13)      | DX-DOAS is provided with heat recovery if not required by WSEC C403.3.5.1.                                                             |
| 7 | Water-source heat pumps                                     | Table C403.3.2(14)                             | No alternate compliance option                                                                                                         |

4254

Footnotes:

4255           a. Includes replacement of equipment with a unit that is the same type or higher  
4256 efficiency and the same or lower capacity, or a replacement of one equipment type with a  
4257 different equipment type.

4258           b. Equipment shall have a capacity-weighted average heating system efficiency  
4259 that is 10 percent better than that shown in the reference table (1.1 times the values in  
4260 reference table).

4261           c. Option 1 and Option 2 can be combined.

4262           NEW SECTION. SECTION 137. There is hereby added to K.C.C. chapter 16.07  
4263 a new section to read as follows:

4264           Section C503.5 of the Washington State Energy Code is not adopted and the  
4265 following is substituted:

4266           **Service water heating systems (WSEC C503.5).** All new service water heating  
4267 systems shall comply with WSEC C404.

4268           C503.5.1. Addition or replacement of service water heating equipment. All  
4269 existing service hot water systems, equipment, and components of existing systems that  
4270 are altered or replaced shall comply with WSEC C407 or WSEC C404, C408.3, C506.1,  
4271 and C501.6. Additions or alterations shall not be made to an existing service water  
4272 heating system that will cause the existing system to become out of compliance. Where  
4273 use of heat pump equipment for space heating is required by this section, it is permissible  
4274 to utilize the Fossil Fuel Compliance Path in WSEC C401.3 to attain the credits required  
4275 for building additions shown in WSEC Table C401.3.3.

4276           **EXCEPTIONS:**

4277           1. Utility service upgrade. Compliance with WSEC C403.1.4 is not required  
4278 where the requirements of WSEC C503.4.6.2 are met, and where such compliance would  
4279 trigger an unplanned utility electrical service upgrade, based on the National Electrical  
4280 Code Section 220.87 method for determining existing loads, that requires one or more of  
4281 the following:

4282           1.1. A new utility transformer vault located in the existing building or on the  
4283 site, or an enlargement of the floor area of such a vault.

4284           1.2. Trenching across the vehicle lanes of a public way.

4285           1.3. The estimated construction cost for the required electrical service  
4286 enlargement exceeds 50 percent of the project valuation for the remainder of the work, as  
4287 determined in accordance with the fee subtitle. Construction cost shall be documented by  
4288 an AACE Level 3 or equivalent cost estimate, including required demolition,  
4289 construction, site work, and utility fees.

4290           The replacement equipment shall comply with the minimum efficiency in Table  
4291 C503.4.6.

4292           2. Exempt Systems. Replacement of any of the following water heater  
4293 appliances is not required to comply with this section or with WSEC C404.2.1:

4294           2.1. Electric water heaters with an input of 24 kilowatts or less.

4295           2.2. Gas storage water heaters with an input of 75,000 Btu/h (79,129  
4296 kilojoules/h) or less.

4297           2.3. Gas instantaneous water heaters with an input of 200,000 Btu/h (211,011  
4298 kilojoules/h) or less and 2 gallons (8 liters) or less of storage.

4299           2.4. Replacement of existing steam boilers with steam distribution piping to  
4300 terminal units and replacement of the existing associated boiler feed equipment.

4301           3. Reserved.

4302           4. Exempt buildings. Replacement service water heating equipment for the  
4303 following buildings is permitted to use the same fuel type as the existing equipment,  
4304 provided the new equipment has no lower efficiency and no higher capacity than the  
4305 existing, and the requirements of WSEC C503.4.6.2 are met.

4306           a. Affordable housing.

4307           b. Group I-1, I-2, or I-3 occupancies.

4308           c. Buildings with more than 50 percent of conditioned floor area occupied by  
4309 organizations recognized as nonprofit by the State of Washington or by federal tax law.

4310           d. Buildings smaller than 20,000 square feet (1,858.1 square meters).

4311           5. Retention of portion of existing system capacity. A maximum of 50 percent of  
4312 the existing central fossil fuel or electric resistance water heating capacity is permitted to  
4313 be provided as supplemental heat for the new heat pump water heating system, provided  
4314 that the supplemental heat is controlled to be used only when the heat pump system  
4315 capacity is insufficient to meet the load, in compliance with WSEC C404.2.1.4, and that  
4316 the requirements of WSEC C503.4.6.2 are met. Where an alteration replaces less than 50  
4317 percent of the existing fossil fuel or electric resistance service water heating capacity, the  
4318 remaining service water heating appliances are permitted to be retained. Where the  
4319 alteration project decreases the peak service water heating load, the fossil fuel or electric  
4320 resistance heating capacity shall be limited to 50 percent of the calculated peak heating  
4321 load.

6. Temporary replacement of failing equipment. Temporary like-for-like replacement of one or more service water heating appliances, in excess of the 50 percent capacity permitted by exception 5 above, is permitted where those appliances require immediate replacement, and where no other work on the service water heating system is planned. When using this exception, it is acceptable to replace a single appliance with two or more smaller appliances, provided the total capacity is not greater than that of the original appliance. In addition, the requirements of WSEC C503.4.6.2 shall be met, and the applicant shall ensure completion of the required heat pump water heating system in compliance with one of the following options;

a. The code official issuing a temporary certificate of occupancy (TCO), which will remain in force until the heat pump water heating system is installed and the final inspection of the system has been completed; or

b. Posting a performance bond for the full estimated cost of the required heat pump water heating system installation, to ensure the system installation completion within 48 months.

NEW SECTION. SECTION 138. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Section C505.2 of the Washington State Energy Code is not adopted and the following is substituted:

**Change in space conditioning (WSEC 505.2).** For the purposes of this section, space conditioning area categories include: low energy space in accordance with WSEC C402.1.1.1, semi-heated space, and conditioned space. Spaces undergoing a change in

space conditioning shall be brought up to full compliance with this code, other than WSEC C502, C503, and C504, for all disciplines in the following cases:

1. Any low energy space in accordance with WSEC C402.1.1.1 that is altered to become conditioned space or semi-heated space.

2. Any semi-heated space in accordance with WSEC C402.1.1.2 that is altered to become conditioned space, or any heated but not cooled space that is altered to become both heated and cooled.

Interior walls, ceilings, floors, and fenestration that separate conditioned spaces from low energy or semi-heated spaces shall comply with the thermal envelope requirements for conditioned space. Interior walls, ceilings, floors, and fenestration that separate semi-heated spaces from low energy spaces shall comply with the thermal envelope requirements for semi-heated space.

A change in space conditioning is permitted to demonstrate by the alteration area alone or combining the alteration area with all existing spaces of the same space conditioning area category that complies. This applies to either prescriptive compliance in accordance with WSEC C505.4 or total building performance in accordance with WSEC C407.

**EXCEPTIONS:**

1. A change in space conditioning does not require full compliance with this code if both of the following conditions are met:

1.1. The existing heated but not cooled space is altered to become both heated and cooled solely by replacement of the existing heating-only HVAC system with an electric heat pump HVAC system, provided that there is no change in the use or

occupancy classification of the area served by the HVAC system that would increase the cooling load.

1.2 The new system includes a DOAS with energy recovery in compliance with WSEC C403.3.5.

2. The addition of cooling equipment to already-conditioned rooms or spaces less than 2,000 square feet (185.8 square meters) in floor area does not trigger the requirement to comply with this Section, WSEC 505.2.

NEW SECTION. SECTION 139. There is hereby added to K.C.C. chapter 16.07 a new section to read as follows:

Section C506 of the Washington State Energy Code is supplemented with the following:

**Metering for the addition or replacement of HVAC equipment in existing buildings (WSEC C506.2).** Where HVAC equipment is added or replaced, metering shall be provided according to WSEC C506.2.1 or C506.2.2, as applicable.

**C506.2.1. Addition or replacement of individual HVAC equipment pieces.** Where HVAC equipment is added or replaced, but compliance with WSEC C506.2.2 is not required, metering shall be provided as follows. The data from these meters is permitted to be stored locally using a manual totalizing meter or other means at the meter or fed into a central data collection system.

1. Electrical metering shall be provided for all of the following:

a. Each new or existing branch circuit serving a new piece of HVAC equipment with minimum circuit ampacity (MCA) that equates to 50 kilovolt-amps or more. A



4389 single meter is permitted to serve multiple circuits of the same sub-metering category  
4390 from WSEC C409.3.

4391 b. Each new or existing branch circuit supplied by a new electrical panel that is  
4392 dedicated to serving HVAC equipment. Circuits may be metered individually or in  
4393 aggregate.

4394 c. Each new HVAC fan or pump on a variable speed drive, where the fan,  
4395 pump, or variable speed drive is new, unless the variable speed drive is integral to a  
4396 packaged HVAC unit or the existing variable speed drive lacks the capability to provide  
4397 electric metering output.

4398 2. Natural gas metering shall be provided for each new natural gas connection  
4399 that is rated at 1,000 kBtu (1,055,056 kilojoules) or higher. A single meter is permitted to  
4400 serve multiple equipment pieces of the same sub-metering category from WSEC C409.3;  
4401 HVAC, water heating, or process.

4402 **C506.2.2. Addition or replacement of the majority of HVAC equipment in a**  
4403 **building.** Within any 12-month period, where permits are issued for new or replacement  
4404 HVAC equipment that has a total heating and cooling capacity greater than 1,200 kBtu/h  
4405 (1,266,067 kilojoules/h) and greater than 50 percent of the building's existing HVAC  
4406 heating and cooling capacity, the following shall be provided for the building:

- 4407 1. Energy source metering required by WSEC C409.2;  
4408 2. HVAC system end-use metering required by WSEC C409.3.1; and  
4409 3. Data acquisition and display system per the requirements of WSEC C409.4.

4410 Each of the building's existing HVAC chillers, boilers, cooling towers, air  
4411 handlers, packaged units, and heat pumps with a capacity exceeding 5 tons or that

4412 represents more than 10 percent of the building's total heating and cooling capacity shall  
4413 be included in the calculation of the existing heating and cooling capacity of the building.  
4414 Where heat pumps are configured to deliver both heating and cooling, the heating and  
4415 cooling capacities shall both be included in the calculation of the total capacity.

4416 Each of the building's existing and new HVAC chillers, boilers, cooling towers,  
4417 air handlers, packaged units, and heat pumps with a heating or cooling capacity  
4418 exceeding 5 tons or that represents more than 10 percent of the total heating and cooling  
4419 capacity of the building shall be included in the HVAC system end-use metering.

4420 Construction documents for new or replacement heating and cooling equipment  
4421 projects shall indicate the total heating and cooling capacity of the building's existing  
4422 HVAC equipment and the total heating and cooling capacity of the new or replacement  
4423 equipment. Where permits have been issued for new or replacement heating and cooling  
4424 equipment within the 12-month period prior to the permit application date, the heating  
4425 and cooling equipment's capacity shall also be indicated. All heating and cooling  
4426 equipment capacities shall be expressed in thousand-Btu/h.

4427 NEW SECTION. SECTION 140. There is hereby added to K.C.C. chapter 16.07  
4428 a new section to read as follows:

4429 Section C506 of the Washington State Energy Code is supplemented with the  
4430 following:

4431 **Addition or replacement of service water heating equipment (WSEC**  
4432 **C506.3).** Where service water heating equipment is added or replaced, metering shall be  
4433 provided as follows. The data from these meters is permitted to be stored locally and

4434 shall be stored for a minimum of 36 months using a manual totalizing meter or other  
4435 means at the meter, or fed into a central data collection system.

4436           A. Electrical metering shall be provided for each new or existing branch circuit  
4437 that is primarily dedicated to serving service water heating equipment. Circuits may be  
4438 metered individually or in aggregate.

4439           B. Natural gas metering shall be provided for each new natural gas service water  
4440 heating appliance that is rated at 100,000 Btu/h (105,506 kilojoules/h) or higher. A  
4441 single meter is permitted to serve multiple service water heating appliances.

4442           NEW SECTION. SECTION 141. There is hereby added to K.C.C. chapter 16.07  
4443 a new section to read as follows:

4444           Section C506 of the Washington State Energy Code is supplemented with the  
4445 following:

4446           **Tenant space electrical sub-metering for existing buildings (WSEC C506.4).**

4447 For tenant improvements in which a single tenant will occupy a full floor or multiple  
4448 floors of a building, the electrical consumption for the tenant space on that floor shall be  
4449 separately metered, and the metering data provided to the tenant with a display system  
4450 per the requirements of WSEC C409.4.3. For the purposes of this section, separate end  
4451 use categories need not be segregated.

4452           **EXCEPTION:** Where an existing branch circuit electrical panel serves tenant  
4453 spaces on multiple full floors of a building the floors served by that panel are not required  
4454 to comply with this section.

4455           NEW SECTION. SECTION 142. There is hereby added to K.C.C. chapter 16.07  
4456 a new section to read as follows:

4457           Section C506 of the Washington State Energy Code is supplemented with the  
4458 following:

4459           **Metering for complete electrical system replacement (WSEC C506.5).** If all,  
4460 or substantially all, of the existing electrical system is replaced within a 12-month period  
4461 or under a single electrical permit, all the provisions of WSEC C409 shall be met.

4462           SECTION 143. Ordinance 8766, Section 6, as amended, and K.C.C. 16.08.050  
4463 are each hereby amended to read as follows:

4464           Approved numbers or addresses shall be provided for all new and existing buildings  
4465 in ~~((such))~~ a position ~~((as to be))~~ that is plainly visible and legible from the road fronting  
4466 the property and in conformance with this section.

4467           A. The owner, occupant, or renter of any addressed building or other structure shall  
4468 maintain the address numbers in a conspicuous place over or near the principal entrance or  
4469 entrances. If the entrance cannot be easily seen from the nearest adjoining road, the  
4470 address numbers shall be placed in ~~((such other))~~ another conspicuous place on the building  
4471 or structure ~~((as is necessary for visually locating such))~~ so the address numbers can be  
4472 easily seen from the nearest adjoining road.

4473           B. If the addressed building or structure cannot be easily seen from the nearest  
4474 adjoining road, the address numbers shall be placed on a portion of the site that is clearly  
4475 visible from the nearest adjoining road.

4476           C. The address numbers shall:

4477           1. Be ~~((easily legible figures;))~~ Arabic numbers or alphabetical letters. Numbers  
4478 shall not be spelled out; and

4479 2. ~~((€))~~ comply with the following size requirements, unless otherwise stipulated  
 4480 in this section:

| <b>Distance from <del>((Right of Way))</del> the<br/>street or road fronting the property</b> | <b>Minimum Letter Size</b>  |
|-----------------------------------------------------------------------------------------------|-----------------------------|
| <del>((0-25 feet))</del>                                                                      | <del>((3 inches))</del>     |
| <del>((26))</del> 0-50 feet (0 millimeters – 15,240<br>millimeters)                           | 4 inches (102 millimeters)  |
| 51-100 feet (15,545 millimeters – 30,480<br>millimeters)                                      | 6 inches (152 millimeters)  |
| 101-150 feet (30,785 millimeters – 45,720<br>millimeters)                                     | 8 inches (203 millimeters)  |
| 151-200 feet (46,025 millimeters – 60,960<br>millimeters)                                     | 10 inches (254 millimeters) |
| Over 200 feet (60,960 millimeters)                                                            | 12 inches (305 millimeters) |

4481 3. Be not less than ~~((five))~~ four inches (127 millimeters) high ~~((for a commercial~~  
 4482 ~~use))~~ with a minimum stroke width of 0.5 inch (13 millimeters);

4483 4. Contrast with the color of the structure ~~((upon which))~~ they are placed on;

4484 5. ~~((Either b))~~ Be illuminated ~~((during periods of darkness))~~ or ~~((be))~~ reflective, so  
 4485 they are easily seen ~~((at night))~~ during periods of darkness.

4486 SECTION 144. Ordinance 12560, Section 109, as amended, and K.C.C.

4487 16.14.090 are hereby amended to read as follows:

4488 Section ~~((104.3))~~ 105.3 of the International Property Maintenance Code is not  
 4489 adopted and the following is substituted:

4490           **Right of entry (IPMC ((104.3)) 105.3)**. The right of entry shall be in accordance  
4491 with the procedures specified in K.C.C. Title 23.

4492           SECTION 145. Ordinance 12560, Section 112, as amended, and K.C.C.  
4493 16.14.100 are hereby amended to read as follows:

4494           Section ((106.1)) 109.1 of the International Property Maintenance Code is not  
4495 adopted and the following is substituted:

4496           **Unlawful acts (IPMC ((106.1)) 109.1)**. It shall be unlawful for any person, firm  
4497 or corporation whether as owner, lessee, sublessee, or occupant, to erect, construct,  
4498 enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy, or  
4499 maintain any building or structure or cause or permit the same to be done, contrary to or  
4500 in violation of this code or any order issued by the code official ((hereunder)). This  
4501 section shall be enforced in accordance with the procedures specified in K.C.C. Title 23.

4502           SECTION 146. Ordinance 12560, Section 110, as amended and K.C.C.  
4503 16.14.110 are hereby amended to read as follows:

4504           Section ((107)) 110 of the International Property Maintenance Code is ((not  
4505 adopted and the following is substituted)) supplemented with the following:

4506           ((**Notices and Orders (IPMC 107)**)) **Stop work orders (IPMC 110.5)**. All  
4507 buildings, portions thereof, or premises ((which are determined by)) that the code official  
4508 determines ((not to be in)) out of compliance with this ((C)) code are hereby declared to  
4509 be a public nuisance and shall be abated by repair, rehabilitation, demolition, or removal  
4510 in accordance with ((the procedures specified in)) K.C.C. ((Title 23)) chapter 23.28.

4511           SECTION 147. Ordinance 14914, Section 359, as amended, and K.C.C.  
4512 16.14.200 are hereby amended to read as follows:

4513           Section ~~((108.2))~~ 111.2 of the International Property Maintenance Code is not  
4514 adopted and the following is substituted:

4515           **Closing of vacant structures (IPMC ~~((108.2))~~ 111.2).** ~~((If the))~~ Where a  
4516 structure is vacant and unfit for human habitation and occupancy~~((;))~~ and ~~((is))~~ not in  
4517 danger of structural collapse, the code official is authorized to post a ~~((placard of))~~  
4518 condemnation placard on the premises and order the structure ~~((closed up))~~ secured so  
4519 ~~((as not to be))~~ it does not become an attractive nuisance. Upon failure of the owner or  
4520 the owner's agent to ~~((close up))~~ secure the ~~((premises))~~ structure within the time  
4521 specified, enforcement action may be taken ~~((using the procedures of))~~ through K.C.C.  
4522 Title 23.

4523           SECTION 148. Ordinance 14914, Section 360, and K.C.C. 16.14.210 are hereby  
4524 amended to read as follows:

4525           Section ~~((108.3))~~ 111.4 of the International Property Maintenance Code is not  
4526 adopted and the following is substituted:

4527           **Notice (IPMC ~~((108.3))~~ 111.4).** Whenever the director has determined a  
4528 structure, premises, or equipment ~~((are))~~ is unsafe under ~~((the provisions of))~~ this section,  
4529 notice shall be provided in ~~((the procures contained in))~~ accordance with K.C.C. Title 23.

4530           SECTION 149. Ordinance 12560, Section 120, and K.C.C. 16.14.220 are hereby  
4531 amended to read as follows:

4532           Section ~~((108.4))~~ 111.7 of the International Property Maintenance Code is not  
4533 adopted and the following is substituted:

4534           **~~((Placard to vacate (IPMC 108.4)))~~ Placarding to vacate (IPMC 111.7).**  
4535 Whenever ~~((such notice))~~ a placard restricting occupancy of a building is posted, the code

official shall include a notification (~~((thereof))~~) in the notice and order issued under K.C.C. Title 23, (~~((reciting))~~) specifying the emergency and (~~((specifying))~~) the conditions (~~((which necessitate))~~) necessitating the posting. No person shall remain in or enter any building which has been so posted, except (~~((that entry may be made))~~) to repair, demolish, or remove such building under permit. No person shall remove or deface any such notice after it is posted until the required repairs, demolition, or removal have been completed and a certificate of occupancy is issued pursuant to (~~((the provisions of the Building Code))~~) this title. Any (~~((person violating this section shall be guilty of a misdemeanor))~~) violation may be enforced through K.C.C. Title 23.

SECTION 150. Ordinance 14914, Section 370, and K.C.C. 16.14.280 are hereby amended to read as follows:

Section (~~((109.4))~~) 112.4 of the International Property Maintenance Code is not adopted and the following is substituted:

**Emergency repairs (IPMC (~~((109.4))~~) 112.4).** For the purposes of this section, the code official shall employ the necessary labor and materials to perform the required work as expeditiously as possible as authorized in K.C.C. Title 23.

SECTION 151. Ordinance 14914, Section 370, and K.C.C. 16.14.290 are hereby amended to read as follows:

Sections (~~((109.5 and 109.6))~~) 112.5 and 112.6 of the International Property Maintenance Code are not adopted.

SECTION 152. Ordinance 12560, Section 121, as amended, and K.C.C. 16.14.430 are hereby amended to read as follows:



4558           Section ~~((444))~~ 107 of the International Property Maintenance Code is not  
4559 adopted and is substituted with the following:

4560           **Means of appeal (IPMC ~~((444))~~ 107).** Appeals shall be in accordance with  
4561 K.C.C. Titles 20 and 23.

4562           SECTION 153. Ordinance 14111, Section 131, as amended, and K.C.C.  
4563 16.14.450 are hereby amended to read as follows:

4564           Section 301.2 of the International Property Maintenance Code is not adopted and  
4565 the following is substituted:

4566           **Responsibilities defined (IPMC 301.2).** Owners ~~((remain))~~ may be liable for  
4567 ~~((violations of duties imposed by))~~ violating this code ~~((even though an obligation is also~~  
4568 ~~imposed on))~~ where the building's occupants ~~((of the building))~~ are also responsible for  
4569 code compliance, and ~~((even though))~~ where the owner ~~((has,))~~ imposes by agreement,  
4570 ~~((imposed on the occupant))~~ the duty of furnishing required equipment or ~~((of~~  
4571 ~~complying))~~ compliance with this code on the occupants.

4572           Buildings and structures and parts thereof shall be maintained in a safe and  
4573 sanitary condition. The owner or the owner's designated agent shall be responsible for  
4574 such maintenance. Buildings may be inspected ~~((T))~~ to determine compliance ~~((with this~~  
4575 ~~subsection, the building may be reinspected))~~.

4576           Owners, in addition to being responsible for maintaining buildings in a sound  
4577 structural condition, shall be responsible for keeping that part of the building or premises  
4578 which the owner occupies or controls in a clean, sanitary, and safe condition, including  
4579 the building's shared or public areas ~~((in a building containing))~~ with two or more  
4580 dwelling units.

4581           ~~((Owners shall, w))~~When required by this code or the code official or the ~~((health~~  
4582 ~~ordinance))~~ King County Board of Health Code or the health officer, owners shall furnish  
4583 and maintain such approved sanitary facilities as required, and shall furnish and maintain  
4584 approved devices, equipment, or facilities ~~((for the prevention of))~~ to prevent insect and  
4585 rodent infestation, and when infestation ~~((has taken place))~~ occurs, shall be responsible  
4586 for ~~((the extermination of))~~ exterminating any insects, rodents, or other pests ~~((when))~~  
4587 unless such extermination is ~~((not))~~ specifically made the occupant's responsibility ~~((of~~  
4588 ~~the occupant))~~ by law or ~~((ruling))~~ rule.

4589           Occupants of a dwelling unit, in addition to being responsible for keeping in a  
4590 clean, sanitary, and safe condition that part of the ~~((dwelling or))~~ dwelling unit or  
4591 premises which they occupy and control, shall dispose of their rubbish, garbage, and  
4592 other organic waste in a manner required by the ~~((health ordinance))~~ King County Board  
4593 of Health Code and approved by the health officer or the code official.

4594           ~~((Occupants shall, w))~~When required by this code or the code official, the ~~((health~~  
4595 ~~ordinance))~~ King County Board of Health Code, or the health officer, occupants shall  
4596 furnish and maintain approved devices, equipment, or facilities necessary to keep their  
4597 premises safe and sanitary.

4598           SECTION 154. Ordinance 14111, Section 131, as amended, and K.C.C.  
4599 16.14.460 are hereby amended to read as follows:

4600           Section 302.4 of the International Property Maintenance Code is not adopted and  
4601 the following is substituted:

4602           ~~((Fire hazard))~~ **Weeds** (IPMC 302.4). ~~((Any building or portion thereof, device,~~  
4603 ~~apparatus, equipment, combustible waste, or vegetation that, in the opinion Fire Marshal~~

4604 ~~or the Code Official, is in such a condition as to cause a fire or explosion or provide a~~  
4605 ~~ready fuel to augment the spread and intensity of fire or explosion arising from any cause~~  
4606 ~~shall be considered substandard. Upon failure of the owner or agent having charge of a~~  
4607 ~~property to cut and destroy weeds after notice violation, they shall be subject to~~  
4608 ~~prosecution in accordance with the provisions of K.C.C. Title 23.))~~ The exterior of  
4609 premises and property shall be maintained free from noxious weeds. Noxious weeds are  
4610 defined as any plant or vegetation included on the King County Noxious Weeds list.  
4611 Noxious weeds shall be prohibited in accordance with chapter 17.10.RCW. The exterior  
4612 of premises and property shall be maintained free of excessive growth of dry or dead  
4613 vegetation that constitutes a potential fire hazard in the opinion of the fire marshal or  
4614 code official.

4615 SECTION 155. Ordinance 14914, Section 408, and K.C.C. 16.14.490 are hereby  
4616 amended to read as follows:

4617 Section 304.3 of the International Property Maintenance Code is not adopted and  
4618 the following is substituted:

4619 **Premises identification. (IPMC 304.3).** ~~((Approved numbers or addresses shall~~  
4620 ~~be provided for all new buildings))~~ Buildings shall have approved address numbers  
4621 placed in ((such)) a position ((as to be)) that is plainly visible and legible from the street  
4622 or road fronting the property ((as specified by the department)).

4623 SECTION 156. Ordinance 12560, Section 115, as amended, and K.C.C.  
4624 16.14.540 are hereby amended to read as follows:

4625 Section 602.3 of the International Property Maintenance Code is not adopted and  
4626 the following is substituted:

---

4627        **Heating facilities - Heat supply (IPMC 602.3).** ~~((Dwellings units and guest~~  
4628 ~~rooms shall be provided with heating facilities capable of maintaining a room~~  
4629 ~~temperature of 70° F. (21.1° C), bathrooms and toilet rooms. Cooking appliances shall~~  
4630 ~~not be used to provide space heating to meet the requirements of this section))~~ Every  
4631 owner and operator of any building who rents, leases, or lets one or more dwelling units  
4632 or sleeping units on terms, either expressed or implied, to furnish heat to the occupants  
4633 shall supply heat to maintain a minimum temperature of 68° Fahrenheit (20° Celsius) in  
4634 all habitable rooms, bathrooms, and other toilet rooms.

4635        **EXCEPTIONS:**

4636        1. When the outdoor temperature is below the winter outdoor design temperature  
4637 for the locality, maintenance of the minimum room temperature shall not be required  
4638 provided that the heating system is operating at its full design capacity. The winter  
4639 outdoor design temperature for the locality shall be as indicated in Appendix C of the  
4640 Washington State Energy Code.

4641        2. In areas where the average monthly temperature is above 30° Fahrenheit (-1°  
4642 Celsius), a minimum temperature of 65° Fahrenheit (18° Celsius) shall be maintained.

4643        SECTION 157. Ordinance 14914, Section 416, and K.C.C. 16.14.550 are hereby  
4644 amended to read as follows:

4645        Section 602.4 of the International Property Maintenance Code is not adopted((-))  
4646 and the following is substituted:

4647        **Occupiable work spaces (IPMC 602.4).** Indoor occupiable work spaces shall be  
4648 supplied with heat to maintain a minimum temperature of 65° Fahrenheit (18° Celsius)  
4649 when the spaces are occupied.

**EXCEPTIONS:**

1. Processing, storage, and operation areas that require cooling or special

temperature conditions.

2. Areas in which persons are primarily engaged in vigorous physical activities.

SECTION 158. Ordinance 6746, Section 5, as amended, and K.C.C. 16.32.030

are each hereby amended to read as follows:

A. Chapters 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 15, 16, and 17 and Appendices A

(Recommended Rules for Sizing the Water Supply System), B (Explanatory Notes on

Combination Waste and Vent Systems), I (Installation Standard for PEX Tubing Systems

for Hot- and Cold-Water Distribution), and M (Peak Water Demand Calculator) of the

2021 edition of the Uniform Plumbing Code as adopted by the state, ((2018 Edition,)) as

published by or jointly with the International Association of Plumbing and Mechanical

Officials and as amended in chapter 51-56 WAC and the gas piping provisions of the

2021 edition of the International Fuel Gas Code as adopted by the state, ((2018 Edition,)),

the 2021 edition of the National Fuel Gas Code as adopted by the state, ((2018 Edition,))

((2018 ANSI Z223.1/NFPA 54,)) the 2021 edition of the Liquefied Petroleum Gas Code

as adopted by the state, ((2017 Edition,)) ((2017 NFPA 58))) as amended in chapter 51-

52 WAC, and the 2021 edition of the International Residential Code as adopted by the

state, ((2018 Edition,)) as amended in chapter 51-51 WAC, are hereby adopted and

together with King County amendments, additions, exceptions, and deletions adopted in

this chapter are adopted as the King County Plumbing Code and may be cited as such and

referred to in this chapter as "this code." This code shall have precedence over

documents adopted by reference.

4673 B. This code also may be further clarified and implemented by administrative  
4674 rules adopted in accordance with K.C.C. chapter 2.98.

4675 SECTION 159. Ordinance 6746, Section 7, as amended, and K.C.C. 16.32.050  
4676 are each hereby amended to read as follows:

4677 The authority having jurisdiction is authorized to enforce this code in accordance  
4678 with K.C.C. Title 23 except as specifically otherwise provided in this code.

4679 SECTION 160. Ordinance 6746, Section 10, as amended, and K.C.C. 16.32.080  
4680 are each hereby amended to read as follows:

4681 Section 104.5 of the Uniform Plumbing Code is not adopted and the following is  
4682 substituted:

4683 **Fees. A.** An applicant for a permit to do work under this chapter shall pay at the  
4684 time of permit issuance, the following fees according to the fee schedule:

4685 **FEE SCHEDULE**

| Fee Type                                                                                                                                                                                 | Cost     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Note: The fees in this table may be adjusted annually in accordance with subsection D. of this section. Contact public health – Seattle & King County for the most current fee schedule. |          |
| <b>Base permit fee</b> , which is for a plumbing, gas, or backflow permit                                                                                                                | \$132.00 |
| <b>Fixture fee</b> , which is assessed per each plumbing, medical or dental gas, fuel gas, laboratory gas, or repipe fixture, or                                                         | \$26.00  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| backflow assembly, or any combination thereof, in addition to the base permit fee                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                           |
| <b>Administrative fee</b> , which is the fee assessed to modify a permit or issue a refund                                                                                                                                                                                                                                                                                                                                                                               | \$40.00                                                                                                                                   |
| <b>Permit renewal fee</b> , which is the fee assessed to renew a permit                                                                                                                                                                                                                                                                                                                                                                                                  | \$66.00                                                                                                                                   |
| <b>Repipe permit fee</b> , which is a project specific fee, and which is the base permit fee plus repipe fixture fee or fees plus the total number of anticipated inspections times the hourly operating rate, unless the number of actual inspections exceed the number of anticipated inspections, in which case the applicant will be charged the hourly operating rate for each additional inspection. Contact public health– Seattle & King County for fee estimate | (Base permit fee + repipe fixture fee or fees) + (the number of anticipated inspections + additional inspections x hourly operating rate) |
| <b>Plan review fee</b> , which applies to plan reviewed project only, and is invoiced at hourly operating rate based on actual time spent reviewing project                                                                                                                                                                                                                                                                                                              | \$264.00/hr.                                                                                                                              |
| <b>Hourly operating rate</b> , which is used to determine fees for plan review, off-hour inspections and repipe projects                                                                                                                                                                                                                                                                                                                                                 | \$264.00/hr.                                                                                                                              |

4686 B. The following definitions apply to this section unless the context clearly  
4687 requires otherwise:

4688           1. "Backflow assembly" means any approved device or assembly installed  
4689 within a water supply system to prevent health hazards associated with backflow or back-  
4690 siphonage conditions;

4691           2. "Fuel gas fixture" means an outlet point in a piped fuel gas supply system or  
4692 connection to a piece of fuel gas using equipment;

4693           3. "Laboratory gas fixture" means an inlet point in a piped nonsurgical vacuum  
4694 collection system, or an outlet point in a nonmedical laboratory gas distribution system  
4695 that connects to a piece of equipment, or that facilitates connections and disconnections  
4696 to be made by a system operator for nonmedical research or process purposes;

4697           4. "Medical or dental gas fixture" means an inlet point in a piped medical,  
4698 surgical, or dental vacuum collection system or an outlet point in a medical or dental gas  
4699 distribution system that connects to a piece of equipment, or that facilitates connections  
4700 and disconnections to be made by a system operator;

4701           5. "Plumbing fixture" means an approved type of installed receptacle, device, or  
4702 appliance that is connected to a water supply or that receives liquid or liquid-borne  
4703 wastes and discharges such wastes into a building drainage system directly or indirectly;  
4704 and

4705           6. "Repipe fixture" represents the water supply, drainage, or venting portion of a  
4706 plumbing system within a building that is to be replaced or repaired. A repipe fixture  
4707 represents the piping system only and does not include any specific device or fixture as  
4708 defined elsewhere in this section.

4709           C.1. Laboratory fixture fees may be collected for any appliance, equipment,  
4710 appurtenance, alarm, or gas system inlet or outlet connected to or affiliated with a



4711 nonmedical vacuum collection system or nonmedical gas piping system that does not  
4712 include fuel gas and is not required to be designed in accordance with NFPA 99.

4713           2. Medical or dental gas fixture fees may be collected for any appliance,  
4714 equipment, appurtenance, alarm, or gas system inlet or outlet connected to or affiliated  
4715 with a medical, surgical, or dental vacuum collection system or medical or dental gas  
4716 piping system designed in accordance with NFPA 99.

4717           3. Plumbing fixture fees may be collected for any plumbing fixture, appliance,  
4718 equipment, or appurtenance that is either regulated by the applicable plumbing or gas  
4719 codes or impacts the design or operation of a plumbing or gas system within a building,  
4720 or both. This includes industrial or commercial tanks, vats, and similar processing  
4721 equipment which might or might not be connected to or discharged into approved traps or  
4722 plumbing fixtures.

4723           D. The fee schedule referenced within this section may be reviewed and adjusted  
4724 periodically in accordance with the following:

4725           1. The director of public health - Seattle & King County shall annually review  
4726 whether the fee schedule needs to be adjusted to reflect the projected subsequent year  
4727 costs of providing services, taking into account the budget adopted by ordinance for the  
4728 agency charged with providing such services; and

4729           2. The director may annually (~~adjust~~) increase or decrease any or all fees to  
4730 reflect actual costs up to an amount that represents the most recent Seattle-Tacoma-  
4731 Bellevue Area Consumer Price Index for Urban Wage Earners and Clerical Workers,  
4732 CPI-W, inflation forecast for the subsequent year prepared by the office of economic and  
4733 financial analysis and adopted by the forecast council plus one percentage point, up to a

maximum of five percent over the current fee(~~((Actual costs may include))~~), plus the cost of (~~((increasing))~~) building rate reserves in accordance with any applicable county fund reserve policies.

SECTION 161. Ordinance 19845, Section 135, as amended, and K.C.C. 16.32.195 are each hereby amended to read as follows:

Section 103.1 of the Uniform Plumbing Code is supplemented with the following:

**Authority Having Jurisdiction (~~((UPC 103.1.1))~~).** The authority having jurisdiction is (~~((the director of))~~) public health - Seattle & King County or the (~~((director's))~~) authorized representative or representatives, who shall administer and enforce the provisions of this code, render interpretations of this code and make and enforce such rules and regulations, in accordance with K.C.C. chapters 2.98 and 2.100.

SECTION 162. Ordinance 15802, Section 124, as amended, and K.C.C. 16.32.215 are each hereby amended to read as follows:

Section 106.4 of the Uniform Plumbing Code is not adopted and the following is substituted:

**Stop Work Order and Correction Order (~~((UPC 106.4))~~).**

A. Whenever any work is being done contrary to the provisions of this code, the authority having jurisdiction may order the work stopped by notice in writing served on any persons engaged in the doing or causing such work to be done, and any such persons shall immediately stop work until authorized by the authority having jurisdiction to proceed with the work. Service of a stop work order shall be made by one or more of the following methods:

4756           1. Personal service: Personal service of a stop work order may be made on the  
4757 property owner or on any person doing or causing the work to be done, or by leaving the  
4758 stop work order at the house of usual abode of the person being served if the stop work  
4759 order is left with a person of suitable age and discretion who resides there.

4760           2. Service by posting on the property: Service directed to the property owner or  
4761 person engaged in doing or causing such work to be done may be made by posting the  
4762 stop work order in a conspicuous place on the property where the work is occurring, and  
4763 concurrently mailing notice as required by this subsection, if a mailing address is  
4764 available.

4765           3. Service by mail: Service by mail may be made for a stop work order by  
4766 mailing two copies, postage prepaid, one by ordinary first class mail and the other by  
4767 certified mail, to the property owner and to any person engaged in doing or causing such  
4768 work to be done, at their last known addresses, at the address of the location of the work  
4769 being done, or at the address of the place of business of the person being served. The  
4770 taxpayer's address as shown on the tax records of the county shall be deemed to be the  
4771 proper address for the purpose of mailing such notice to the person being served. Service  
4772 by mail shall be presumed effective upon the third business day following the day upon  
4773 which the stop work order was placed in the mail.

4774           B. Whenever any work is being done contrary to the provisions of this code, the  
4775 authority having jurisdiction may order the violations corrected without ordering all work  
4776 stopped by issuing a correction notice that identifies the violation. The correction notice  
4777 may require an inspection before further construction or at the time of the next required

4778 inspection. The correction notice shall be served or posted in the same manner as a stop  
4779 work order.

4780 C. The remedies in this section are in addition to those authorized elsewhere in  
4781 this code.

4782 SECTION 163. Ordinance 15802, Section 126, as amended, and K.C.C.

4783 16.32.235 are each hereby amended to read as follows:

4784 Section 103.2 of the Uniform Plumbing Code is not adopted and the following is  
4785 substituted:

4786 **Liability (~~((UPC 103.2))~~).** This code is enacted as an exercise (~~((of the police~~  
4787 ~~power))~~) of King County's police power to protect and preserve the public peace, health,  
4788 safety, and welfare, and its provisions shall be liberally construed (~~((for the~~  
4789 ~~accomplishment of))~~) to accomplish these purposes. It is expressly the purpose of this  
4790 code to provide for and promote the health, safety, and welfare of the general public, and  
4791 not to create or otherwise establish or designate any particular class or group of persons  
4792 who would or should be especially protected or benefited by (~~((the terms of))~~) this code.

4793 (~~((It is to))~~) The code's specific intent (~~((of this code))~~) is to place the obligation of  
4794 complying with its requirements upon the owner or occupier of premises within this  
4795 code's scope, and no provision (~~((n))~~) or term used in this code is intended to impose any  
4796 duty upon the authority having jurisdiction or any of the authority having jurisdiction's  
4797 officers or employees, for whom (~~((the))~~) code implementation or enforcement (~~((of this~~  
4798 ~~code))~~) shall be discretionary and not mandatory.

4799 Nothing in this code creates or forms the basis for any liability on the part of the  
4800 authority having jurisdiction, or the authority having jurisdiction's officers, employees, or

4801 agents, for any injury or damage resulting from the failure of the owner or occupier of  
4802 premises to comply with ~~((the provisions of))~~ this code, or by reason or in consequence of  
4803 any act or omission in connection with ~~((the))~~ code implementation or enforcement ~~((of~~  
4804 ~~this code))~~ on the part of the authority having jurisdiction or by the authority having  
4805 jurisdiction's officers, employees, or agents.

4806 Any claim or litigation arising from any conduct, acts, or omissions of the  
4807 authority having jurisdiction, or any of the authority having jurisdiction's officers,  
4808 employees, or agents, shall be subject to the provisions of K.C.C. chapter 2.21.

4809 NEW SECTION. SECTION 164. There is hereby added to K.C.C. chapter 16.32  
4810 a new section to read as follows:

4811 The authority having jurisdiction shall issue a permit to the applicant if the  
4812 authority having jurisdiction verifies all of the following:

4813 A. The work described in the construction documents conforms to this code's  
4814 requirements and applicable laws and ordinances;

4815 B. Construction documents for projects requiring plan review have been  
4816 reviewed and approved;

4817 C. The fees specified in K.C.C. 16.32.080 have been paid;

4818 D. The applicant has complied with all requirements to be performed prior to  
4819 permit issuance under applicable laws, ordinances, and regulations otherwise imposed by  
4820 the authority having jurisdiction; and

4821 E. The applicant, or the applicant's authorized agent, becomes the permit holder  
4822 when the permit is issued.

4823           NEW SECTION. SECTION 165. There is hereby added to K.C.C. chapter 16.32  
4824 a new section to read as follows:

4825           Section 104.1 of the Uniform Plumbing Code is supplemented with the following:

4826           **Complete plumbing permit applications.** A plumbing permit application is  
4827 complete if the authority having jurisdiction determines it meets the requirements of  
4828 sections 104.1 and the following:

4829           **Application for Permit.** To obtain a permit, the applicant shall first file an  
4830 application in a format determined by the authority having jurisdiction. Every such  
4831 application shall:

- 4832           1. Identify and describe the work to be covered by the permit.
- 4833           2. Describe the proposed work site by parcel number, property address, or similar  
4834 description that will readily identify and clearly locate the proposed building or project.
- 4835           3. Provide unit, space suite, floor level, or other information that will clearly  
4836 identify the location of the project.
- 4837           4. Provide the property owner's name, address, and phone number.
- 4838           5. Provide the contractor's business name, address, email, and phone number.
- 4839           6. Be accompanied by plans, diagrams, computations and specifications,  
4840 equipment schedules, and other data as required by the authority having jurisdiction.
- 4841           7. Be signed by the owner of the property or building, or the owner's authorized  
4842 agent, who may be required to submit evidence to indicate such authority.
- 4843           8. Provide other data and information as may be required by the authority having  
4844 jurisdiction.

4845           **Plumbing Design Documents.** Plumbing design documents shall be submitted  
4846 with each application for a permit, in electronic format to the authority having  
4847 jurisdiction. Diagrams, schedules, and other data sufficient to show the adequacy of the  
4848 plans shall be submitted when required by the authority having jurisdiction.

4849           **EXCEPTION:** The authority having jurisdiction may waive the submission of  
4850 plumbing design documents where the authority having jurisdiction finds that the nature  
4851 of the work applied for is such that reviewing plumbing documents is not necessary to  
4852 obtain compliance with this code.

4853           **Preparation by Registered Design Professionals.** Plumbing design documents  
4854 for all plumbing work shall be prepared and designed by or under the direct supervision  
4855 of a mechanical engineer licensed to practice under the laws of the State of Washington.  
4856 Each sheet of plumbing documents shall bear the seal and the signature of the registered  
4857 design professional before the permit is issued.

4858           **EXCEPTIONS:**

- 4859           1. Detached one- and two-family dwellings, and townhouses.
- 4860           2. Design documents that do not include systems specifically required to be  
4861 designed by a registered design professional shall be permitted to be submitted without a  
4862 PE stamp by any individual holding an active Certified in Plumbing Design (CPD)  
4863 designation issued by the American Society of Plumbing Engineers (ASPE) or by a  
4864 Washington State Certified Journeyman Plumber (PL01).
- 4865           3. Design documents provided for reference only.
- 4866           4. Other work as specified by the authority having jurisdiction.

4867           **Registered Design Professional in Responsible Charge.** The authority having  
4868 jurisdiction is authorized to require the owner to engage and designate on the plumbing  
4869 permit application a Registered Design Professional who shall act as the Registered  
4870 Design Professional in Responsible Charge. If the circumstances require, the owner shall  
4871 designate a substitute Registered Design Professional in Responsible Charge who shall  
4872 perform the duties required of the original Registered Design Professional in Responsible  
4873 Charge. The authority having jurisdiction shall be notified in writing by the owner if the  
4874 Registered Design Professional in Responsible Charge is changed or is unable to continue  
4875 to perform their duties. The Registered Design Professional in Responsible Charge is  
4876 responsible for reviewing and coordinating submittal documents prepared by others,  
4877 including phased and deferred submittal items, for compatibility with the design and  
4878 scope of the project.

4879           **Information Required on Plumbing Design Documents.** The documents shall  
4880 include the following, as applicable:

4881           **Cover Sheet.** The cover sheet shall include the project address, parcel number,  
4882 scope of work narrative, legends, abbreviations, general notes, applicable code cycles,  
4883 and other information as required by the authority having jurisdiction.

4884           **Calculations and Notes.** Calculations and load summaries shall be provided to  
4885 determine system loading for each plumbing system included in the project scope of  
4886 work. A separate calculation for each separate utility point of connection is required.  
4887 Domestic water pressure loss calculations shall be provided for each independent  
4888 domestic water system or pressure zone. Notes shall include proposed material types and



4889 joining methods, insulation requirements, disinfection procedures, and similar  
4890 information as required by the authority having jurisdiction.

4891       **Schedules.** Schedules shall be provided for all fixtures and equipment associated  
4892 with the plumbing system design. Schedules shall include all information required to  
4893 verify compliance with this code and the Washington State Energy Code as amended by  
4894 King County. Such information may include operating weight, equipment make/model,  
4895 applicable standards, connection sizes, flow rates, input/output ratings, and similar  
4896 information as required by the authority having jurisdiction.

4897       **Energy Code Compliance.** Equipment required to comply with the Washington  
4898 State Energy Code as amended by King County shall include make and model and any  
4899 other design or listing information required to determine compliance.

4900       **Plan Sheets.** Plan sheets shall include building information, plumbing system  
4901 design information, scale, key plan, north arrow, and similar information as required by  
4902 the authority having jurisdiction.

4903       **Building Information.** Building information shown on plan sheets shall be  
4904 screened (semi-opaque) and include information such as room names, walls, corridors,  
4905 fixtures, footings, floor elevations, and other building elements relevant to the installation  
4906 of the plumbing system(s).

4907       **Plumbing System Design Information.** Plumbing system design information  
4908 shown on plan sheets shall be easily identifiable and include all horizontal piping, all  
4909 vertical risers, sizing, loading, notes, fixture and equipment tags, and similar information  
4910 as required by the authority having jurisdiction.

4911           **Riser Diagrams.** Riser diagrams shall be provided for each distinct plumbing  
4912 system type including sanitary waste and vent, domestic water, stormwater and roof  
4913 drainage, natural gas, non-potable water, graywater, and any other system type referenced  
4914 within the plumbing design documents. Riser diagrams shall include all piping from the  
4915 utility or tenant point of connection to the furthest fixture or roof termination. Piping  
4916 shown on riser diagrams shall be clearly sized and labeled and include loading at each  
4917 pipe segment.

4918           **Construction Details.** Construction details shall be provided for the installation  
4919 of certain fixtures or equipment where determining code compliance may not be readily  
4920 achievable through review of Plans, Schedules, Notes, or Riser Diagrams. Construction  
4921 details may be required for the installation of water heaters, interceptors, pumps,  
4922 backflow devices, and similar items. The authority having jurisdiction may request  
4923 additional construction details as deemed necessary.

4924           **Deferred Submittals.** Deferral of any submittal items shall have the prior  
4925 approval of the authority having jurisdiction. The Registered Design Professional in  
4926 Responsible Charge shall list deferred submittals on the plans for review by the authority  
4927 having jurisdiction. Documents for deferred submittal items shall be submitted to the  
4928 Registered Design Professional in Responsible Charge who shall review them and  
4929 forward them to the authority having jurisdiction with a notation indicating that the  
4930 deferred submittal documents have been reviewed and been found to be in general  
4931 conformance to the plumbing design. The deferred submittal items shall not be installed  
4932 until the deferred submittal documents have been approved by the authority having  
4933 jurisdiction.

4934           **Application Review.** The plumbing design documents shall be reviewed by the  
4935 authority having jurisdiction. Such plumbing design documents may be reviewed by  
4936 other county departments for compliance with the laws and ordinances under their  
4937 jurisdiction.

4938           **Determination of Completeness.** Within 28 days after an application is filed, the  
4939 authority having jurisdiction shall notify the applicant in writing that the application is  
4940 complete or incomplete, and if the application is incomplete, the additional information  
4941 required to make it complete shall be provided. Within 14 days after receiving the  
4942 additional information, the authority having jurisdiction shall notify the applicant in  
4943 writing whether the application is now complete or specify the additional information  
4944 required to make it complete. An application shall be deemed to be complete if the  
4945 authority having jurisdiction does not notify the applicant in writing by the deadlines in  
4946 this section that the application is incomplete.

4947           **Decision on Application.** The authority having jurisdiction shall approve,  
4948 condition, or deny the application within 120 days after notifying the applicant that the  
4949 application is complete.

4950           To determine the number of days that have elapsed after the notification that the  
4951 application is complete, the following periods shall be excluded:

4952           1. All periods of time during which the applicant has been requested by the  
4953 authority having jurisdiction to correct plans, perform required studies, or provide  
4954 additional required information, until the determination that the request has been  
4955 satisfied. The period shall be calculated from the date the authority having jurisdiction  
4956 notifies the applicant of the need for additional information until the earlier of the date

the authority having jurisdiction determines whether the additional information satisfies the request for information or 14 days after the date the information has been provided to the authority having jurisdiction.

2. If the authority having jurisdiction determines that the information submitted by the applicant under item 1 of this subsection is insufficient, the authority having jurisdiction shall notify the applicant of the deficiencies, and the procedures under item 1 of this subsection shall apply as if a new request for information has been made;

3. All extensions of time mutually agreed upon by the applicant and the authority having jurisdiction. If a plumbing permit application is substantially revised by the applicant, the time period shall start from the date at which the revised application is determined to be complete under the Determination of Completeness subsection above.

**EXCEPTIONS:**

1. When changes to the approved work (plumbing design documents) are made during installation, approval of the authority having jurisdiction shall be obtained prior to execution. The authority having jurisdiction may approve minor changes to the plumbing design documents for work without revisions to the approved plumbing design documents when it is determined that the changes conform to the requirements of this code and other pertinent laws, ordinances, and other issued permits.

2. When the authority having jurisdiction allows a plumbing permit application to be submitted in phases for portions of the building, each phased portion submittal shall meet the requirements applicable to the scope of the allowed phased portion, and the plumbing permit application shall be considered complete for the purpose of Section 104.1 on the date the phased portion submittal is submitted.

4980            SECTION 166. Ordinance 15802, Section 131, as amended, and K.C.C.

4981    16.32.285 are each hereby amended to read as follows:

4982            Section 104.4.2 of the Uniform Plumbing Code is not adopted and the following  
4983    is substituted:

4984            **Validity of Permit ((~~UPC 104.4.2~~)).** The issuance of a permit or approval of  
4985    plans and specifications shall not be construed to be a permit for, or an approval of, any  
4986    violation of any of the provisions of this code or of any other ordinance of the  
4987    jurisdiction. No permit presuming to give authority to violate or cancel the provisions of  
4988    this code shall be valid.

4989            The issuance of a permit based upon plans, specifications, or other data shall not  
4990    prevent the authority having jurisdiction from thereafter requiring the correction of errors  
4991    contained in the plans, specifications, and other data or from ((~~preventing~~)) halting  
4992    building operations ((~~being carried on thereunder~~)) when in violation of this code or of  
4993    other ordinances of this jurisdiction.

4994            Every plumbing permit shall be kept on the site where the work permitted is being  
4995    performed and shall not be removed until the work has obtained final approval ((~~been~~  
4996    ~~finally approved~~)) by the authority having jurisdiction.

4997            Plumbing work authorized by a permit in effect on or after January 1, 2023, shall  
4998    be performed in accordance with the laws and ordinances in effect when the permit was  
4999    issued, except when:

- 5000            1. The authority having jurisdiction determines such work to be ((~~in fact~~))  
5001    dangerous, unsafe, insanitary, or a nuisance or a menace to life, health, or property; or  
5002            2. A building permit has been approved before January 1, 2023.

5003            SECTION 167. Ordinance 15802, Section 132, as amended, and K.C.C.

5004    16.32.295 are each hereby amended to read as follows:

5005            Section 104.4.5 of the Uniform Plumbing Code is not adopted and the following  
5006    is substituted:

5007            **Suspension, Revocation, or Limitation of Permits ((UPC 104.4.5)).**

5008            1. In addition to other remedies provided by law, the authority having jurisdiction  
5009    may((;)) in writing((;)) suspend, revoke, or limit a permit issued under this code if:

5010            1.1. The permit holder committed a violation of this code, other ordinances, or  
5011    any rules and regulations adopted by the authority having jurisdiction, in the course of  
5012    performing activities subject to that permit;

5013            1.2 The permit holder interfered with the authority having jurisdiction in the  
5014    performance of the authority having jurisdiction's duties relating to the permit;

5015            1.3. The permit was issued in error or on the basis of materially incorrect  
5016    information supplied to the authority having jurisdiction; or

5017            1.4. Permit fees or costs were paid to the county by check and returned from a  
5018    financial institution marked nonsufficient funds or canceled.

5019            2. The suspension, revocation, or limitation shall be carried out through the  
5020    notice and order provisions of K.C.C. Title 23(~~(, is effective on the date established by~~  
5021    ~~the notice and order and may be appealed to the King County hearing examiner in~~  
5022    ~~accordance with the appeal provisions of K.C.C. Title 23)).~~

5023            3. Notwithstanding any other provision of this code, the administrative authority  
5024    may immediately suspend operations under a permit by issuing a stop work order in  
5025    accordance with this code.

5026            SECTION 168. Ordinance 15802, Section 133, as amended, and K.C.C.

5027    16.32.306 are each hereby amended to read as follows:

5028            Section 105.2.6 of the Uniform Plumbing Code is not adopted and the following  
5029    is substituted:

5030            **Reinspections (((UPC 105.2.6))).** A reinspection fee may be assessed after the  
5031    initial inspection for each subsequent inspection ~~((or reinspection))~~ when part or all of the  
5032    work for which an inspection is called is found by the inspector to be in one or more of  
5033    the following conditions:

5034            1. Work is not complete ~~((or when required corrections have not been made.))~~;

5035            2. Work is not ready for inspection, and/or not under test;

5036            3. Corrections from previous inspection have not been completed;

5037            4. Access to inspection area(s) is denied or not provided;

5038            5. Permit is not properly posted at the work site; and

5039            6. Where applicable, work installed does not conform to approved drawings.

5040            ~~((This provision is not to be interpreted as requiring reinspection fees the first~~  
5041    ~~time a job is rejected for failure to comply with the requirements of this code, but as~~  
5042    ~~controlling the practice of calling for inspections before the job is ready for inspection or~~  
5043    ~~reinspection.~~

5044            ~~Reinspection fees may be assessed when the approved plans are not readily~~  
5045    ~~available to the inspector, for failure to provide access on the date for which the~~  
5046    ~~inspection is requested, or for deviating from plans when such deviation requires but has~~  
5047    ~~not received the approval of the authority having jurisdiction.~~

5048           ~~To obtain reinspection, the applicant shall file an application therefor in writing~~  
5049 ~~upon a form furnished for that purpose and pay the reinspection fee in accordance with~~  
5050 ~~K.C.C. 16.32.095.)~~ This subsection does not allow a reinspection fee to be applied at  
5051 initial plumbing or gas inspection when the inspection fails due to plumbing or gas  
5052 installation not complying with this code.

5053           In instances where a reinspection fee ~~((s have))~~ has been assessed, no additional  
5054 inspections ~~((of the work))~~ shall be performed until the required reinspection fees have  
5055 been paid.

5056           NEW SECTION. SECTION 169. There is hereby added to K.C.C. chapter 16.32  
5057 a new section to read as follows:

5058           Section 308 of the Uniform Plumbing Code is supplemented with the following:

5059           **Exterior installations.** Unless required to meet other provisions of this code, or  
5060 where first approved by the authority having jurisdiction, no plumbing or piping system  
5061 or part thereof shall be installed exterior to a building.

5062           **EXCEPTIONS:**

- 5063           1. Rainwater conductors, leaders, gutters, or downspouts.  
5064           2. Natural gas, fuel oil, or condensate piping serving exterior equipment.  
5065           3. Non-potable water serving irrigation systems, mechanical fill stations, or  
5066 similar exterior uses.

5067           NEW SECTION. SECTION 170. There is hereby added to K.C.C. chapter 16.32  
5068 a new section to read as follows:

5069           Section 418.3 of the Uniform Plumbing Code is not adopted and the following is  
5070 substituted:



5071           **Floor drains.** Floor drains shall be installed in the following areas:

5072           A. Any restroom, toilet facility, or similar area within a building containing two  
5073 or more water closets or a combination of one water closet and one urinal, except within  
5074 a dwelling unit. The floor shall slope in accordance with the requirements of UPC 418.5.  
5075 Any enclosed space containing a water closet or urinal and constructed in such a way as  
5076 to prevent fixture overflow spillage from reaching a floor drain located outside of the  
5077 enclosed space shall be provided with a dedicated floor drain within the space.

5078           B. Laundry rooms in commercial buildings and common laundry facilities in  
5079 multi-family dwelling buildings.

5080           NEW SECTION. SECTION 171. There is hereby added to K.C.C. chapter 16.32  
5081 a new section to read as follows:

5082           Section 418.5 of the Uniform Plumbing Code is supplemented with the following:

5083           **Floor slope.** Floors shall be sloped to floor drains.

5084           **EXCEPTIONS:**

5085           1. Floors of parking garages.

5086           2. Where existing floors are constructed such that creating a slope by recess or  
5087 topping slab is not feasible, a threshold of a minimum 1/4 inch (6 millimeters), but not  
5088 exceeding 1/2 inch (13 millimeters) in height shall be provided at each entry to the room  
5089 or area to prevent spillage from entering adjacent spaces.

5090           SECTION 172. Ordinance 19485, Section 151, and K.C.C. 16.32.338 are each  
5091 hereby amended to read as follows:

5092           Section 501 of the Uniform Plumbing Code is supplemented with the following:

5093           **Supplemental Water-Heating Devices ((UPC 501.3))**. Potable water heating  
5094 devices that use refrigerant-to-water heat exchangers shall be approved and installed in  
5095 accordance with this code and the manufacturer's instructions.

5096           SECTION 173. Ordinance 19485, Section 153, and K.C.C. 16.32.340 are each  
5097 hereby amended to read as follows:

5098           Section 709.1 of the Uniform Plumbing Code is not adopted and the following is  
5099 substituted:

5100           **709.1 General ((UPC 709.1))**. Plumbing fixtures shall be drained to the  
5101 sanitary waste system by gravity flow and are permitted to be pumped or ejected as  
5102 allowed in accordance with Section 710.2 or when approved by the authority having  
5103 jurisdiction.

5104           ~~((EXCEPTION: Plumbing fixtures are permitted to be pumped or ejected as~~  
5105 ~~allowed by UPC 710.2 or approved by the authority having jurisdiction.))~~

5106           SECTION 174. Ordinance 19485, Section 136, and K.C.C. 16.32.341 are each  
5107 hereby amended to read as follows:

5108           Section 104.3.2 of the Uniform Plumbing Code is not adopted and the following  
5109 is substituted:

5110           **Plan Review Fees ((UPC 104.3.2))**. ~~((Where))~~ When a plan or other data is  
5111 required to be submitted in accordance with UPC 104.3.1, a plan review fee shall be  
5112 charged at a rate equal to the cost of performing the service in addition to the permit fees  
5113 specified in K.C.C. 16.32.080.

5114           The authority having jurisdiction may rescind prior approval of reviewed  
5115 construction documents and deny permit issuance if any of the following conditions  
5116 develop:

5117           1. Permit applicant has not responded to a plan review invoice notice or request  
5118 for plan corrections from the assigned plans examiner within 90 days of request.

5119           2. Permit fees have not been paid within 90 days of notification to applicant that  
5120 plans have been approved and an invoice generated.

5121           **EXCEPTION:** The authority having jurisdiction may grant an extension to the  
5122 above time periods upon finding good cause for an extension, such as unforeseen  
5123 circumstances impeding timely action by the applicant. Any request for an extension  
5124 must be initiated by the permit applicant. The authority having jurisdiction shall maintain  
5125 a written record of any extension granted and the reason or reasons for the extension.

5126           SECTION 175. Ordinance 19485, Section 154, and K.C.C. 16.32.342 are each  
5127 hereby amended to read as follows:

5128           Chapter 9 of the Uniform Plumbing Code is supplemented with the following:

5129           **Air Admittance Valves (((UPC 913.0))).** ~~((Individual fixtures, a branch vent, a~~  
5130 ~~vertical wet vent and a horizontal wet vent may terminate with a connection to an air~~  
5131 ~~admittance valve as follows:~~

5132           ~~1. Fixtures connected to an air admittance valve shall be located on the same floor~~  
5133 ~~level.~~

5134           ~~2. Air admittance valves shall conform to ASSE 1051 for single fixtures, or ASSE~~  
5135 ~~1050 for multiple fixtures, and shall be installed as required in this section and the~~  
5136 ~~manufacturer installation guidelines.~~

- 5137           ~~3. Air admittance valves shall be accessible and located:~~
- 5138           ~~3.1. In an area that allows air to enter the valve.~~
- 5139           ~~3.2. A minimum of 4 inches above the trap arm.~~
- 5140           ~~3.3. A minimum of 6 inches above the flood level rim of the highest fixture being~~
- 5141 ~~vented, when the air admittance valve serves as a vent termination for a branch vent, or~~
- 5142 ~~vertical and horizontal wet vent.~~
- 5143           ~~3.4. Not less than 6 inches above insulation materials.~~
- 5144           ~~3.5. Within the maximum developed length permitted for the vent as shown in~~
- 5145 ~~UPC Table 703.2.~~
- 5146           ~~4. The air admittance valve shall be rated in accordance with the standard for the~~
- 5147 ~~vent size as determined in UPC Table 703.2.~~
- 5148           ~~5. Not less than one plumbing vent sized as required by UPC 904.1 shall extend to~~
- 5149 ~~the exterior of the building as required in UPC 906.1.~~
- 5150           ~~6. When a horizontal branch drain uses an individual or branch type air~~
- 5151 ~~admittance valve, a relief vent shall be installed when the horizontal branch drain is~~
- 5152 ~~located more than 4 branch intervals from the top of the building drain or waste stack.~~
- 5153 ~~Installations that require a relief vent shall be:~~
- 5154           ~~6.1. Submitted for an installation design review before approval.~~
- 5155           ~~6.2. Sized in accordance with UPC 904.1~~
- 5156           ~~6.3. Installed in accordance with UPC 905.0.~~
- 5157           ~~6.4. Extended to the outdoors or connect to a vent stack.~~
- 5158           ~~6.5. Permitted to serve as the vent for other fixtures.~~
- 5159           ~~7. Air admittance valve installations are prohibited for:~~
-

5160 ~~7.1. Venting sumps or tanks.~~

5161 ~~7.2. Non-neutralized chemical waste systems without a design review and~~

5162 ~~approval by the authority having jurisdiction.~~

5163 ~~7.3. Any fixtures connected to a grease or fats, oils or grease (FOG) disposal~~

5164 ~~system.~~

5165 ~~7.4. Location in spaces used as supply or return air plenums.))~~

5166 **1. General.** Vent systems utilizing air admittance valves shall comply with this  
5167 section.

5168 **2. Where Permitted.** Individual fixtures, a branch vent, a vertical wet vent, and  
5169 a horizontal wet vent shall be permitted to terminate with a connection to an air  
5170 admittance valve. Fixtures connected to an air admittance valve shall be located on the  
5171 same floor level.

5172 **3. Installation.** Air admittance valves shall conform to ASSE 1051 for single  
5173 fixtures, and ASSE 1050 for multiple fixtures, and shall be installed as required in this  
5174 section and the manufacturer's installations guidelines.

5175 **4. Location.**

5176 4.1. Air admittance valves shall be accessible and located in an area that allows  
5177 air to enter the valve.

5178 4.2. The air admittance valve shall be located a minimum of 4 inches (102  
5179 millimeters) above the trap arm.

5180 4.3. The air admittance valve that serves as a vent termination for a branch vent,  
5181 or vertical and horizontal wet vent, shall be located a minimum of 6 inches (152  
5182 millimeters) above the flood level rim of the highest fixture being vented.

5183           4.4. The air admittance valve shall be located with the maximum developed  
5184 length permitted for the vent as shown in Table 703.2.

5185           4.5. The air admittance valve shall be installed at least 6 inches (152 millimeters)  
5186 above insulation materials.

5187           **5. Size.** The air admittance valve shall be rated in accordance with the standard  
5188 for the vent size as determined in Table 703.2.

5189           **6. Vent Required.** Not less than one plumbing vent sized as required by Section  
5190 904.1, shall extend to the exterior of the building as required in Section 906.1

5191           **7. Relief Vent.** When a horizontal branch drain utilizes an individual or branch  
5192 type air admittance valve, a relief vent shall be installed when the horizontal branch drain  
5193 is located more than 4 branch intervals from the top of the building drain (waste stack),  
5194 and the relief vent shall extend to the outdoors or connect to a vent stack.

5195           The relief vent shall be sized in accordance with Section 904.1, installed in  
5196 accordance with Section 905.0, and shall be permitted to serve as the vent for other  
5197 fixtures.

5198           **8. Prior Approval.** Installations that require a relief vent shall be submitted for  
5199 an installation design review.

5200           **9. Prohibited Installations.**

5201           **9.1 Sumps.** Air admittance valves shall not be utilized to vent sumps or tanks of  
5202 any type.

5203           **9.2 Chemical Waste Systems.** Air admittance valves shall not be installed in  
5204 non-neutralized chemical waste systems without a design review and approval by the  
5205 authority having jurisdiction.

5206           **9.3 FOG Disposal Systems.** Air admittance valves shall not be installed on any  
5207 fixtures that are connected to a fats, oils, and grease (FOG) disposal system.

5208           **9.4 Plenums.** Air admittance valves shall not be located in spaces utilized as  
5209 supply or return air plenums.

5210           SECTION 176. Ordinance 19485, Section 155, and K.C.C. 16.32.343 are each  
5211 hereby amended to read as follows:

5212           Section 1014.1 of the Uniform Plumbing Code is ~~((not adopted and))~~  
5213 supplemented with the following ((is substituted)):

5214           ~~((General (UPC 1014.1). Where it is determined by the authority having~~  
5215 ~~jurisdiction that waste pretreatment is required, an approved type of grease interceptor(s)~~  
5216 ~~that complies with ASME A112.14.3, ASME A112.14.4, CSA B481, PDI G-101 or PDI~~  
5217 ~~G-102, and sized in accordance with UPC 1014.2.1 or 1014.3.6, shall be installed in~~  
5218 ~~accordance with the manufacturer's installation instructions to receive the drainage from~~  
5219 ~~fixtures or equipment that produce grease laden waste located in areas of establishments~~  
5220 ~~where food is prepared or other establishments where grease is introduced into the~~  
5221 ~~drainage or sewage system in quantities that can effect line stoppage or hinder sewage~~  
5222 ~~treatment or private sewage disposal systems. A combination of hydromechanical,~~  
5223 ~~gravity grease interceptors and engineered systems are allowed to meet this code and~~  
5224 ~~other applicable requirements of the authority having jurisdictions where space or~~  
5225 ~~existing physical constraints of existing buildings require such installations. Grease~~  
5226 ~~interceptors are not required for individual dwelling units or private living quarters.~~  
5227 ~~Water closets, urinals and other plumbing fixtures conveying human waste shall not drain~~

5228 ~~into or through the grease interceptor. Grease interceptors shall comply with UPC~~  
5229 ~~1014.1.1 through 1014.1.3.))~~

5230           **EXCEPTION:** A one-family or two-family home that has an approved  
5231 commercial kitchen or prepares food for public sale shall install a grease interceptor that  
5232 complies ~~((to))~~ with Section 1014.0 for all fixtures that produce ~~((fats, oils and grease))~~  
5233 ~~((f))~~FOG~~((g))~~ waste.

5234           NEW SECTION. SECTION 177. There is hereby added to K.C.C. chapter 16.32  
5235 a new section to read as follows:

5236           Section 608.1 of the Uniform Plumbing Code not adopted and the following is  
5237 substituted:

5238           **Inadequate water pressure.** Where the water pressure in the main or other  
5239 source of supply will not provide a minimum residual water pressure of 15 pounds per  
5240 square inch (PSI) (103 kilopascals), after allowing for friction and other pressure losses, a  
5241 tank and a pump or other means that will provide said 15 pounds PSI (103 kilopascals)  
5242 pressure shall be installed. Where fixtures, fixture fittings, or both are installed that,  
5243 require residual pressure exceeding 15 PSI (103 kilopascals), such minimum residual  
5244 pressure shall be provided. ASSE listed temperature or pressure compensating valves, or  
5245 both, shall be provided with a minimum residual pressure equal to or greater than the  
5246 minimum test pressure of the applicable standard, or 20 PSI (138 kilopascals), whichever  
5247 is greater.

5248           NEW SECTION. SECTION 178. There is hereby added to K.C.C. chapter 16.32  
5249 a new section to read as follows:



5250 Section 609.12 of the Uniform Plumbing Code not adopted and the following is  
5251 substituted:

5252 **Pipe insulation.** Domestic water piping within commercial buildings shall be  
5253 insulated in accordance with the Washington State Energy Code as amended by King  
5254 County.

5255 NEW SECTION. SECTION 179. There is hereby added to K.C.C. chapter 16.32  
5256 a new section to read as follows:

5257 Table 610.3 of the Uniform Plumbing Code is replaced with the following:

5258 **Table 610.3**

5259 **Water supply fixture units (WSFU) and minimum fixture branch pipe sizes<sup>3</sup>**

| <b>Appliances, appurtenances,<br/>or fixtures<sup>2</sup></b> | <b>Minimum fixture<br/>branch pipe size<br/>(inches)<sup>1,4</sup></b> | <b>Private</b> | <b>Public</b> | <b>Assembly<sup>6</sup></b> |
|---------------------------------------------------------------|------------------------------------------------------------------------|----------------|---------------|-----------------------------|
| Bathtub or combination<br>bath/shower (fill)                  | 0.5                                                                    | 4.0            | 4.0           |                             |
| 0.75 inch bathtub fill valve                                  | 0.75                                                                   | 10.0           | 10.0          |                             |
| Bidet                                                         | 0.5                                                                    | 1.0            |               |                             |
| Clothes washer                                                | 0.5                                                                    | 4.0            | 4.0           |                             |
| Dental unit, cuspidor                                         | 0.5                                                                    |                | 1.0           |                             |
| Dishwasher, domestic                                          | 0.5                                                                    | 1.5            | 1.5           |                             |
| Drinking fountain or water<br>cooler                          | 0.5                                                                    | 0.5            | 0.5           | 0.75                        |

|                                                      |      |                           |     |     |
|------------------------------------------------------|------|---------------------------|-----|-----|
| Hose bibb                                            | 0.5  | 2.5                       | 2.5 |     |
| Hose bibb, each additional <sup>8</sup>              | 0.5  | 1.0                       | 1.0 |     |
| Lavatory <sup>9</sup>                                | 0.5  | 1.0                       | 1.0 | 1.0 |
| Lawn sprinkler, each head <sup>5</sup>               |      | 1.0                       | 1.0 |     |
| Mobile home, each<br>(minimum)                       |      | 12.0                      |     |     |
| Sinks                                                |      |                           |     |     |
| Bar                                                  | 0.5  | 1.0                       | 2.0 |     |
| Clinical faucet                                      | 0.5  |                           | 3.0 |     |
| Clinical flushometer valve<br>with or without faucet | 1    |                           | 8.0 |     |
| Kitchen, domestic with or<br>without dishwasher      | 0.5  | 1.5                       | 1.5 |     |
| Laundry                                              | 0.5  | 1.5                       | 1.5 |     |
| Service or mop basin                                 | 0.5  | 1.5                       | 3.0 |     |
| Washup, each set of faucets                          | 0.5  |                           | 2.0 |     |
| Shower, per head                                     | 0.5  | 2.0                       | 2.0 |     |
| Urinal, 1.0 GPF flushometer<br>valve                 | 0.75 | See footnote <sup>7</sup> |     |     |
| Urinal, greater than 1.0 GPF<br>flushometer valve    | 0.75 | See footnote <sup>7</sup> |     |     |
| Urinal, flush tank                                   | 0.5  | 2.0                       | 2.0 | 3.0 |

|                                                      |      |                           |     |     |
|------------------------------------------------------|------|---------------------------|-----|-----|
| Urinal, hybrid                                       | 0.5  | 1.0                       | 1.0 | 1.0 |
| Wash fountain, circular spray                        | 0.75 |                           | 4.0 |     |
| Water closet, 1.6 GPF gravity tank                   | 0.5  | 2.5                       | 2.5 | 3.5 |
| Water closet, 1.6 GPF flushometer tank               | 0.5  | 2.5                       | 2.5 | 3.5 |
| Water closet, 1.6 GPF flushometer valve              | 1    | See footnote <sup>7</sup> |     |     |
| Water closet, greater than 1.6 GPF gravity tank      | 0.5  | 3.0                       | 5.5 | 7.0 |
| Water closet, greater than 1.6 GPF flushometer valve | 1    | See footnote <sup>7</sup> |     |     |

5260 For SI units: 1 inch = 25mm

5261 Footnotes:

5262 1. Size of the cold branch pipe, or both the hot and cold branch pipes.

5263 2. Appliances, appurtenances, or fixtures not referenced in this table shall be  
 5264 permitted to be sized by reference to fixtures having a similar flow rate and frequency of  
 5265 use.

5266 3. The listed fixture unit values represent their load on the cold water building  
 5267 supply. The separate cold water and hot water fixture unit value for fixtures having both  
 5268 hot and cold water connections shall be permitted to be each taken as three-quarter of the  
 5269 listed total value of the fixture.

5270 4. The listed minimum supply branch pipe sizes for individual fixtures are the  
5271 nominal (I.D.) pipe size.

5272 5. For fixtures or supply connections likely to impose continuous flow demands,  
5273 determine the required flow in gallons per minute (liters per second), and add it  
5274 separately to the demand in gallons per minute (liters per second) for the distribution  
5275 system or portions.

5276 6. Assembly, Public Use (See UPC Table 422.1).

5277 7. Where sizing flushometer systems, see UPC 610.10.

5278 8. Reduced fixture unit loading for additional hose bibbs is to be used where  
5279 sizing total building demand and for pipe sizing where more than one hose bibb is  
5280 supplied by a segment of water distribution pipe. The fixture branch to each hose bibb  
5281 shall be sized based on 2.5 fixture units.

5282 9. The minimum fixture branch size may be reduced to 3/8 inch (10 millimeters)  
5283 when serving a single lavatory.

5284 NEW SECTION. SECTION 180. There is hereby added to K.C.C. chapter 16.32  
5285 a new section to read as follows:

5286 Table 702.2(2) of the Uniform Plumbing Code is replaced with the following:

5287 **Table 702.2(2)**

5288 **Discharge capacity in gallons per minute for intermittent flow only<sup>a</sup>**

| Gallons per minute (gpm) | Fixture units          |
|--------------------------|------------------------|
| Up to 7.5                | Equals 1 fixture unit  |
| Greater than 7.5 to 15   | Equals 2 fixture units |

|                         |                         |
|-------------------------|-------------------------|
| Greater than 15 to 30   | Equals 4 fixture units  |
| Greater than 30 to 50   | Equals 6 fixture units  |
| Greater than 50 to 100  | Equals 12 fixture units |
| Greater than 100 to 200 | Equals 18 fixture units |
| Greater than 200 to 350 | Equals 24 fixture units |

5289 For SI units 1 gallon per minute = 0.06 L/s

5290 Footnote:

5291 a. Discharge capacity exceeding 350 gallons per minute (3.15 liters per second)

5292 shall be determined by the authority having jurisdiction.

5293 NEW SECTION. SECTION 181. There is hereby added to K.C.C. chapter 16.32

5294 a new section to read as follows:

5295 Section 704.3 of the Uniform Plumbing Code not adopted and the following is

5296 substituted:

5297 **Commercial sinks.** Except where specifically required to be connected indirectly  
5298 to the drainage system, or when first approved by the authority having jurisdiction, all  
5299 plumbing fixtures, drains, appurtenances, and appliances, including 3-compartment sinks,  
5300 shall be directly connected to the drainage system of the building or premises.

5301 NEW SECTION. SECTION 182. There is hereby added to K.C.C. chapter 16.32

5302 a new section to read as follows:

5303 Section 710.4 of the Uniform Plumbing Code not adopted and the following is

5304 substituted:

5305 **Discharge line.** The discharge line from such ejector, pump, or another  
5306 mechanical device shall be of approved pressure rated material and be provided with an

5307 accessible backwater or swing check valve and gate or ball valve. Where the gravity  
5308 drainage line to which such discharge line connects is horizontal, the method of  
5309 connection shall be from the top through a wye branch fitting. The gate or ball valve  
5310 shall be located on the discharge side of the backwater or check valve. Gate or ball  
5311 valves, where installed in drainage piping, shall be fullway type with working parts of  
5312 corrosion-resistant metal. Sizes 4 inches (102 millimeters) or more in diameter shall have  
5313 cast-iron bodies and sizes less than 4 inches (102 millimeters), cast-iron or copper alloy  
5314 bodies. Discharge lines from elevator hoistway pumps shall be provided with a check  
5315 valve and lockable gate or ball valve locked in the open position and located outside of  
5316 the hoistway.

5317       **EXCEPTION:** The discharge line of a pump serving an elevator hoistway shall  
5318 be routed through an air break to an approved indirect receptor. The indirect receptor  
5319 shall be provided with an outlet, tailpiece, and trap (if applicable) large enough to  
5320 accommodate the design flow rate of the largest pump discharging to the indirect  
5321 receptor. The trap seal of such receptor (if applicable) shall be maintained by a trap  
5322 primer in accordance with UPC 1007.0.

5323       NEW SECTION. SECTION 183. There is hereby added to K.C.C. chapter 16.32  
5324 a new section to read as follows:

5325       Section 710.5 of the Uniform Plumbing Code not adopted and the following is  
5326 substituted:

5327       **Size of building drains and sewers.** Building drains or building sewers  
5328 receiving a discharge from a pump or ejector shall be adequately sized to prevent

5329 overloading. Two fixture units shall be allowed for each gallon per minute (4 liters per  
5330 minute) of flow.

5331       **EXCEPTION:** Where first approved by the authority having jurisdiction, the  
5332 discharge from pumps or ejectors provided for periodic testing or emergency use only  
5333 may be assigned fixture unit loading in accordance with Table 702.2(2). All gravity  
5334 drainage piping and/or pretreatment devices downstream of such pumps shall be  
5335 adequately sized for continuous full flow of the pumped discharge under emergency or  
5336 test conditions.

5337       NEW SECTION. SECTION 184. There is hereby added to K.C.C. chapter 16.32  
5338 a new section to read as follows:

5339       Section 803.3 of the Uniform Plumbing Code is not adopted and the following is  
5340 substituted:

5341       **Pipe size and length.** The size of indirect waste piping shall comply with other  
5342 sections of this code applicable to drainage and vent piping. No vent from indirect waste  
5343 piping shall combine with a sewer-connected vent but shall extend separately to the  
5344 outside air. Indirect waste pipes exceeding 5 feet (1,524 millimeters), but less than 15  
5345 feet (4,572 millimeters) in length shall be directly trapped, but such traps need not be  
5346 vented.

5347       Indirect waste pipes less than 15 feet (4,572 millimeters) in length shall be at least  
5348 the diameter of the drain outlet or tailpiece of the fixture, appliance, or equipment served,  
5349 and in no case less than 1/2 inch (15 millimeters). Angles and changes of direction in  
5350 such indirect waste pipes shall be provided with cleanouts to permit flushing and  
5351 cleaning.

**EXCEPTIONS:**

1. Gravity indirect waste pipes connected to elevator hoistway drains shall be provided with a normally closed backwater valve or a vented running trap installed in accordance with UPC 1008.1. Where a trap is provided, the trap seal shall be maintained by an automatic electronic trap primer.

2. Unless required by the authority having jurisdiction, traps and vents shall not be required in indirect waste piping from backflow or pressure relief devices or other similar applications intended for emergency use only.

SECTION 185. Ordinance 19485, Section 156, and K.C.C. 16.32.344 are each hereby amended to read as follows:

The Exception to Section 1014.1.3 of the Uniform Plumbing Code is not adopted and the following is substituted:

~~((Food Waste Disposers and Dishwashers (UPC 1014.1.3). No food waste disposer or dishwasher shall be connected to or discharge into a grease interceptor. Commercial food waste disposers may discharge directly into the buildings drainage system.))~~

**EXCEPTION:** Food waste disposers may discharge to grease interceptors that are designed to receive ~~((the discharge of))~~ food waste discharge or a listed food solids interceptor shall be installed at the ~~((discharge point of the))~~ food waste disposer discharge point.

SECTION 186. Ordinance 15802, Section 137, as amended, and K.C.C. 16.32.345 are each hereby amended to read as follows:

Chapter 10 of the Uniform Plumbing Code is supplemented with the following:



5375           ~~((Parking Garage Drainage Systems (UPC 1018.1). All garage floor drainage~~  
5376 ~~under the roof of a parking garage shall be connected to the sanitary drainage system,~~  
5377 ~~through the use of a sand interceptor. When the top floor of the building is used as a roof~~  
5378 ~~as well as a parking area, the drainage from the roof shall be connected to the storm~~  
5379 ~~drainage system. Drainage from plumbing fixtures shall not be inter-connected with the~~  
5380 ~~garage drainage system; however, drainage lines from car or truck washing equipment~~  
5381 ~~may be connected to the approved garage drainage system. Garage drains shall comply~~  
5382 ~~with the following:~~

- 5383           ~~1. Garage drain piping shall be a minimum of three inches in size.~~  
5384           ~~2. A trap shall not be installed at the garage drains. All plans for parking garage~~  
5385 ~~drainage systems shall be submitted to the authority having jurisdiction before~~  
5386 ~~installation for approval.~~

5387           ~~**EXCEPTION:** This section shall not apply to one family or two family~~  
5388 ~~dwelling(s).))~~

5389           **Parking Garage Drainage Systems.** Parking garage drainage systems shall  
5390 comply with sections A and B as follows. All plans for parking garage floor drainage  
5391 systems shall be submitted to the authority having jurisdiction and approved prior to  
5392 installation.

5393           **A. Parking Garage Drains.** Drains connected to the parking garage drainage  
5394 system shall comply with the following:

- 5395           1. Unless otherwise approved by the authority having jurisdiction, drains  
5396 serving parking or loading dock areas exposed to precipitation and larger than 200 square  
5397 feet (18.6 square meters) shall be connected to the building storm drainage system. All

5398 other parking garage and/or loading dock drainage shall be connected to the sanitary  
5399 drainage system using a sand interceptor or oil/water separator.

5400 2. Parking garage drain outlets and connected drainage waste lines shall be a  
5401 minimum of 3 inches (76 millimeters) in diameter. Drainage piping serving parking  
5402 garage drains shall be sized in accordance with Table 703.2.

5403 3. Drains of any type connected to the parking garage drainage system shall be  
5404 equipped with approved strainers and need not be trapped or vented when connected to  
5405 the building drain though a properly trapped and vented sand interceptor or oil/water  
5406 separator. Drains at floor level and subject to vehicular traffic shall be equipped with  
5407 strainers with a load rating appropriate to the use of the parking area served.

5408 4. Traps shall not be used when drains are located in areas exposed to freezing  
5409 temperatures.

5410 5. The waste line from drains entering a sand interceptor or oil/water separator  
5411 shall be at an elevation equal to or above the waste line discharging from the sand  
5412 interceptor or oil/water separator.

5413 6. The sand interceptor or oil/water separator receiving the discharge from  
5414 parking garage floor drains shall have a water seal of not less than 6 inches (152  
5415 millimeters). Sand interceptors shall meet the requirements of Section 1016.0. Oil/water  
5416 separators shall meet the requirements of Section 1009.0. Submittal information shall be  
5417 provided to the authority having jurisdiction prior to installation. The water seal of the  
5418 sand interceptor or oil/water separator shall be maintained by an automatic electronic trap  
5419 primer discharging not less than 1/2 gallon (2 liters) per day.

5420           **B. Drainage from Other Plumbing Fixtures.** Drainage from any plumbing  
5421 fixture other than a parking garage floor drain shall not be interconnected with the  
5422 parking garage drainage system.

5423           **EXCEPTION:** Where first approved by the authority having jurisdiction, the  
5424 following types of drains may be connected to the parking garage drainage system  
5425 upstream of the sand interceptor or oil/water separator and need not be individually  
5426 trapped or vented, provided that all drainage piping downstream of such drains, including  
5427 the sand interceptor or oil/water separator, is sized to accommodate the largest flow of  
5428 effluent anticipated from any single connected drain under worst case or emergency  
5429 conditions:

5430           **1. Drains within car or truck washing area and drainage lines from car or truck**  
5431 washing equipment.

5432           **2. Approved indirect receptors located within the parking garage and accepting**  
5433 drainage from fire/sprinkler standpipes, fire water storage tanks, mechanical condensate,  
5434 relief valves, or other similar clear water waste only.

5435           **3. Approved indirect receptors located within the parking garage and accepting**  
5436 drainage from hoistway pumps or drains required by ASME A17.1, provided the  
5437 discharge from the sand interceptor or oil/water separator connects to the building drain  
5438 by gravity and not to a sanitary lift station.

5439           **4. Where the sand interceptor or oil/water separator discharges to a sanitary lift**  
5440 station, an approved indirect receptor located within the parking garage and accepting  
5441 drainage from a pump serving a hoistway containing a fire service access or occupant  
5442 evacuation operation elevator that is required to be on emergency or standby power per

5443 the IBC as adopted by the state of Washington Section 403.4.8.4 or 403.4.8.3 may only  
5444 be connected to the parking garage drainage system when the floor of the hoistway  
5445 enclosure is protected from water intrusion in accordance with the IBC as adopted by the  
5446 state of Washington Section 3007.3. Sanitary lift station pumps shall not be connected to  
5447 emergency power.

5448 5. Floor drains and indirect receptors within mechanical rooms, water entry  
5449 rooms, fire pump rooms, and similar spaces where no graywater or blackwater producing  
5450 fixtures are located, provided such rooms have a door or doors that open directly into the  
5451 parking garage and are directly and continuously exhausted by mechanical means or  
5452 provided with permanent fixed openings into the parking garage.

5453 **Note:** For the purposes of this section, a mop sink, utility sink, or similar fixture  
5454 shall not be considered an approved indirect receptor.

5455 **NEW SECTION. SECTION 187.** There is hereby added to K.C.C. chapter 16.32  
5456 a new section to read as follows:

5457 Section 1101.12.2.2.2 of the Uniform Plumbing Code is not adopted and the  
5458 following is substituted:

5459 **Combined system.** The secondary roof drains shall connect to the vertical piping  
5460 of the primary storm drainage conductor downstream of the last horizontal offset located  
5461 below the roof. The primary storm drainage system shall connect to the building storm  
5462 water that connects to an underground public storm sewer. The combined secondary and  
5463 primary roof drain systems shall be sized in accordance with UPC 1103.0 based on  
5464 double the rainfall rate for the local area. A relief drain shall be connected to the  
5465 combined vertical drainage piping, within 20 feet (6,096 millimeters) of grade, using a

5466 wye-type fitting piped to daylight on the exterior of the building. The piping shall be  
5467 sized as required for a secondary drain with a 4 inch (102 millimeter) maximum  
5468 diameter.

5469 SECTION 188. Ordinance 1488 (part), as amended, and K.C.C. 16.82.130 are  
5470 each hereby amended to read as follows:

5471 A. If clearing or grading has occurred on any site that is inconsistent with the  
5472 purposes and requirements of this chapter in effect at the time of the ~~((action has occurred~~  
5473 ~~on a site))~~ clearing or grading, the department shall not accept or grant any other  
5474 development permit or approval for the site, except any permit or approval necessary  
5475 ~~((for the correction of))~~ to correct code violations or as may be determined otherwise by  
5476 the director, until the applicant:

5477 1. Completes site restoration ~~((of the site))~~ or the ~~((appropriate))~~ corrective  
5478 actions to bring the site into compliance; or  
5479 2. Obtains department approval of a permit for the ~~((appropriate))~~ site restoration  
5480 or corrective action and posts any required financial guarantee.

5481 B. The department shall require ~~((appropriate))~~ site restoration ~~((of the site))~~ or  
5482 corrective work under an approved ~~((restoration or corrective work))~~ plan that includes a  
5483 time schedule for compliance. If restoration or corrective work has not been completed  
5484 within the time established ~~((by the department))~~ in the plan, the director may order  
5485 restoration or corrective work using ~~((funds from))~~ the department's contingency  
5486 account~~((s))~~ funds and seek restitution from the property owner through liens or other  
5487 available legal methods.

5488 C. This section does not limit corrective action requirements or other remedies or  
5489 penalties ~~((applicable to))~~ under K.C.C. Title 23.

5490 SECTION 189. Ordinance 2097, Section 1, as amended, and K.C.C. 17.04.010  
5491 are each hereby amended to read as follows:

5492 The International Fire Code ~~((2018 Edition))~~ 2021 edition, together with  
5493 Appendices B (Fire-flow requirements for buildings) ~~((and))~~, C (Fire hydrants location  
5494 and distribution), and D (Fire apparatus access roads) as published by the International  
5495 Code Council, as amended in chapter 51-54A WAC, effective ~~((February 1, 2021))~~  
5496 March 15, 2024, and referred to in this title as the International Fire Code ("IFC"),  
5497 together with amendments, additions, and deletions adopted in this chapter by reference,  
5498 and together with King County modifications are adopted as the King County Fire Code,  
5499 and referred to in this chapter as "this code." Administrative rules may be adopted in  
5500 accordance with K.C.C. chapter 2.98 to further clarify and implement these code  
5501 requirements. The King County modifications shall be codified in this chapter.

5502 SECTION 190. Ordinance 12560, Section 148, as amended, and K.C.C.  
5503 17.04.200 are each hereby amended to read as follows:

5504 Section 104.1 of the International Fire Code is not adopted and the following is  
5505 substituted:

5506 **General (IFC 104.1).** The fire marshal is authorized to render interpretations of  
5507 this code and make and enforce such rules and regulations, in accordance with K.C.C.  
5508 chapters 2.98 and 2.100, for the prevention and control of fires and fire hazards as  
5509 necessary to execute the application and the intent of this code, including but not limited  
5510 to:

5511           ((+)) A. Procedures to ensure that building permits for structures shall conform to  
5512 the requirements of this code.

5513           ((2)) B. Procedures to ensure that applicable standards of this code shall be  
5514 reviewed as part of the subdivision, short subdivision, rezone, conditional use, special  
5515 use, site development permit, binding site plan, and building permit processes.

5516           ((3)) C. Procedures to ~~((assure))~~ ensure that the standard known as ~~((NFPA))~~  
5517 National Fire Protection Association 13R shall be applied as a minimum standard to all R  
5518 occupancies.

5519           ((4)) D. Procedures to allow for relaxation of the hydrant spacing requirements  
5520 by as much as 50 percent, except when such allowances would unreasonably reduce fire  
5521 protection to the areas or structures served.

5522           SECTION 191. Ordinance 2910, Section 6, as amended, and K.C.C. 17.04.210  
5523 are each hereby amended to read as follows:

5524           Section 104.1 of the International Fire Code is supplemented with the following:

5525           **Enforcement (IFC 104.1.1).**

5526           ((+)) A. The fire marshal is authorized to enforce the provisions of this title, the  
5527 ordinances codified in it, and any adopted rules and regulations in accordance with the  
5528 enforcement and penalty provisions of K.C.C. Title 23.

5529           ((2)) B. The fire marshal, any officer of the department of public safety, and the  
5530 chief of the fire district or designee, is authorized to take such lawful action, including  
5531 ~~((the writing and issuance of))~~ issuing citations for civil infractions, as may be required to  
5532 enforce the provisions of the fire lane ordinance codified in this title.

5533            SECTION 192. Ordinance 12560, Section 153, as amended, and K.C.C.

5534    17.04.220 are each hereby amended to read as follows:

5535            Section 104.1 of the International Fire ~~((e))~~Code is supplemented with the  
5536    following:

5537            **Additional conditions (IFC 104.1.2).** The fire marshal or designee retains the  
5538    authority to impose additional conditions, including but not limited to increased setbacks,  
5539    use of fire-retardant materials, installation of fire sprinkler systems, automatic fire  
5540    suppression systems, automatic fire detection systems, or standpipes where determined  
5541    necessary to mitigate identified fire protection impacts.

5542            SECTION 193. Ordinance 12560, Section 149, as amended, and K.C.C.

5543    17.04.280 are each hereby amended to read as follows:

5544            Section 104 of the International Fire Code is supplemented with the following:

5545            **Notice to fire districts (IFC ~~((104.12))~~ 104.13).**

5546            A. Before submitting an application for a commercial building permit, site  
5547    development permit, binding site plan, a preliminary subdivision or short subdivision  
5548    approval, final plat or short plat approval, zoning reclassification, conditional use permit,  
5549    and special use permit to the department:

5550            1. ~~((†))~~The applicant shall submit a copy of the application to the fire district  
5551    providing fire protection services to the proposed development;

5552            2. For subdivisions and short subdivisions applied for and~~((†or))~~ recorded  
5553    before February 1, 1989, the first building permit applicant shall ~~((be submitted once))~~  
5554    submit a copy of the application to the ~~((applicable))~~ fire district providing fire protection



5555 services to the development ~~((for review at the time of the first building permit by the~~  
5556 ~~applicant for that building permit))~~;

5557 3. ~~((†))~~It shall be the responsibility of the fire district to issue a receipt to the  
5558 applicant the same day it receives a copy of a permit application. The receipt shall  
5559 constitute proof ~~((to the director))~~ ~~((the))~~ notification that the district has received a  
5560 request to complete a fire district receipt;

5561 4. ~~((†))~~The applicant shall include the fire district receipt with the permit  
5562 application to the department;

5563 5. ~~((†))~~It shall be the responsibility of the fire district to ~~((notify))~~ provide any  
5564 comments to the fire marshal ~~((of any comments))~~ within seven days of ~~((the receipt of~~  
5565 ~~an applied for))~~ receiving a copy of the permit application.

5566 NEW SECTION. SECTION 194. There is hereby added to K.C.C. chapter 17.04  
5567 a new section to read as follows:

5568 Section 105.3.1 of the International Fire Code is not adopted and the following is  
5569 substituted:

5570 **Expiration (IFC 105.3.1).** Expiration of permits under Title 17 shall be in  
5571 accordance with Section K.C.C. 16.02.290 Permits-Expiration.

5572 SECTION 195. Ordinance 12560, Section 156, as amended, and K.C.C.  
5573 17.04.290 are each hereby amended to read as follows:

5574 Section 105.3.6 of the International Fire Code is supplemented with the  
5575 following:

5576 **Penalties (IFC 105.3.6.1).** When installation of a fire protection system, ~~((which~~  
5577 ~~requires approval of))~~ requiring the ~~((F))~~ ~~((M))~~ fire marshal's approval, ~~((is started or~~

~~proceeded with prior to~~) occurs before obtaining ~~((said))~~ approval, the ~~((ordinary))~~ fees specified in K.C.C. Title 27 shall be doubled. The payment of such double fee shall not relieve any persons from fully complying with ~~((the))~~ this code's requirements ~~((of this code))~~ in the execution of the work ~~((n))~~ or from any other penalties prescribed herein.

NEW SECTION. SECTION 196. There is hereby added to K.C.C. chapter 17.04 a new section to read as follows:

Section 105.5.38 of the International Fire Code is not adopted and the following is substituted:

**Outdoor assembly event (IFC 105.5.38).** An operational permit is required to conduct an outdoor assembly event where planned attendance exceeds 50 persons.

SECTION 197. Ordinance 17837, Section 75, as amended, and K.C.C. 17.04.295 are each hereby amended to read as follows:

Section ~~((105.7.21))~~ 105.6.20 of the International Fire Code is not adopted and the following is substituted:

**Solar photovoltaic power systems (IFC ~~((105.7.21))~~ 105.6.20).** A construction permit ~~((shall be))~~ is required to install or modify solar photovoltaic power systems.

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

**EXCEPTION:** Roof-mounted photovoltaic solar panels on one- and two-family dwellings that have a total dead load not exceeding ~~((four))~~ 4 pounds per square foot (20 kilograms per square meter) and are mounted no more than ~~((eighteen))~~ 18 inches (457 millimeters) above the roof or highest roof point on which they are mounted.

5600           NEW SECTION. SECTION 198. There is hereby added to K.C.C. chapter 17.04  
5601 a new section to read as follows:

5602           Section 105.6.21 of the International Fire Code is not adopted and the following is  
5603 substituted:

5604           **Special event structure and assembly area (IFC 105.6.21).** A single special  
5605 event permit is required to erect and take down a temporary special event structure. An  
5606 application for a special event structure or special event shall be made at least 30 days  
5607 before the event: Applications submitted less than 30 business days before the event may  
5608 be accepted if the department finds that there is adequate time to properly process the  
5609 request. All applications may require further review by the following:

- 5610           A. King County permitting division;  
5611           B. King County roads division;  
5612           C. King County sheriff's office;  
5613           D. public health - Seattle & King County; or  
5614           E. Washington state Department of Labor and Industries.

5615           SECTION 199. Ordinance 14915, Section 25, as amended, and K.C.C. 17.04.310  
5616 are each hereby amended to read as follows:

5617           Section (~~(s-109)~~) 111 of the International Fire Code is not adopted.

5618           SECTION 200. Ordinance 14915, Section 26, and K.C.C. 17.04.320 are each  
5619 hereby amended to read as follows:

5620           Sections (~~((112.1 and 112.2))~~) 113.1 and 113.2 of the International Fire Code are  
5621 not adopted and the following is substituted:

5622           ~~((Order and Issuance (IFC 112.1 and 112.2)))~~ **Authority (IFC 113.1).**

5623   ~~((Whenever))~~ Where any work is being done contrary to the provisions of this code, the  
5624   fire marshal may order the work stopped in accordance with K.C.C. Title 23 ~~((by notice~~  
5625   ~~in writing served on any persons engaged in the doing or causing such work to be done,~~  
5626   ~~or by posting such notice in a conspicuous place on the premises where the violation is~~  
5627   ~~occurring, and any such persons shall immediately stop such work until authorized by the~~  
5628   ~~fire marshal to proceed with the work))~~.

5629           ~~((Whenever))~~ Where any work is being done contrary to the provisions of this  
5630   code, the fire marshal may order the violations corrected without ordering all work  
5631   stopped by issuing a correction notice which identifies the violation. The correction  
5632   notice may require reinspection before ~~((further construction))~~ work can resume or at the  
5633   time of the next required inspection. The correction notice shall be served or posted in  
5634   the same manner as a stop work order.

5635           These remedies are in addition to those authorized elsewhere in the code.

5636           SECTION 201. Ordinance 19485, Section 166, as amended, and K.C.C.  
5637   17.04.330 are each hereby amended to read as follows:

5638           **Stop Work Order – Failure to Comply.** Section ~~((112.4))~~ 113.4 of the  
5639   International Fire Code is not adopted ~~((:))~~ and the following is substituted:

5640           **Failure to comply (IFC 113.4).** The enforcement of a stop work order violation  
5641   shall be in accordance with K.C.C. Title 23.

5642           SECTION 202. Ordinance 19485, Section 178, and K.C.C. 17.04.341 are each  
5643   hereby amended to read as follows:

5644           Section 202 of the International Fire Code is supplemented with the following:

5645           **Definitions (IFC 202.1).** Definitions. The definitions in this section apply  
5646 throughout this title unless the context clearly requires otherwise.

5647           A. Applicant: a property owner or a public agency or public or private utility  
5648 which owns a right-of-way or associated easement or has been adjudicated the right to  
5649 such an easement pursuant to RCW 8.12.090, or any person or entity designated or  
5650 named in writing by the property or easement owner to be the applicant, in an application  
5651 for a permit.

5652           B. ~~((Critical fire service areas: Areas that provide vital services for the~~  
5653 ~~coordination or implementation of fire suppression services, such as fire command~~  
5654 ~~centers, fire pump rooms, interior exit stairways, exit passageways, elevator lobbies,~~  
5655 ~~standpipe cabinets and sprinkler sectional valve locations, and other areas required by the~~  
5656 ~~fire marshal.~~

5657           ~~€))~~ Automatic ~~((F))~~ fire detection system: a heat and/or smoke detection system  
5658 monitored by a central and/or remote station conforming to the current edition of the  
5659 International Fire Code as adopted by the Washington State Building Code Council  
5660 ~~((and/))~~ or the fire marshal or designee.

5661           ~~((D:))~~ C. Fire marshal: ~~((F))~~ the King County fire marshal as designated in  
5662 K.C.C. 2.16.055, or designee.

5663           ~~((E))~~ D. Life safety/rescue access: an unobstructed access to all floor levels and  
5664 each roof level of a building on not less than ~~((twenty))~~ 20 percent of the building  
5665 perimeter by utilizing a ~~((thirty-five))~~ 35 foot (10,668 millimeter) ladder. An alternate  
5666 method would be at least one stairway enclosure with exit doorways from each floor level

5667 and with a door opening onto each roof level which conforms to the requirements of the  
5668 International Building Code.

5669 ~~((F.))~~ E. NFPA: ~~((F.))~~the National Fire Protection Association.

5670 ~~((G.))~~ F. Water main: piping used to deliver water to any fire hydrants or to one  
5671 or more individual service connections.

5672 NEW SECTION. SECTION 203. There is hereby added to K.C.C. chapter 17.04  
5673 a new section to read as follows:

5674 Section 322.4 of the International Fire Code is supplemented with the following:

5675 **Lithium Batteries – Signage (IFC 322.4.4).** The following signs or equivalent  
5676 markings shall be durably posted at the locations indicated for each lithium-ion and  
5677 lithium metal battery installation subject to IFC 322.2:

5678 A. Warning signs. The following warning signs shall be posted on the exterior of  
5679 battery system enclosures:

5680 1. "Danger: High Voltage," or equivalent complying with Electrical Code  
5681 requirements; and

5682 2. Hazard identification sign complying with NFPA Standard 704.

5683 B. Identification, emergency contact, and emergency shut-down signs. The  
5684 following signs shall be posted at the fire department connection, if any, utility  
5685 connection or other approved, conspicuous outdoor location on the premises that is  
5686 accessible to emergency response personnel and that is a reasonable distance, but not less  
5687 than 10 feet (3,048 millimeters), from the stationary storage battery system installation.  
5688 If the location of the signage would not be readily apparent to emergency response  
5689 personnel, a sign with lettering not less than 3 inches (76 millimeters) high shall be

5690 posted on or adjacent to the battery installation indicating the location of the following  
5691 signage:

- 5692 1. Permit. The permit for the installation, laminated, or weatherproofed.
- 5693 2. Equipment specifications. The manufacturer and model number of the  
5694 battery system and electrical rating, including voltage and current.
- 5695 3. Monitoring facility contact information. The telephone number of the battery  
5696 management system remote monitoring facility, if any.
- 5697 4. Installation identification. The number or other unique identifier used by the  
5698 battery management system remote monitoring facility, if any, to identify the installation.
- 5699 5. Emergency shutdown procedures. Emergency shutdown procedures for the  
5700 battery energy storage system posted at the battery system emergency shut down control  
5701 and at any attended on-site location. Emergency shutdown instructions should indicate  
5702 "GRID SUPPORT SYSTEM" in letters not less than 2 inches (51 millimeters) high if  
5703 immediate shut down of the battery system could disrupt public utility operations.

5704 SECTION 204. Ordinance 19485, Section 169, and K.C.C. 17.04.375 are each  
5705 hereby amended to read as follows:

5706 Section 503.2 of the International Fire Code is not adopted and the following is  
5707 substituted:

5708 **Specifications (IFC 503.2).** Fire apparatus access roads shall be installed and  
5709 arranged in accordance with IFC 503.2.1 ((and)) IFC ((503.2.2)) through 503.2.7, and  
5710 K.C.C. chapter 17.09.

5711 SECTION 205. Ordinance 19485, Section 170, and K.C.C. 17.04.377 are each  
5712 hereby amended to read as follows:

5713           Section 503.2 of the International Fire Code is not adopted and the following is  
5714 substituted:

5715           **Dimensions (IFC 503.2.1).** An approved fire apparatus access road shall be a  
5716 minimum of 20 feet (6,096 millimeters) wide and provide a minimum unobstructed  
5717 height of ~~((13 feet 6 inches))~~ 13.5 feet (4,115 millimeters).

5718           SECTION 206. Ordinance 12560, Section 165, and K.C.C. 17.04.380 are each  
5719 hereby amended to read as follows:

5720           Section 503.2.3 of the International Fire Code is not adopted and the following is  
5721 substituted:

5722           **Surface (IFC 503.2.3).** Fire apparatus access roads shall be designed and  
5723 maintained to be accessible with an asphalt, concrete, or other approved driving surface  
5724 suitable for all-weather driving and capable of supporting the imposed load of fire  
5725 apparatus weighing at least 75,000 pounds (34,019 kilograms), or other weight as  
5726 required by the fire marshal, and shall comply with K.C.C. chapter 14.42 and the  
5727 provisions of this chapter.

5728           SECTION 207. Ordinance 12560, Section 166, as amended, and K.C.C.  
5729 17.04.390 are each hereby amended to read as follows:

5730           Section 503.2.4 of the International Fire Code is not adopted and the following is  
5731 substituted:

5732           **Turning radius (IFC 503.2.4).** The turning radius of a fire apparatus access road  
5733 shall have a 20 foot (6,096 millimeters) inside and 40 foot (12,192 millimeters) outside  
5734 turning radius ~~((, or shall be))~~ or as otherwise approved by the ~~((F))~~ fire ~~((M))~~ marshal.



5735            SECTION 208. Ordinance 14915, Section 45, as amended, and K.C.C. 17.04.400  
5736 are each hereby amended to read as follows:

5737            Section 503.2.5 of the International Fire Code is not adopted and the following is  
5738 substituted:

5739            **Dead ends (IFC 503.2.5).** Dead-end fire apparatus access roads in excess of 150  
5740 feet ~~((45.72 m))~~ (45,720 millimeters) in length shall be provided with an approved cul-  
5741 de-sac having a 40 foot (12,192 millimeters) outside turning radius, or a "hammerhead-  
5742 like" turnaround designed as described in King County Administrative Rule for Chapter  
5743 17-04 or other designs approved by the ~~((F))~~fire ~~((M))~~marshal.

5744            SECTION 209. Ordinance 7980, Section 1, as amended, and K.C.C. 17.04.420  
5745 are each hereby amended to read as follows:

5746            Sections 503.3 and 503.4 of the International Fire Code ~~((is))~~ are not adopted and  
5747 the following is substituted:

5748            **Marking, establishment, and obstruction of fire ~~((lanes))~~ apparatus access**  
5749 **roads (IFC 503.3 and 503.4).**

5750            ~~((1.))~~ A. Establishment of fire ~~((lanes))~~ apparatus access roads. Fire ~~((lanes))~~  
5751 apparatus access roads in conformance with this code shall be established by the fire  
5752 marshal, and shall be referred to as "designated fire lanes" in this section.

5753            ~~((2.))~~ B. Definition of fire lanes. ~~((The area within any public right-of-way,~~  
5754 ~~easement or on private property designated for the purpose of allowing fire trucks and~~  
5755 ~~other firefighting or emergency equipment to use, travel upon and park))~~ A road or other  
5756 passageway developed to allow the passage of fire apparatus. A fire lane is not  
5757 necessarily intended for vehicular traffic other than fire apparatus.

5758            ~~((3-))~~ C. Marking of fire lanes. All designated fire lanes shall be clearly marked  
5759 as follows:

5760            ~~((3-))~~1. Vertical curbs shall be painted red on the top and side, extending the  
5761 length of the designated fire lane. The pavement adjacent to the painted curbs shall be  
5762 marked with minimum 18 inch (457 millimeters) in height block lettering with a  
5763 minimum 3~~((-))~~ inch (76 millimeters) brush stroke reading: "NO PARKING - FIRE  
5764 LANE." Lettering shall be white and spaced at 50 foot (15,240 millimeters) intervals or  
5765 portion thereof (~~((intervals))~~);

5766            ~~((3-))~~2. Rolled curbs or surface without curbs shall have a red 6~~((-))~~ inch-wide  
5767 (152 millimeters) stripe painted extending the length of the designated fire lane. The  
5768 surface adjacent to the stripe shall be marked with minimum 18 inch (457 millimeters) in  
5769 height block lettering with a minimum 3~~((-))~~ inch (76 millimeters) brush stroke reading:  
5770 "NO PARKING - FIRE LANE." Lettering shall be in white and spaced at 50 ~~((ft))~~ feet  
5771 (15,240 millimeters) intervals or portion thereof (~~((intervals))~~); or

5772            ~~((3-))~~3. Fire lane signs shall be installed as follows:

5773            a. Signs shall be a type "R8-31" reflective sign or of an equivalent reflectivity.

5774            b. Red letters on white background with the wording: "NO PARKING - FIRE  
5775 LANE".

5776            c. Signs shall be no less than 12 inches (305 millimeters) by 18 inches (457  
5777 millimeters) in size and shall be placed at a maximum center-to-center spacing of 150  
5778 feet (45.7 meters) on both sides of the fire lane, or an additional sign may be ~~((put))~~  
5779 placed beneath the fire lane sign lettered as: "BOTH SIDES".

5780 d. Signs shall be posted at a minimum height of 7 feet (2,134 millimeters)  
5781 measured from the road or sidewalk to the bottom of the sign, unless required otherwise  
5782 by this section.

5783 e. Signs may be placed on a fence or building when approved by the fire  
5784 marshal. When signs are wall or fence mounted, they shall be posted at a minimum  
5785 height of 5 feet (1,524 millimeters) measured from the road or sidewalk to the top of the  
5786 sign.

5787 f. When posts are required, they shall meet current road standards in K.C.C.  
5788 chapter 14.42. Signs shall be placed so they face the direction of the vehicular travel.

5789 g. Sign numbers and spacing may be modified by the King County fire  
5790 marshal.

5791 ~~((4.))~~ D. Obstruction of Fire Lanes Prohibited. Unless required otherwise by this  
5792 chapter, the obstruction of a designated fire lane by a parked vehicle or any other object  
5793 is prohibited, shall constitute a traffic hazard as defined in state law and an immediate  
5794 hazard to life and property.

5795 ~~((5.))~~ E. Alternate materials and methods. The fire marshal may modify any of  
5796 the provisions of this section where practical difficulties exist. ~~((The particulars of a))~~  
5797 Any modifications ~~((that are))~~ approved by the fire marshal shall be entered into the final  
5798 records for the project permit.

5799 ~~((6.))~~ F. Existing fire lane signs and markings.

5800 ~~((6.1.))~~ 1. Signs that are a minimum 9 inches by 16 inches (229 millimeters by  
5801 406 millimeters) may be allowed to remain until there is a need for replacement and at  
5802 that time a 12 inch (305 millimeters) by 18 inch (457 millimeters) sign shall be installed.

5803            ~~((6.2.))~~ 2. Markings may be allowed to remain until there is a need for  
5804 repainting. When markings are repainted, they shall comply with subsection ~~((3.))~~ C. of  
5805 this section.

5806            ~~((7.))~~ G. Maintenance. Fire lane markings shall be maintained at the property  
5807 owner's expense ~~((of the property owner))~~ as often as needed to clearly identify the  
5808 ~~((designated))~~ area as ~~((being))~~ a designated fire lane.

5809            ~~((8.))~~ H. Towing notification. At each entrance to property ~~((where))~~ with  
5810 designated fire lanes ~~((have been designated))~~, signs shall be posted in a clearly  
5811 conspicuous location and shall clearly state that vehicles parked in fire lanes may be  
5812 impounded, and the name, telephone number, and address of the towing firm where the  
5813 vehicle may be collected.

5814            ~~((9.))~~ I. Property owner responsible. The owner, manager, or person in charge of  
5815 any property upon which designated fire lanes have been established shall prevent the  
5816 parking of vehicles or placement of other obstructions in such fire lanes.

5817            ~~((10.))~~ J. Violation - Civil infraction. Any person who fails to mark or maintain  
5818 the marking of a designated fire lane as prescribed in this chapter, or who parks a vehicle  
5819 in, allows the parking of a vehicle in, obstructs, or allows the obstruction of a designated  
5820 fire lane commits a civil infraction to which the provisions of chapter 7.80 RCW shall  
5821 apply. The penalty for failing to mark or maintain the marking of a designated fire lane  
5822 shall be one hundred and fifty dollars. The penalty for parking a vehicle in, allowing the  
5823 parking of a vehicle in, obstructing, or allowing the obstruction of a designated fire lane  
5824 shall be fifty dollars.

5825           ~~((4-))~~ K. Violation - Civil penalty. In addition to, or as an alternative to, the  
5826 provisions of subsection ~~((4-))~~ J. of this section, any person who fails to meet the  
5827 provisions of the fire lane requirements codified in this title ~~((shall))~~ may be subject to  
5828 civil penalties ~~((in conformance with))~~ under K.C.C. Title 23.

5829           ~~((4-))~~ L. Impoundment. Any vehicle or object obstructing a designated fire lane  
5830 is hereby declared a traffic hazard and may be abated without prior notification to its  
5831 owner by impoundment in accordance with the applicable state law.

5832           SECTION 210. Ordinance 19485, Section 173, and K.C.C. 17.04.425 are each  
5833 hereby amended to read as follows:

5834           Section 503.6 of the International Fire Code is not adopted and the following is  
5835 substituted.

5836           **Security gates, bollards, or other obstructions (IFC 503.6).**

5837           ~~((4-))~~ A. The installation of security gates, bollards, or other obstructions across a  
5838 fire apparatus access road shall not be allowed unless approved by the fire marshal. The  
5839 use of directional-limiting devices, such as tire spikes, is prohibited. Where security  
5840 gates, bollards, or other obstructions are installed, they shall have an approved means of  
5841 emergency operation. The security gates, bollards, or other obstructions and the  
5842 emergency operation shall be maintained so that they are operational at all times.

5843           ~~((2-))~~ B. Electric gate operators, where provided, shall be listed in accordance  
5844 with Underwriter Laboratories (UL) 325. Gates intended for automatic operation shall be  
5845 designed, constructed, and installed to comply with the requirements of American  
5846 Society for Testing and Materials (ASTM) F 2200 and shall be equipped with equipment

5847 approved by the fire marshal that allows for operation of the gate by fire and police  
5848 personnel from their vehicle.

5849 ~~((3-))~~ C. Gates shall be at a minimum as wide as the required fire apparatus  
5850 access road width. Gates, bollards, or other obstructions on commercial properties shall  
5851 be set back at least 30 feet (9,144 millimeters) from roadway edge of pavement. Where a  
5852 fence is provided on each side of a gate for a commercial property, an access door shall  
5853 be provided at an approved location with a secure key box that is approved by the fire  
5854 marshal.

5855 **EXCEPTION:** Automated gates with equipment approved by the fire marshal  
5856 that allow for operation of the gate by fire and police personnel from their vehicle are not  
5857 required to be set back 30 feet (9,144 millimeters) from the roadway edge of pavement if  
5858 the roadway is not a principal or collector arterial or a road with lane markers.

5859 SECTION 211. Ordinance 19485, Section 175, as amended, and K.C.C.  
5860 17.04.447 are each hereby amended to read as follows:

5861 Section 504 of the International Fire Code is supplemented with the following:

5862 **Buildings with enclosed interior courtyards (IFC 504.5).** New buildings with  
5863 enclosed interior courtyards shall have a straight, direct access corridor or stairway or  
5864 both from the exterior to the courtyard at a location acceptable to the fire marshal.  
5865 Stairways shall comply with IFC 1011 and corridors shall comply with IFC 1020. The  
5866 access shall have a minimum width of 4 feet (1,219 millimeters), or an alternative width  
5867 as ~~((directed))~~ approved by the fire marshal~~((;))~~ and be large enough to carry a 35-foot-  
5868 long (10,668-millimeter-long) sectional ladder, with a minimum folded length of 20 feet

5869 (6,096 millimeters), directly from the exterior to the courtyard without obstructions. The  
5870 access door shall be marked at the road as "Direct access to courtyard."

5871 SECTION 212. Ordinance 19485, Section 178, and K.C.C. 17.04.462 are each  
5872 hereby amended to read as follows:

5873 Section 510.1 of the International Fire Code is not adopted and the following is  
5874 substituted:

5875 **Emergency responder ((radio)) communication coverage in new buildings**  
5876 **(IFC 510.1).** ~~((New buildings meeting the conditions of this section shall have an~~  
5877 ~~approved radio coverage system for emergency responders installed in accordance with~~  
5878 ~~IFC 510.4 through 510.5.5 and NFPA 1221. Radio coverage is based upon the existing~~  
5879 ~~coverage levels of the public safety communication systems of the jurisdiction at the~~  
5880 ~~exterior of the building. This section shall not require improvements of the existing~~  
5881 ~~public safety communication system.))~~ Approved in-building, emergency responder  
5882 communications enhancement system (ERCES) for emergency responders shall be  
5883 provided in new buildings, as defined by this section. In-building ERCES within the  
5884 building shall be based on the existing coverage levels of the public safety  
5885 communication systems utilized by the jurisdiction, measured at the exterior of the  
5886 building. Where required, the two-way emergency responder communications coverage  
5887 system, shall be of a type determined by the fire code official and the frequency license  
5888 holder(s). This section shall not require improvement of the existing public safety  
5889 communication systems. An approved ((radio coverage)) communication enhancement  
5890 system shall be provided within new buildings meeting any of the following conditions:  
5891 ((+) A. High-rise buildings;

5892            ~~((2. The))~~ B. Buildings with total building area ~~((is))~~ of 50,000 square feet  
5893 (4,645.2 square meters) or more;  
5894            ~~((3. The))~~ C. Buildings with total basement area ~~((is))~~ of 10,000 square feet (929  
5895 square meters) or more;  
5896            ~~((4. There are))~~ D. Buildings with floors used for human occupancy more than  
5897 30 feet (9,144 millimeters) below the finished floor of the lowest level of exit discharge;  
5898 or  
5899            ~~((5.))~~ E. Buildings or structures where the fire marshal determines, in  
5900 consultation with the fire chief, that in-building radio coverage is critical because of its  
5901 unique design, location, use, or occupancy.

5902            **EXCEPTIONS:**

- 5903            1. Buildings and areas of buildings that have minimum radio coverage signal  
5904 strength levels of the public safety radio operator within the building in accordance with  
5905 IFC 510.4.1 without the use of a radio coverage system.
- 5906            2. In facilities where emergency responder radio coverage is required and such  
5907 systems, components or equipment required could have a negative impact on the normal  
5908 operations of that facility, the fire marshal shall have the authority to accept an  
5909 automatically activated emergency responder radio coverage system.
- 5910            3. One- and two-family dwellings and townhouses.
- 5911            4. Where ~~((it is determined by))~~ the fire marshal determines that the radio  
5912 coverage system is not needed.



5913           5. Where approved by the building official and the fire marshal, a wired  
5914 communication system in accordance with Section 907.2.13.2 IFC shall be permitted to  
5915 be installed or maintained instead of an approved communication coverage system.

5916           SECTION 213. Ordinance 19485, Section 180, and K.C.C. 17.04.467 are each  
5917 hereby amended to read as follows:

5918           Section 510.4.1.2 of the International Fire Code is not adopted and the following  
5919 is substituted:

5920           **Minimum signal strength out of the building (IFC 510.4.1.2).** The minimum  
5921 outbound signal strength shall be sufficient to provide usable voice communications  
5922 throughout the coverage area as specified by the fire marshal. The outbound signal level  
5923 shall be sufficient to provide not less than a DAQ of 3((-4)) or an equivalent SINR  
5924 applicable to the technology for either analog or digital signals. A minimum signal  
5925 strength of -100 dBm shall be received by the public safety radio operator when  
5926 transmitted from within the building.

5927           SECTION 214. Ordinance 19485, Section 184, and K.C.C. 17.04.476 are each  
5928 hereby amended to read as follows:

5929           Section ((~~510.5.1~~)) 510.5.2 of the International Fire Code is not adopted and the  
5930 following is substituted:

5931           **Approval prior to installation (IFC ((~~510.5.1~~)) 510.5.2).** Amplification systems  
5932 capable of operating on frequencies licensed to any public safety agency by the FCC or  
5933 other radio licensing authority shall not be activated to rebroadcast without prior  
5934 coordination and approval of the fire marshal and public safety radio system operator.

5935            SECTION 215. Ordinance 19485, Section 192, and K.C.C. 17.04.489 are each  
5936 hereby amended to read as follows:

5937            Section 901.1 of the International Fire Code is not adopted and the following is  
5938 substituted:

5939            **Scope (IFC 901.1).** This chapter specifies where fire protection and life safety  
5940 systems are required and applies to the design, installation, inspection, operation, testing,  
5941 and maintenance of fire protection systems.

5942            ~~((1. ADDITIONAL REQUIREMENTS.))~~ A. Additional requirements:

5943            ~~((1.))~~1. The fire marshal retains the authority under the IFC to impose additional  
5944 conditions, including but not limited to increased setbacks, use of fire-retardant materials,  
5945 or standpipes where determined necessary to mitigate identified fire protection impacts.

5946            ~~((1.))~~2. This chapter applies to all buildings or structures undergoing a  
5947 substantial improvement as defined in K.C.C. chapter 21A.06.

5948            ~~((1.))~~3. Any additions to an existing building or structure shall be considered  
5949 new construction and subject the entire structure to the provisions of this chapter.

5950            ~~((1.))~~4. All condominiums shall have the following wording in the recorded  
5951 Declaration of Covenants and a copy of the document shall be provided to the fire  
5952 marshal:

5953            ~~((1.4.1.))~~ a. If any unit is equipped with a sprinkler system, nothing shall be  
5954 hung from the sprinklers comprising a part of the system nor shall any such sprinklers be  
5955 painted, covered, or otherwise changed, tampered with, or altered ~~((:))~~ ; and

5956            ~~((1.4.2.))~~ b. Before any alteration, amendment, modification, or change  
5957 ~~((thereof))~~ to any part of the sprinkler system, the owners or their agents shall submit

5958 such alteration, amendment, modification, or change to the fire marshal for approval and  
5959 agree to comply with all applicable sprinkler requirements.

5960 SECTION 216. Ordinance 12560, Section 171, and K.C.C. 17.04.520 are each  
5961 hereby amended to read as follows:

5962 Section 903.1 of the International Fire Code is not adopted and the following is  
5963 substituted:

5964 **General (IFC 903.1).**

5965 ~~((1.))~~ A. An automatic fire ~~((-extinguishing))~~ sprinkler system shall be installed  
5966 in the occupancies and locations in accordance with IFC ~~((903.2))~~ 904.

5967 For provisions on special hazards and hazardous materials, see IFC 901.4.4.

5968 ~~((2.))~~ B. The provisions of this section shall apply to all buildings undergoing a  
5969 substantial improvement as defined in K.C.C. chapter 21A.06.

5970 ~~((3.))~~ C. Any additions to an existing structure shall be considered new  
5971 construction and subject the entire structure to the provisions of this section.

5972 **EXCEPTION:** A one-time exemption for buildings regulated by the  
5973 International Residential Code (IRC) shall be allowed for a single addition not to exceed  
5974 500 square feet (46.5 square meters), unless sprinklers or other fire protection systems are  
5975 required by other statutes.

5976 ~~((4. All condominiums shall have the following wording in the recorded  
5977 Declaration of Covenants and a copy of the document shall be provided to the fire  
5978 marshal:~~

5979           4.1. ~~If any unit is equipped with a sprinkler system, nothing shall be hung from~~  
5980 ~~the sprinklers comprising a part of the system nor shall any such sprinklers be painted,~~  
5981 ~~covered or otherwise changed, tampered with or altered.~~

5982           4.2. ~~Before any alteration, amendment, modification or change thereof, the~~  
5983 ~~owners or their agents shall submit such alteration, amendment, modification or change~~  
5984 ~~to the fire marshal for approval and agrees to comply with all applicable sprinkler~~  
5985 ~~requirements.))~~

5986           SECTION 217. Ordinance 12560, Section 174, as amended, and K.C.C.  
5987 17.04.560 are each hereby amended to read as follows:

5988           Section 903.2.11 of the International Fire Code is supplemented with the  
5989 following:

5990           **Habitable space of structures built under the IRC (IFC 903.2.11.8).** An  
5991 automatic sprinkler system shall be installed in the habitable space of structures built  
5992 under the ~~((International Residential Code (I) IRC (I)))~~ when:

5993           ~~((1.))~~ A. There is no approved fire access as defined in K.C.C. Title 14 and IFC  
5994 503; or

5995           ~~((2.))~~ B. The structure has a total floor area, including basements, that exceed  
5996 10,000 square feet (929 square meters); ~~or((÷))~~

5997           ~~((3.))~~ C. There is not:

5998           ~~((3.))~~1. A minimum fire flow of 1,000 gallons per minute (63.1 liters per  
5999 second) as defined in IFC Appendix B; or

6000            ~~((3-))~~2. A fire hydrant within ~~((400 feet or))~~ 600 feet (182,880 millimeters) of  
6001 the property line for R-3 and U occupancies, and 400 feet (121,920 millimeters) for all  
6002 other occupancies, ((of the property line)) as outlined in IFC 507.5.1.

6003            ~~((EXCEPTIONS: Structures are located on lots that:~~

6004            1. ~~Are sized 35,000 square feet or larger;~~

6005            2. ~~Are outside the Urban Growth Area; and~~

6006            3. ~~Have a residential use as the primary land use.))~~

6007            SECTION 218. Ordinance 19485, Section 196, as amended, and K.C.C.

6008 17.04.563 are each hereby amended to read as follows:

6009            Section 903.2 of the International Fire Code is supplemented with the following:

6010            **Specific buildings areas and hazards – Buildings exceeding 10,000 square feet**

6011 **(929 square meters) (IFC 903.2.13).** An automatic sprinkler system, installed in

6012 accordance with IFC 903.2, 901.4.3, and 901.4.4 shall be provided throughout all

6013 buildings where the total floor area, including basements, exceeds 10,000 square feet

6014 (929 square meters). For the purposes of this section, portions of buildings separated by

6015 one or more fire walls shall not be considered a separate building.

6016            Existing buildings shall comply with this section when an addition is made to the

6017 building and the new total floor area, including basements, exceeds 10,000 square feet

6018 (929 square meters), or an existing building exceeding 10,000 square feet (929 square

6019 meters) is substantially improved as defined in K.C.C. chapter 21A.06.

6020            SECTION 219. Ordinance 19485, Section 7, and K.C.C. 17.04.572 are each

6021 hereby amended to read as follows:

6022           Section 903.3.1 of the International Fire Code is not adopted and the following  
6023 is substituted:

6024           **Installation requirements – standards (IFC 903.3.1).** Sprinkler systems shall  
6025 be designed and installed in accordance with IFC 903.3.1.1, unless otherwise permitted  
6026 by IFC 903.3.1.2, 903.3.1.3, and other chapters of this code, as applicable. In addition,  
6027 sprinkler systems shall be designed with a buffer to account for water system fluctuations  
6028 to include a low reservoir condition. Such buffer shall be ~~((five))~~ 5 pounds per square  
6029 inch (PSI) (34,474 kilopascals) for static pressures less than 50 PSI (344,738 kilopascals)  
6030 and 10 PSI (68,948 kilopascals) for static pressures above 50 PSI (344,738 kilopascals).  
6031 Permit applicants shall independently verify site specific static pressure at the following  
6032 intervals:

- 6033           1. Before initiating sprinkler system;  
6034           2. Before installing sprinkler piping, including the underground supply; and  
6035           3. Before requesting a cover inspection.

6036           SECTION 220. Ordinance 19485, Section 198, as amended, and K.C.C.

6037 17.04.574 are each hereby amended to read as follows:

6038           Section 903.4.3 of the International Fire Code is not adopted and the following is  
6039 substituted:

6040           **Floor control valves (IFC 903.4.3).** Approved supervised indicating control  
6041 valves shall be provided at the point of connection to the riser on each floor. The floor  
6042 control valves shall be located within stair enclosures and within ~~((six))~~ 6 feet (1,829  
6043 millimeters) of floors or landings unless chains or other approved devices are readily  
6044 available.

6045           **EXCEPTION:** In buildings without stair enclosures, the location of the floor  
6046 control valves shall be determined by the fire marshal.

6047           SECTION 221. Ordinance 19485, Section 200, as amended, and K.C.C.  
6048 17.04.582 are each hereby amended to read as follows:

6049           Section 905.3.1 of the International Fire Code is not adopted and the following is  
6050 substituted:

6051           **Height (IFC 905.3.1).** Class I standpipe systems shall be installed throughout  
6052 buildings where any of the following conditions exist:

- 6053           1. Four or more stories are above or below grade plane((:)) ;  
6054           2. The floor level of the highest story is located more than 30 feet (9,144 ((~~mm~~))  
6055 millimeters) above the lowest level of the fire apparatus access((:)) ; or  
6056           3. The floor level of the lowest story is located more than 30 feet (9,144 ((~~mm~~))  
6057 millimeters) below the highest level of fire apparatus access.

6058           **EXCEPTIONS:**

- 6059           1. Class II standpipes may be used for hose connections in open parking garages  
6060 in accordance with IFC 905.5.  
6061           2. In determining the lowest level of fire apparatus access, the following does not  
6062 apply:  
6063           2.1. Recessed loading docks for four vehicles or less.  
6064           2.2. Conditions where topography makes access from the fire apparatus to the  
6065 building impractical or impossible.

6066           SECTION 222. Ordinance 19485, Section 201, as amended, and K.C.C.  
6067 17.04.590 are each hereby amended to read as follows:

6068           Section 912.2 of the International Fire Code is supplemented with the following:

6069           **Distance (IFC 912.2.3).** Fire apparatus connections shall not be located on a  
6070 building unless approved by the fire marshal, and shall be located within 50 feet (15,240  
6071 millimeters) of a required fire hydrant.

6072           SECTION 223. Ordinance 5828, Section 4, as amended, and K.C.C. 17.08.030  
6073 are each hereby amended to read as follows:

6074           A. The following permits and approvals are exempt from the fire flow and fire  
6075 hydrant requirements of this title. These exemptions do not exempt any development  
6076 from compliance with the requirements of state law.

6077           1. ~~((Subdivisions and short subdivisions located outside the Urban Growth Area~~  
6078 ~~and that do not contain a lot less than thirty-five thousand square feet in size.~~

6079           2. ~~Building permits for buildings with one or two dwelling units located outside~~  
6080 ~~the Urban Growth Area, only if the lot is at least thirty-five thousand square feet in size.~~

6081           3.)) Building permits for structures classified as Group U occupancies under the  
6082 ~~((International Building Code))~~ IBC that conform to the definition of agricultural  
6083 buildings in Appendix C of the ~~((International Building Code))~~ IBC only if the structures  
6084 are located outside the Urban Growth Area.

6085           ~~((4. Building permits for structures that are:~~

6086           a. ~~two thousand five hundred square feet in floor area, excluding garage or~~  
6087 ~~less;~~

6088           b. ~~served by a Group B water system; and~~

6089           c. ~~located outside the Urban Growth Area.~~



6090           ~~5. Building permits for structures that are more than two thousand five hundred~~  
6091 ~~square feet in floor area (excluding garages) and comply with subsection A.4.b. and c. of~~  
6092 ~~this section, shall be exempt if the fire marshal determines that the project will not create~~  
6093 ~~a substantial fire hazard.))~~

6094           B. The fire marshal shall have the authority to impose conditions including, but  
6095 not limited to, increased setbacks, use of fire-retardant materials, or sprinkler system  
6096 requirements on permits exempt under subsection A. of this section where necessary to  
6097 mitigate identified fire ~~((hazards))~~ protection impacts.

6098           ~~((C. Building permits and subdivisions and short subdivisions exempt under~~  
6099 ~~subsection A. of this section shall as a condition of approval, record a covenant running~~  
6100 ~~with the land which acknowledges the absence of fire hydrants and by which owners of~~  
6101 ~~the property and their successors are deemed to have agreed to participate in and not~~  
6102 ~~oppose or protest annexation to a public water district or the formation of a utility local~~  
6103 ~~improvement district for installation of water mains and fire hydrants consistent with~~  
6104 ~~applicable county standards. However, this condition shall not apply when the lot is five~~  
6105 ~~acres or larger, or the proposed subdivision, short subdivision or structure is located~~  
6106 ~~outside the Urban Growth Area.))~~

6107           SECTION 224. Ordinance 5828, Section 10, as amended, and K.C.C. 17.08.090  
6108 are each hereby amended to read as follows:

6109           A. The fire marshal shall have the authority to approve deviations from the  
6110 standards established under this chapter when it is shown that:

6111           1. Strict compliance would require unreasonable fire hydrant locations, fire flow  
6112 requirements, or water main sizes; and

6113           2. The variance would not unreasonably affect adequate fire protection to the  
6114 area or structures served.

6115           B. The fire marshal may approve variances, except as provided in subsection C.  
6116 of this section for connections to single family residences served by an existing water  
6117 system that have fire hydrants and fire flow of at least ~~((five hundred))~~ 500 gallons (1,893  
6118 liters) per minute if the variance would not unreasonably affect fire protection and only if  
6119 the purveyor's approved comprehensive plan includes a method for increasing fire flow to  
6120 current standards.

6121           C. The fire marshal shall not approve any variance which would result in a  
6122 violation of chapters 246-290 and 246-293 WAC without prior approval of the  
6123 Washington state Department of Social and Health Services.

6124           SECTION 225. Ordinance 3316, Section 4, as amended, and K.C.C. 17.08.100  
6125 are each hereby amended to read as follows:

6126           A. Water authorities shall not be required to exercise police or regulatory powers  
6127 ~~((toward the))~~ for enforcement of this chapter. The only role of water authorities shall be  
6128 to provide information, such as:

6129           1. The county may request the water authority ~~((may be requested by the~~  
6130 ~~county))~~ to indicate in writing its capability to provide water service, consistent with the  
6131 standards contained in this chapter, to any building permit, subdivision, or short  
6132 subdivision applicant, or to the county; and

6133           2. The fire marshal may require the water authority ~~((may be required by the fire~~  
6134 ~~marshal))~~ to notify the fire department in writing when a water system installed pursuant  
6135 to this chapter is available for use.

6136 B. King County is solely responsible for ~~((E))~~ enforcement ~~((responsibility, for))~~  
6137 and determining whether ~~((or not))~~ to approve a building permit, subdivision, or short  
6138 subdivision application, based on information provided by the water authority ~~((, shall~~  
6139 ~~belong solely to King County))~~.

6140 SECTION 226. Ordinance 14915, Section 125, as amended, and K.C.C.

6141 17.08.140 are each hereby amended to read as follows:

6142 No more than ~~((sixty))~~ 60 feet (18,288 millimeters) of piping that connects the  
6143 customer's plumbing system to the purveyor's water main or water meter shall be located  
6144 in any public road right-of-way unless approved in accordance with K.C.C. chapter  
6145 14.28.

6146 SECTION 227. Sections 228 through 233 of this ordinance should constitute a  
6147 new chapter in K.C.C. Title 17 to follow K.C.C. chapter 17.08.

6148 NEW SECTION. SECTION 228. There is hereby added to the new K.C.C.  
6149 chapter established in section 227 a new section to read as follows:

6150 Adoption of Appendix D of the 2021 IFC is to provide for additional measures  
6151 concerning the minimum design criteria for fire apparatus access roads within  
6152 unincorporated King County. The criteria within Appendix D are approved by the fire  
6153 marshal and sections have been amended to align with current KCC Titles such as,  
6154 section 17.04.390 Fire apparatus access roads – Specifications – Turning radius; section  
6155 17.04.400 Fire apparatus access roads – Specifications – Dead ends; section 17.04.410  
6156 Fire apparatus access roads – Specifications – Grade; section 17.04.420 Fire apparatus  
6157 access roads – Marking establishment, and obstruction of fire apparatus access roads;  
6158 17.04.425 Fire apparatus access roads – Security gates, bollards, or other obstructions.

6159           NEW SECTION. SECTION 229. There is hereby added to the new K.C.C.

6160 chapter established in section 227 a new section to read as follows:

6161           Section D103.2 of the International Fire Code is not adopted and the following is  
6162 substituted:

6163           **Grade (IFC D103.2).** The gradient for a fire apparatus access road((s)) shall not  
6164 exceed 15 percent at any point.

6165           NEW SECTION. SECTION 230. There is hereby added to the new K.C.C.

6166 chapter established in section 227 a new section to read as follows:

6167           Section D103.3 of the International Fire Code is not adopted and the following is  
6168 substituted:

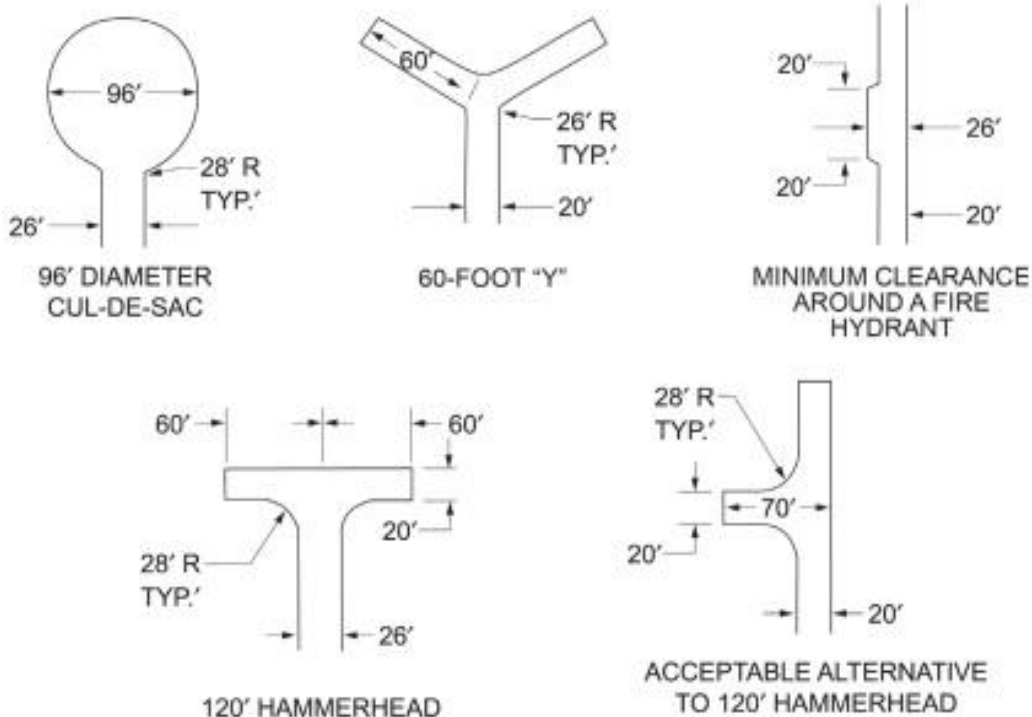
6169           **Turning radius (IFC D103.3).** The turning radius of a fire apparatus access road  
6170 shall have a 20 foot (6,096 millimeters) inside and 40 foot (12,192 millimeters) outside  
6171 turning radius or as otherwise approved by the fire marshal.

6172           NEW SECTION. SECTION 231. There is hereby added to the new K.C.C.

6173 chapter established in section 227 a new section to read as follows:

6174           Section D103.4 of the International Fire Code is not adopted and the following is  
6175 substituted:

6176           **Dead ends (IFC D103.4).** Dead-end fire apparatus access roads in excess of 150  
6177 feet (45,720 millimeters) in length shall be provided with an approved cul-de-sac having  
6178 a 40 foot (12,192 millimeters) turning radius, or "hammerhead-like" turnaround designed  
6179 as described in King County Administrative Rule for Chapter 17.04 or other designs  
6180 approved by the fire marshal. See figure D103.4.1 for examples of approved designs.



6181  
6182

For SI: 1 foot = 305 millimeters

6183

D103.4.1 Examples of approved designs.

6184

NEW SECTION. SECTION 232. There is hereby added to the new K.C.C.

6185

chapter established in section 227 a new section to read as follows:

6186

Section D103.5 of the International Fire Code is not adopted and the following is

6187

substituted:

6188

**Fire apparatus access road gates (IFC D103.5).**

6189

A. The installation of security gates, bollards, or other obstructions across a fire

6190

apparatus access road shall not be allowed unless approved by the fire marshal. The use

6191

of directional-limiting devices, such as tire spikes, is prohibited. Where security gates,

6192

bollards, or other obstructions are installed, they shall have an approved means of

6193 emergency operation. The security gates, bollards, or other obstructions and the  
6194 emergency operation shall be maintained so that they are operational at all times.

6195         B. Electric gate operators, where provided, shall be listed in accordance with  
6196 Underwriter Laboratories (UL) 325. Gates intended for automatic operation shall be  
6197 designed, constructed, and installed to comply with the requirements of American  
6198 Society for Testing and Materials (ASTM) F 2200 and shall be equipped with equipment  
6199 approved by the fire marshal that allows for operation of the gate by fire and police  
6200 personnel from their vehicle.

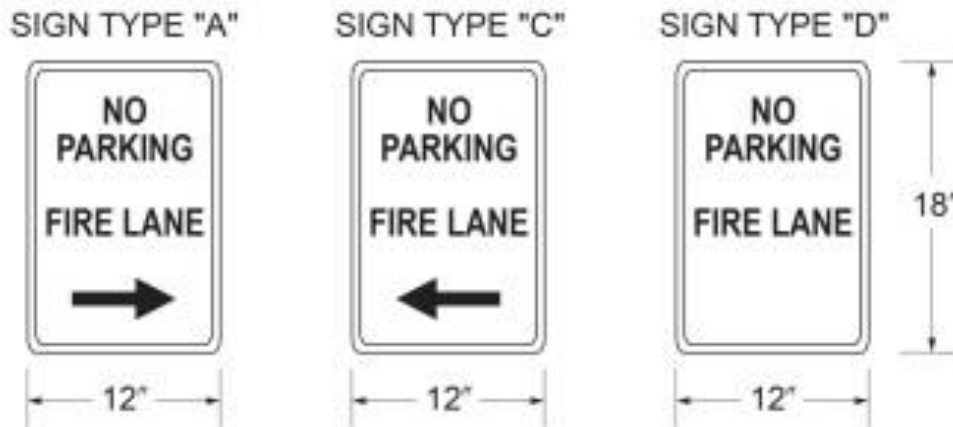
6201         C. Gates shall be at a minimum as wide as the required fire apparatus access road  
6202 width. Gates, bollards, or other obstructions on commercial properties shall be set back at  
6203 least 30 feet (9,144 millimeters) from roadway edge of pavement. Where a fence is  
6204 provided on each side of a gate for a commercial property, an access door shall be  
6205 provided at an approved location with a secure key box that is approved by the fire  
6206 marshal.

6207         **EXCEPTION:** Automated gates with equipment approved by the fire marshal  
6208 that allow for operation of the gate by fire and police personnel from their vehicle are not  
6209 required to be set back 30 feet (9,144 millimeters) from the roadway edge of pavement if  
6210 the roadway is not a principal or collector arterial or road with lane markers.

6211         NEW SECTION. SECTION 233. There is hereby added to the new K.C.C.  
6212 chapter established in section 227 a new section to read as follows:

6213         Section D103.6 of the International Fire Code is not adopted and the following is  
6214 substituted:

6215 **Signs (IFC D103.6).** Signs shall comply with 17.04.420 Fire apparatus access  
 6216 roads – Marking, establishment, and obstruction of fire apparatus access roads. See  
 6217 figure D103.6.1 as examples of approved signage. Refer to section 503.3 for size  
 6218 requirements.



6219 D103.6.1 Examples of approved designs.  
 6220

6221 SECTION 234. Ordinance 19276, Section 7, and K.C.C. 17.11.040 are each  
 6222 hereby amended to read as follows:

6223 A. The retail sale of fireworks in unincorporated King County is prohibited.

6224 B. The use, discharge, or display of fireworks in unincorporated King County is  
 6225 prohibited absent a permit issued by the county pursuant to RCW 70.77.260(2) and this  
 6226 section.

6227 C. Any person (~~((desiring))~~) seeking to (~~((give))~~) provide a public display of  
 6228 fireworks shall submit to the fire marshal a ~~((n))~~ permit application (~~((for a permit to~~  
 6229 ~~operate))~~) for the public display. This is in addition to any permits required by Section  
 6230 105 of the International Fire Code for pyrotechnic special effects material and use of  
 6231 hazardous materials. Public displays of fireworks shall not be permitted more than two

6232 days per calendar year on any site as defined in K.C.C. 21A.06.1170.

6233 D. A complete permit application for a public display of fireworks shall be made  
6234 at least twenty days ~~((in advance of))~~ before the date set for the public display.  
6235 ~~((Applications received after that date))~~ Untimely or incomplete applications shall be  
6236 denied.

6237 E. The fee for the permit shall be as established in K.C.C. Title 27. The permit  
6238 required by this section shall be in addition to any license required by the state fire  
6239 marshal under chapter 70.77 RCW. Permits for displays of fireworks for religious  
6240 purposes shall not be subject to a fee, in accordance with RCW 70.77.311(2).

6241 F.1. For any scheduled public display, applicants shall submit such information  
6242 as ~~((deemed appropriate))~~ required by the department of local services and the sheriff's  
6243 office to ensure that adequate traffic control and crowd protection ~~((policing))~~ services  
6244 has either been arranged through private security agencies or ~~((has been))~~ contracted for  
6245 with the sheriff.

6246 2. A written notice that the applicant has complied with this requirement shall be  
6247 issued by the sheriff to the fire marshal before a public display permit is issued.

6248 3. If the applicant contracts for traffic control and crowd protection ~~((policing))~~  
6249 services with King County, the ~~((sum))~~ agreed upon ~~((in))~~ payment ~~((for the policing))~~  
6250 shall not be less than the actual expense incurred by the county in providing that service.  
6251 The compensation for a traffic control contract ~~((for traffic control))~~ and crowd protection  
6252 ~~((policing))~~ services with King County shall be calculated ~~((for))~~ as personnel resources  
6253 ~~((in))~~ by the hourly rate for overtime under the current collective bargaining agreement,  
6254 plus the percentage being paid for fringe benefits, and all sums paid under the contract



6255 shall be paid in accordance with procedures specified by the county treasurer.

6256 G. Every public display of fireworks shall be conducted with a pyrotechnic  
6257 operator licensed by the state of Washington under RCW 70.77.255 supervising the  
6258 handling and discharge of the fireworks.

6259 H. A bond or certificate of insurance must be furnished to the department of  
6260 local services before a permit is issued. The bond shall be in the amount of one million  
6261 dollars and shall be conditioned upon the applicant's payment of all damages to persons  
6262 and property resulting from or caused by the public display of fireworks, or by any  
6263 negligence on the part of the applicant or its agents, servants, employees, or  
6264 subcontractors in the ~~((presentation of the))~~ public display of fireworks. The certificate  
6265 of insurance shall evidence a comprehensive general liability insurance policy providing  
6266 limits of one million dollars combined single limit, per occurrence and annual aggregate,  
6267 and naming King County as an additional insured. ~~((Any-s))~~ Such a bond or insurance  
6268 policy must be approved by the fire marshal.

6269 I. A cash deposit in the amount of one hundred fifty dollars to provide for costs  
6270 of site cleanup must be posted with the department of local services at least twenty days  
6271 ~~((in advance of))~~ before the public display date ~~((to provide for costs of site cleanup))~~.  
6272 The deposit shall be forfeited to King County if the operator fails to perform such  
6273 cleanup within six days after the public display. If the operator properly performs the  
6274 cleanup, the deposit shall be returned to the operator.

6275 SECTION 235. Ordinance 19276, Section 9, and K.C.C. 17.11.060 are each  
6276 hereby amended to read as follows:

6277 A. A violation of this chapter is a misdemeanor and is punishable as prescribed

6278 by law.

6279 B. Notwithstanding any criminal penalty provided in this chapter, a person who  
6280 violates this chapter or chapter 70.77 RCW is subject to the maximum civil penalty in an  
6281 amount not to exceed two hundred fifty thousand dollars per violation. In addition, a  
6282 person ~~((in violation of))~~ who violates this chapter is responsible for any costs incurred to  
6283 enforce this chapter, including bringing a civil action, court costs, and reasonable  
6284 attorneys' fees. All civil penalties assessed shall be enforced under K.C.C. Title 23.

6285 C. A person commits a separate offense for each day during which the person  
6286 commits, continues, or permits a violation of this chapter.

6287 ~~((D. The civil and criminal penalties described in subsections A. through C. of  
6288 this section shall not be enforced for violations of K.C.C. 17.11.040.B. as it pertains to  
6289 the use or discharge of consumer fireworks, as defined in RCW 70.77.136, until one year  
6290 after Ordinance 19276 takes effect under RCW 70.77.250. During the period in which  
6291 these penalties are not being enforced, the King County sheriff's office and the fire  
6292 marshal shall only issue warnings to violators of K.C.C. 17.11.040.B. and shall provide  
6293 information to violators on the county's laws governing fireworks.))~~

6294 SECTION 236. The following are each hereby repealed:

6295 A. Ordinance 14914, Section 10, as amended, and K.C.C. 16.02.160;

6296 B. Ordinance 12560, Section 55, as amended, and K.C.C. 16.02.170;

6297 C. Ordinance 14914, Section 20, and K.C.C. 16.02.230;

6298 D. Ordinance 12560, Section 15, as amended, and K.C.C. 16.02.310;

6299 E. Ordinance 17837, Section 13, and K.C.C. 16.02.316;

6300 F. Ordinance 12560, Section 13, as amended, and K.C.C. 16.02.370;

- 6301 G. Ordinance 12560, Section 26, as amended, and K.C.C. 16.02.410;
- 6302 H. Ordinance 12560, Section 30, as amended, and K.C.C. 16.02.470
- 6303 I. Ordinance 12560, Section 31, as amended, and K.C.C. 16.02.480;
- 6304 J. Ordinance 12560, Section 32, as amended, and K.C.C. 16.02.490;
- 6305 K. Ordinance 12560, Section 33, as amended, and K.C.C. 16.02.500;
- 6306 L. Ordinance 12560, Section 34, as amended, and K.C.C. 16.02.510;
- 6307 M. Ordinance 12560, Section 35, as amended, and K.C.C. 16.02.520;
- 6308 N. Ordinance 12560, Section 37, as amended, and K.C.C. 16.02.530;
- 6309 O. Ordinance 14914, Section 78, as amended, and K.C.C. 16.02.550;
- 6310 P. Ordinance 19414, Section 85, as amended, and K.C.C. 16.02.600;
- 6311 Q. Ordinance 19485; Section 29, and K.C.C. 16.03.057;
- 6312 R. Ordinance 14914, Section 133, as amended, and K.C.C. 16.04.260;
- 6313 S. Ordinance 12560, Section 44, as amended, and K.C.C. 16.04.270;
- 6314 T. Ordinance 14914, Section 141, as amended, and K.C.C. 16.04.290;
- 6315 U. Ordinance 12560, Section 47, as amended, and K.C.C. 16.04.310;
- 6316 V. Ordinance 14111, Section 55, as amended, and K.C.C. 16.04.330;
- 6317 W. Ordinance 15802, Section 23, as amended, and K.C.C. 16.04.344;
- 6318 X. Ordinance 15802, Section 24, and K.C.C. 16.04.346;
- 6319 Y. Ordinance 15802, Section 25, and K.C.C. 16.04.348;
- 6320 Z. Ordinance 14914, Section 155, as amended, and K.C.C. 16.04.360;
- 6321 AA. Ordinance 15802, Section 34, and K.C.C. 16.04.475;
- 6322 BB. Ordinance 12560, Section 54, as amended, and K.C.C. 16.04.490;
- 6323 CC. Ordinance 11923, Section 2, as amended, and K.C.C. 16.04.890;

- 6324 DD. Ordinance 11923, Section 3, as amended, and K.C.C. 16.04.900;
- 6325 EE. Ordinance 19485, Section 5, and K.C.C. 16.04.930;
- 6326 FF. Ordinance 12380, Section 2, as amended, and K.C.C. 16.04.940;
- 6327 GG. Ordinance 12380, Section 3, as amended, and K.C.C. 16.04.950;
- 6328 HH. Ordinance 12380, Section 4, as amended, and K.C.C. 16.04.960;
- 6329 II. Ordinance 12380, Section 5, as amended, and K.C.C. 16.04.970;
- 6330 JJ. Ordinance 7853, Section 1, as amended, and K.C.C. 16.04.980;
- 6331 KK. Ordinance 14914, Section 276, as amended, and K.C.C. 16.05.080;
- 6332 LL. Ordinance 19485, Section 73, and K.C.C. 16.07.050;
- 6333 MM. Ordinance 19485, Section 75, and K.C.C. 16.07.070;
- 6334 NN. Ordinance 19485, Section 76, and K.C.C. 16.07.080;
- 6335 OO. Ordinance 19485, Section 76, and K.C.C. 16.07.090;
- 6336 PP. Ordinance 19485, Section 80, and K.C.C. 16.07.120;
- 6337 QQ. Ordinance 19485, Section 81, and K.C.C. 16.07.130;
- 6338 RR. Ordinance 19485 Section 83, and K.C.C. 16.07.150;
- 6339 SS. Ordinance 19485, Section 84, and K.C.C. 16.07.160;
- 6340 TT. Ordinance 19485, Section 85, and K.C.C. 16.07.170;
- 6341 UU. Ordinance 19485, Section 86, and K.C.C. 16.07.180;
- 6342 VV. Ordinance 19485, Section 87, and K.C.C. 16.07.190;
- 6343 WW. Ordinance 19485, Section 88, and K.C.C. 16.07.200;
- 6344 XX. Ordinance 19485, Section 89, and K.C.C. 16.07.210;
- 6345 YY. Ordinance 19485, Section 91, and K.C.C. 16.07.230;
- 6346 ZZ. Ordinance 19485, Section 92, and K.C.C. 16.07.240;

6347 AAA. Ordinance 19485, Section 93, and K.C.C. 16.07.250;  
6348 BBB. Ordinance 19485, Section 94, and K.C.C. 16.07.260;  
6349 CCC. Ordinance 19485, Section 95, and K.C.C. 16.07.270;  
6350 DDD. Ordinance 19485, Section 96, and K.C.C. 16.07.280;  
6351 EEE. Ordinance 19485, Section 98, and K.C.C. 16.07.300  
6352 FFF. Ordinance 19485, Section 101, and K.C.C. 16.07.330;  
6353 GGG. Ordinance 19485, Section 102, and K.C.C. 16.07.340;  
6354 HHH. Ordinance 19485, Section 103, and K.C.C. 16.07.350;  
6355 III. Ordinance 19485, Section 104, and K.C.C. 16.07.360;  
6356 JJJ. Ordinance 19485, Section 105, and K.C.C. 16.07.370;  
6357 KKK. Ordinance 19485, Section 106, and K.C.C. 16.07.380;  
6358 LLL. Ordinance 19485, Section 108, and K.C.C. 16.07.400;  
6359 MMM. Ordinance 19485, Section 109, and K.C.C. 16.07.410;  
6360 NNN. Ordinance 19485, Section 110, and K.C.C. 16.07.420;  
6361 OOO. Ordinance 19485, Section 111, and K.C.C. 16.07.430;  
6362 PPP. Ordinance 19485, Section 112, and K.C.C. 16.07.440;  
6363 QQQ. Ordinance 19485, Section 113, and K.C.C. 16.07.450;  
6364 RRR. Ordinance 19485, Section 115, and K.C.C. 16.07.470;  
6365 SSS. Ordinance 19485, Section 116, and K.C.C. 16.07.480;  
6366 TTT. Ordinance 19485, Section 118, and K.C.C. 16.07.500;  
6367 UUU. Ordinance 19485, Section 119, and K.C.C. 16.07.510;  
6368 VVV. Ordinance 19485, Section 120, and K.C.C. 16.07.520;  
6369 WWW. Ordinance 19485, Section 121, and K.C.C. 16.07.530;

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6370 XXX. Ordinance 19485, Section 122, and K.C.C. 16.07.540;  
6371 YYY. Ordinance 19485, Section 123, and K.C.C. 16.07.550;  
6372 ZZZ. Ordinance 14111, Section 73, and K.C.C. 16.10.010;  
6373 AAAA. Ordinance 12560, Section 58, as amended, and K.C.C. 16.10.020;  
6374 BBBB. Ordinance 12560, Section 59, as amended, and K.C.C. 16.10.030;  
6375 CCCC. Ordinance 12560, Section 60, and as amended, K.C.C. 16.10.040;  
6376 DDDD. Ordinance 12560, Section 61, as amended, and K.C.C. 16.10.050;  
6377 EEEE. Ordinance 12560, Section 62, as amended, and K.C.C. 16.10.060;  
6378 FFFF. Ordinance 12560, Section 63, as amended, and K.C.C. 16.10.070;  
6379 GGGG. Ordinance 12560, Section 64, as amended, and K.C.C. 16.10.080;  
6380 HHHH. Ordinance 15802, Section 99, and K.C.C. 16.10.100;  
6381 IIII. Ordinance 15802, Section 100, and K.C.C. 16.10.110;  
6382 JJJJ. Ordinance 15802, Section 101, as amended, and K.C.C. 16.10.120;  
6383 KKKK. Ordinance 12560, Section 127, as amended, and K.C.C. 16.14.020;  
6384 LLLL. Ordinance 14914, Section 337, and K.C.C. 16.14.040;  
6385 MMMM. Ordinance 14914, Section 338, and K.C.C. 16.14.050;  
6386 NNNN. Ordinance 14914, Section 339, and K.C.C. 16.14.060;  
6387 OOOO. Ordinance 14914, Section 352, and K.C.C. 16.14.140;  
6388 PPPP. Ordinance 14914, Section 353, and K.C.C. 16.14.150;  
6389 QQQQ. Ordinance 14914, Section 367, as amended, and K.C.C. 16.14.250;  
6390 RRRR. Ordinance 14914, Section 407, and K.C.C. 16.14.480;  
6391 SSSS. Ordinance 14914, Section 410, and K.C.C. 16.14.510;  
6392 TTTT. Ordinance 14914, Section 413, and K.C.C. 16.14.530;

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6393 UUUU. Ordinance 14914, Section 418, and K.C.C. 16.14.570;  
6394 VVVV. Ordinance 14914, Section 419, and K.C.C. 16.14.580;  
6395 WWWW. Ordinance 14914, Section 420, and K.C.C. 16.14.590;  
6396 XXXX. Ordinance 19485, Section 149, and K.C.C. 16.32.336  
6397 YYYY. Ordinance 19485, Section 150, and K.C.C. 16.32.337  
6398 ZZZZ. Ordinance 19485, Section 152, and K.C.C. 16.32.339  
6399 AAAAA. Ordinance 1283, Section 1, as amended, and K.C.C. 16.78.010;  
6400 BBBB. Ordinance 1283, Section 2, and K.C.C. 16.78.020;  
6401 CCCCC. Ordinance 1283, Section 3, and K.C.C. 16.78.030;  
6402 DDDDD. Ordinance 1283, Section 4, and K.C.C. 16.78.040;  
6403 EEEEE. Ordinance 1283, Section 5, and K.C.C. 16.78.050;  
6404 FFFFF. Ordinance 1283 (part) and K.C.C. 16.78.060;  
6405 GGGGG. Ordinance 19485, Section 174, and K.C.C. 17.04.445;  
6406 HHHHH. Ordinance 19485, Section 175, and K.C.C. 17.04.447;  
6407 IIIII. Ordinance 19485, Section 179, and K.C.C. 17.04.466;  
6408 JJJJJ. Ordinance 19485, Section 181, and K.C.C. 17.04.468;  
6409 KKKKK. Ordinance 19485, Section 182, and K.C.C. 17.04.471;  
6410 LLLLL. Ordinance 19485, Section 183, and K.C.C. 17.04.472;  
6411 MMMMM. Ordinance 19485, Section 185, and K.C.C. 17.04.477;  
6412 NNNNN. Ordinance 19485, Section 186, and K.C.C. 17.04.478;  
6413 OOOOO. Ordinance 19485, Section 187, and K.C.C. 17.04.479;  
6414 PPPPP. Ordinance 19485, Section 188, and K.C.C. 17.04.481;  
6415 QQQQQ. Ordinance 19485, Section 189, and K.C.C. 17.04.486;

6416 RRRRR. Ordinance 19485, Section 190, and K.C.C. 17.04.487;  
6417 SSSSS. Ordinance 19485, Section 191, and K.C.C. 17.04.488; and  
6418 TTTTT. Ordinance 14111, Section 215, and K.C.C. 17.04.540.  
6419 SECTION 237. Severability. If any provision of this ordinance or its application



6420 to any person or circumstance is held invalid, the remainder of the ordinance or the  
6421 application of the provision to other persons or circumstances is not affected.

KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

---

Sarah Perry, Chair

ATTEST:

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Melani Pedroza, Clerk of the Council

APPROVED this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_.

---

Girmay Zahilay, County Executive

**Attachments:** None



## King County

**Shannon Braddock**

King County Executive

401 Fifth Avenue, Suite 800  
Seattle, WA 98104

**206-296-9600** Fax 206-296-0194

TTY Relay: 711

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September 30, 2025

The Honorable Girmay Zahilay  
Chair, King County Council  
Room 1200  
C O U R T H O U S E

Dear Councilmember Zahilay:

This letter transmits a proposed Ordinance that, if enacted, would amend the King County Code (KCC) building and fire regulations for development in unincorporated King County. Approval of this proposed Ordinance will align the County's building and fire Code regulations with current editions of the building and fire Code adopted by Washington State (Chapter 19.27 Revised Code of Washington (RCW)) that went into effect in March 2024. The proposed Ordinance will also remove outdated sections of KCC and adopt amendments to the Washington State Energy Code (Chapter 19.27A RCW) to implement the 2020 adopted and 2025 proposed King County Strategic Climate Action Plan (SCAP) priority actions, reducing greenhouse gas (GHG) emissions in unincorporated King County.

In 2021, the Department of Local Services (DLS) hired both a new Building Official and Fire Marshal. With these key positions filled, DLS used this KCC update cycle as an opportunity to comprehensively recommend changes to KCC Titles 16 and 17 for the first time in decades.

Key amendments in the proposed Ordinance include:

- Adoption of the 2021 editions of the state building codes.
- Housekeeping revisions to align with updated state legislation, remove outdated code provisions, and improve readability.
- Modifications to permit expiration dates and allowable extensions, including revising standalone mechanical permits validity to six months and adding a one-time 60-day extension option for building permits where only a final inspection remains.
- Adoption of new appendices on construction and demolition material management and building deconstruction to reduce construction waste.
- Minor clarifications to work exempt from requiring a building permit.

- Updated regulations for parking garage and elevator hoistway drainage systems, domestic water piping, and deference to the Energy Code for minimum pipe insulation.
- Expanded criteria for plumbing permit applications, including comprehensive guidance regarding information required, plumbing permit issuance, and reinspection fee assessments.
- Clarifications for determining when a fire special event permit is required.
- Refinement of fire department access requirements.

The proposed Ordinance also includes amendments to the Washington State Energy Code for commercial buildings and multifamily buildings four stories and taller to facilitate the design and construction of buildings with consideration for the use and conservation of energy over the life of each building.

To accomplish this, the proposed Ordinance would, if enacted:

- Increase efficiency requirements for building materials including windows.
- Increase HVAC and water heating efficiency requirements.
- Reduce the allowed maximum lighting power density in most building space types.
- Modify the energy efficiency package credit section to reflect amendments to base code.
- Reduce the threshold to provide energy metering and energy consumption management.
- Reduce the threshold for providing a renewable energy generation system.

In developing the proposed Ordinance, the Permitting Division of the Department of Local Services sought input from the public and multiple stakeholders, including: the Regional Code Collaboration, the Master Builders Association of King and Snohomish Counties, Seattle King County Realtors, Seattle Building Trades, Puget Sound Energy, and the Housing Development Consortium of Seattle-King County.

Thank you for your consideration of this proposed Ordinance. This legislation advances the County's goals to reduce sources of GHG emissions in our built environment and will help to build a more resilient and sustainable King County.

If your staff have any questions, please contact Leon Richardson, Director, Department of Local Services, at 206-263-3332.

Sincerely,



for

Shannon Braddock  
King County Executive

The Honorable Girmay Zahilay

September 30, 2025

Page 3

Enclosure

cc: King County Councilmembers

ATTN: Stephanie Cirkovich, Chief of Staff, King County Council

Melani Hay, Clerk of the Council

Karan Gill, Deputy Executive, Chief of Staff, Office of the Executive

Stephanie Pure, Council Relations Director, Office of the Executive

Leon Richardson, Director, Department of Local Services

Jim Chan, Permitting Division Director, Department of Local Services

Ordinance/Motion: 2025-XXXX  
 Title: Building and Fire Code Update  
 Affected Agency and/or Agencies: Department of Local Services (DLS) - Permitting Division  
 Note Prepared By: Nicole Gaudette and Warren Cheney, DLS-Permitting  
 Date Prepared: 7/21/2025  
 Note Reviewed By: Bonnie L. Fluckinger, Office of Performance, Strategy, and Budget  
 Date Reviewed: 9/9/2025

**Description of request:**

A proposed ordinance to amend building code and fire code regulations in K.C.C. Titles 16 and 17 to adopt and align with current codes adopted by the state; remove outdated and unnecessary code sections; and to adopt amendments to the state energy codes to support greenhouse gas emission reductions.

**Revenue to:**

| Agency | Fund Code | Revenue Source | 2025 | 2026-2027 | 2028-2029 |
|--------|-----------|----------------|------|-----------|-----------|
|        |           |                | 0    | 0         | 0         |
|        |           |                |      |           |           |
|        |           |                |      |           |           |
|        |           |                |      |           |           |
| TOTAL  |           |                | 0    | 0         | 0         |

**Expenditures from:**

| Agency | Fund Code | Department | 2025 | 2026-2027 | 2028-2029 |
|--------|-----------|------------|------|-----------|-----------|
|        |           |            | 0    | 0         | 0         |
|        |           |            |      |           |           |
|        |           |            |      |           |           |
|        |           |            |      |           |           |
| TOTAL  |           |            | 0    | 0         | 0         |

**Expenditures by Categories**

|       | 2025 | 2026-2027 | 2028-2029 |
|-------|------|-----------|-----------|
|       |      |           |           |
|       |      |           |           |
|       |      |           |           |
|       |      |           |           |
|       |      |           |           |
| TOTAL | 0    | 0         | 0         |

**Does this legislation require a budget supplemental? Yes: No**

**Notes and Assumptions:**

Staff time will be required to learn new portions of this revised code and associated training costs are estimated to be \$2,500 for 16 staff members. Estimates were based on typical costs of Washington Association of Building Officials (WABO)-sponsored code education. WABO is not providing training for the new construction and demolition appendices at this time, so DLS staff will internally train within existing budgeted resources. No impact on budget is anticipated. DNRP has subscribed to Green Halo, a web-based recycling tracking system that will be used for construction & demolition tracking. This results in no cost to DLS, other than the added staff time to use the tracking system. The legislation could result in increased costs for capital projects subject to the new code requirements, when those projects are located in unincorporated King County.

## Summary of Proposed Ordinance relating to King County Building and Fire Code Updates

The following is a summary of a proposed ordinance that would adopt building and fire codes for unincorporated King County in K.C.C. Titles 16 and 17. This summary fulfills Washington State Growth Management Act and King County Code (K.C.C.) 20.18.100 requirements for a "plain language summary."

King County reviews and adopts model building codes to ensure the construction, repair, and maintenance of safe, sustainable, and resilient structures. This includes adoption and, as appropriate, amendment of codes published by or jointly with the International Code Council, Inc (ICC), and the International Association of Plumbing and Mechanical Officials (IAPMO). The ICC and IAPMO update these codes once every three years. The updated international codes are then adopted and amended by Washington State. Local jurisdictions, including King County, then adopt and amend the State building codes to meet local administrative needs and policy goals. With some exceptions, local jurisdictions cannot amend residential codes.

This proposed ordinance includes both substantive regulatory changes and technical clean-up. The proposed ordinance includes the most recent 2021 international codes, as adopted by the state, which became effective March 15, 2024. This is the first time King County is proposing Energy Conservation Code amendments, which provide the greatest local opportunity to implement the County's 2020 Strategic Climate Action Plan (SCAP) goals for the built environment. Energy code amendments only apply to commercial buildings, and multifamily buildings four stories or taller.

| Ordinance Section | King County Code Section | Current Code | Proposed Change   | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|--------------------------|--------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Throughout        | Throughout               | n/a          | Technical changes | <p>Technical corrections are made throughout this proposed ordinance, including updating ICC code section numbers; K.C.C. references; code restructuring for clarification; and updated terminology to reflect current K.C.C. ordinance drafting guidance.</p> <p>Where these changes are the only amendments proposed for existing code sections, it is noted in the rationale below. For sections proposing substantive changes, in addition to technical changes, only substantive changes are noted.</p> |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                 | 16.02.110                | <p>Describes which International Code Council codes this K.C.C. chapter adopts and modifies, namely the:</p> <ul style="list-style-type: none"> <li>• International Building Code (IBC),</li> <li>• International Residential Code (IRC),</li> <li>• International Energy Conservation Code (IECC), Commercial,</li> <li>• International Mechanical Code (IMC),</li> <li>• International Existing Building Code,</li> <li>• International Property Maintenance Code (IPMC),</li> <li>• International Wildland Urban Interface Code, and</li> <li>• Uniform Plumbing Code.</li> </ul> | <p>Proposes technical corrections and changes, including the following:</p> <ul style="list-style-type: none"> <li>• IBC Appendix D and P are proposed to be adopted,</li> <li>• The International Fire Code (IFC) is proposed to be adopted and cited as described in K.C.C. 16.02.150,</li> <li>• Updates to the naming of IRC appendices,</li> <li>• IRC Appendices AQ, AU, AY, and AZ are adopted,</li> <li>• Updates to the naming of IECC appendices,</li> <li>• The Universal Plumbing code is adopted and cited as described in K.C.C. 16.02.150.</li> <li>• Proposed changes update code edition references from the 2018 edition to the 2021 edition of state codes.</li> </ul> | <p>Updates International Code Council (ICC) codes references to 2021 editions and associated appendices, and other references to be consistent with current naming conventions and K.C.C. 16.02.150, and incorporates these throughout the K.C.C.</p> <p>Adoption of IBC Appendix P and IRC Appendix AY—Construction and demolition material management is intended to increase the reuse and recycling of construction and demolition materials for scoped projects. Scope includes new building construction, alterations to existing buildings and the demolition of existing buildings having a work area greater than 750 square feet or a project value greater than \$75,000, whichever is more restrictive.</p> <p>Adoption of IRC Appendix AQ allows for relaxation of various requirements in the body of the code as they apply to houses that are 400 square feet in area or less. Attention is specifically paid to features such as compact stairs, including stair handrails and headroom, ladders, reduced ceiling heights in lofts and guard and emergency escape and rescue opening requirements at lofts.</p> <p>Adoption of IRC Appendix AZ---Building deconstruction is intended to increase the amount of material salvaged for reuse through the act of deconstruction when a building or structure is demolished.</p> |
| 2                 | 16.02.150                | <p>States which regulations shall be known as the "building codes" of King County. Current code lists the IBC, IRC, IECC, IMC, IEBC, IPMC, UPC, and IFC.</p>                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Proposes to remove the King County Building Security Code (K.C.C. chapter 16.10).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>Proposed update matches current practice. Current building and residential codes address building security, superseding this 30-year-old code. Regulations are simplified by aligning with the state code.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                    | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Intent/Rationale                                                                                                                                                                                                                                                                                                                           |
|-------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3                 | 16.02.152                | States that the IBC applies to buildings under this code, except for building types covered by the IRC, and provisions of the IMC and International Fuel Gas Code (IFGC).       | <p>Proposes to add the following limited uses to the IRC scope, when such buildings are equipped with an automatic fire sprinkler system:</p> <ul style="list-style-type: none"> <li>• Care facilities with five or fewer persons receiving custodial care within a dwelling unit,</li> <li>• Care facilities with five or fewer persons receiving medical care within a dwelling unit,</li> <li>• Care facilities with five or fewer persons receiving care within a single-family dwelling.</li> </ul> <p>Proposes to allow fuel systems to be regulated by the IFGC, and clarifies the type of fuel gas piping, structure types, and use types to which the IFGC will apply.</p> | <p>These three uses were added to the scope of the 2021 IRC by the state in WAC 51-51-01010, and this proposed update brings the County into alignment with the state building code.</p> <p>Minor edits related to fuel systems were added to align with revised State code language. The content and intent of code remains the same.</p> |
| 4                 | 16.02.190                | Outlines the authority for enforcement of the building code to the building official, authority to enforce the IFGC to the building official and the director of public health. | Proposes to remove (1) references to specific chapters of the IBC and IRC and (2) authority from the director of public health to enforce specified chapters of the IBC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Clarifies the responsibilities of the building official and director of public health regarding enforcement of the fuel gas provisions of the IRC (Chapter 24), the plumbing provisions of the IBC (Chapter 29), and IFGC in its entirety.                                                                                                 |



| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| 5                 | 16.02.240                | <p>Lists projects exempt from permits, including the following:</p> <ul style="list-style-type: none"> <li>• Residential accessory buildings up to 200 square feet in size that meet certain design requirements,</li> <li>• Agricultural and forestry accessory buildings which meet certain design requirements,</li> <li>• Fences less than 6 feet high,</li> <li>• Retaining walls less than 4 feet high,</li> <li>• Water tanks not exceeding 5,000 gallons,</li> <li>• Sidewalks, decks, and driveways under 30 inches above grade,</li> <li>• Certain interior improvements,</li> <li>• Temporary theater installations,</li> <li>• Prefabricated swimming pools,</li> <li>• Temporary growing structures,</li> <li>• Swings,</li> <li>• Window awnings that meet certain design requirements,</li> <li>• Certain nonfixed interior features,</li> <li>• Reroofing a residential structure with exceptions,</li> <li>• Submerged, freestanding mechanical boat lifts which meet certain criteria,</li> <li>• Work in the public way and utility towers,</li> <li>• Mechanical equipment which meets certain criteria,</li> <li>• Antenna and satellite dishes which meet certain criteria,</li> <li>• Roof-mounted photovoltaic solar panels which meet certain criteria,</li> <li>• Ground-mounted wind turbines which meet certain criteria,</li> <li>• Portable heating or cooking appliances,</li> <li>• Replacement of minor parts of equipment which meet certain criteria,</li> <li>• Mechanical equipment which meets certain criteria.</li> </ul> | <p>Proposes language to clarify that an exemption does not grant authorization for any work. Modifies the following building permit exemptions:</p> <ul style="list-style-type: none"> <li>• Clarifies that prefabricated pools adjacent to a Group R-3 occupancy are exempt.</li> <li>• Swings and playground equipment that exceed 10 feet in height and 150 square feet in area and are installed inside all occupancies are not exempt.</li> <li>• Relocates and modifies the notes that the code does not grant authorization for any work and that separate plumbing, electrical, and mechanical permits are required.</li> </ul> <p>Adds or clarifies the following building permit exemptions:</p> <ul style="list-style-type: none"> <li>• Detached accessory structures must be unconditioned to be exempt,</li> <li>• Shade cloth structures for nursery or agricultural purposes.</li> <li>• Wildlife exclusion fencing up to 8 feet.</li> </ul> | <p>Clarifies the intent of the section which is to continue requiring compliance with the code even when permits are not required. Other proposed changes:</p> <ul style="list-style-type: none"> <li>• Clarify that to be exempt from permit, detached accessory structures may not be conditioned; code was previously silent on this issue.</li> <li>• Clarify that swimming pool barriers, regardless of height, require a permit; previously all fences not more than six feet in height were exempted.</li> <li>• Add agricultural wildlife exclusion fencing up to eight feet in height to exempt work as requested by commercial farmers in conjunction with Washington State Department of Fish &amp; Wildlife (WDFW). WDFW will provide farmers with funding for such fencing if it is permit exempt, and these fences are typically located and constructed such that they do not pose an increased life safety risk.</li> </ul> |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                 | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| 6                 | 16.02.290                | Requires approved permits to expire two years from the date of issuance, and permits issued to correct a code violation to expire one year from the date of issuance. Permits may be extended for one-year periods with the following conditions: <ul style="list-style-type: none"> <li>An application for a permit extension is submitted at least seven, but no more than 60 days before the expiration date.</li> <li>Construction has substantially begun.</li> <li>The applicant has not requested more than two prior permit extensions.</li> <li>Extensions beyond the second extension are permitted to complete a structure or mechanical system which is substantially constructed.</li> <li>A permit may be revised, but does not constitute an extension.</li> </ul> | Proposes the following: <ul style="list-style-type: none"> <li>Specifies expiration dates for certain types of permits.</li> <li>Modifies the requirement to have substantial construction underway to request an extension.</li> <li>Adds conditions under which extensions will and will not be granted.</li> <li>Adds an option for a 60-day extension when only a final inspection is remaining.</li> </ul> | Restructures the section and simplifies the language to allow for better compliance and enforcement. Allows additional language flexibility for substantially completed projects.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 7                 | 16.02.340                | An applicant may begin work prior to obtaining the required permit or approval if the applicant deposits cash or an equivalent in escrow, and the building official determines: <ul style="list-style-type: none"> <li>The work does not endanger or harm the property,</li> <li>The work would not violate SEPA requirements.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                         | Proposes to add a condition that the scope of work must not include alterations, site development, or approvals regulated under K.C.C. Title 9.                                                                                                                                                                                                                                                                 | The intent of Pre-Issuance Construction Authorizations (PICAs) is to allow early construction to begin on a building before the full building permit has been reviewed and approved but not to permit site work prior to completion of drainage reviews. This change corrects the language to clarify that significant site work is not to be undertaken before there is sufficient knowledge that the site may be developed in compliance with stormwater regulations in K.C.C. Title 9. This proposed provision allows for review and enforcement of pre-construction stormwater mitigation measures. |
| 8                 | 16.02.440                | Energy efficiency inspections are required to be in accordance with the IECC as adopted and amended by WAC 51-11C and 51-11R, and as amended in Title 16.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Updates the IBC reference.                                                                                                                                                                                                                                                                                                                                                                                      | The proposed change clarifies the section number that was updated in the 2021 IBC and corrects the reference from the IECC to the WSEC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9                 | 16.02.470                | A building official may issue a certificate of occupancy (CO) or a certificate of shell completion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Revised language to remove reference to certificate of shell completion.                                                                                                                                                                                                                                                                                                                                        | Removed policy language from code which addressed how to issue certificate of occupancies for shell only (speculative use) buildings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 10                | 16.02.540                | A CO and/or certificate of shell completion shall be posted on the premises.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Removes the reference to certificate of shell completion.                                                                                                                                                                                                                                                                                                                                                       | This removed a reference that is no longer used; see description for 16.02.470 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Proposed Change                                                                                                                                                                                                                                      | Intent/Rationale                                                                                                                                                                                                                                         |
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| 11                | 16.03.020                | The following definitions within IBC 202 are not adopted: <ul style="list-style-type: none"> <li>• Base flood,</li> <li>• Base flood elevation,</li> <li>• Coastal high-hazard area,</li> <li>• Design flood,</li> <li>• Dry floodproofing,</li> <li>• Flood hazard area,</li> <li>• Flood insurance rate map (FIRM),</li> <li>• Flood insurance study,</li> <li>• Floodway,</li> <li>• Historic buildings,</li> <li>• Special flood hazard area, and</li> <li>• Substantial improvement.</li> </ul> | Proposes to remove the definition of historic buildings from the list of definitions that are not adopted, thereby adopting the IBC definition of the term "historic buildings." This action aligns County code with the I codes.                    | This section is being revised to align the County code with the I-Codes.                                                                                                                                                                                 |
| 12                | 16.03.280                | Defines a water heater.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Technical corrections.                                                                                                                                                                                                                               | Updated water heater definition to align with Seattle's code for ease of enforcement by Seattle/King County Public Health. It is preferable in plumbing code to be in alignment with Seattle codes where the County does not align with the State codes. |
| 13                | 16.04.XXX<br>New Section | n/a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Proposes to modify IBC 429.2. Adds requirements for electric vehicle (EV) charging infrastructure.                                                                                                                                                   | EV charging infrastructure is an essential part of the SCAP. Accommodating emerging technologies and reducing reliance on fossil fuel energy sources in the construction of new buildings is easier and less expensive than retrofits.                   |
| 14                | 16.04.440                | Supplements IBC to clarify who can complete a flood elevation certificate.                                                                                                                                                                                                                                                                                                                                                                                                                           | Corrects King County code language to clarify a surveyor is required to complete Federal Emergency Management Agency (FEMA) elevation certificate. Removes reference to engineer. Adds a reference to a K.C.C. code section for further information. | This revision brings K.C.C. into compliance with State law and provides reference to Title 21A to assist with navigating the K.C.C.                                                                                                                      |
| 15                | 16.04.600                | Supplements IBC appendix AZ 106 with requirements for noise reduction coefficient and sound transmission class.                                                                                                                                                                                                                                                                                                                                                                                      | Technical corrections.                                                                                                                                                                                                                               | Spelled out units of measurement and reformatted for consistency with K.C.C. and ease of reading.                                                                                                                                                        |
| 16                | 16.04.620                | Supplements IBC appendix AZ 108 with a definition of the Seattle-Tacoma noise program area.                                                                                                                                                                                                                                                                                                                                                                                                          | Technical corrections.                                                                                                                                                                                                                               | Spelled out units of measurement and reformatted for consistency with K.C.C. and ease of reading.                                                                                                                                                        |
| 17                | 16.04.630                | Supplements IBC appendix AZ 109 with requirements for air leakage for all buildings.                                                                                                                                                                                                                                                                                                                                                                                                                 | Technical corrections.                                                                                                                                                                                                                               | Reformatted for consistency with K.C.C. and ease of reading.                                                                                                                                                                                             |
| 18                | 16.04.720                | Supplements IBC appendix AZ 118 with requirements for exterior walls, and stud walls.                                                                                                                                                                                                                                                                                                                                                                                                                | Technical corrections.                                                                                                                                                                                                                               | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading.                                                                                                                            |

| Ordinance Section | King County Code Section | Current Code                                                                                | Proposed Change                                                                                                          | Intent/Rationale                                                                                                              |
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| 19                | 16.04.730                | Supplements IBC appendix AZ 119 with requirements for exterior window 30 dB compliance.     | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 20                | 16.04.740                | Supplements IBC appendix AZ 120 with requirements for exterior doors 30 dB compliance.      | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 21                | 16.04.750                | Supplements IBC appendix AZ 121 with requirements for roofs 30 dB compliance.               | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 22                | 16.04.760                | Supplements IBC appendix AZ 122 with requirements for ceilings 30 dB compliance.            | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 23                | 16.04.770                | Supplements IBC appendix AZ 123 with requirements for 30 dB compliance.                     | Technical corrections.                                                                                                   | Corrected the code reference from International Energy Conservation Code (IECC) to the Washington State Energy Code (WSEC).   |
| 24                | 16.04.780                | Supplements IBC appendix AZ 124 with requirements for ventilation 30 dB compliance.         | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 25                | 16.04.800                | Supplements IBC appendix AZ 126 with requirements for exterior walls 35 dB compliance.      | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 26                | 16.04.820                | Supplements IBC appendix AZ 128 with requirements for exterior doors 35 dB compliance.      | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 27                | 16.04.830                | Supplements IBC appendix AZ 129 with requirements for roofs 35 dB compliance.               | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 28                | 16.04.840                | Supplements IBC appendix AZ 130 with requirements for ceiling 35 dB compliance.             | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 29                | 16.04.850                | Supplements IBC appendix AZ 131 with requirements for floors 35 dB compliance.              | Technical corrections.                                                                                                   | Corrected the code reference from International Energy Conservation Code (IECC) to the Washington State Energy Code (WSEC).   |
| 30                | 16.04.860                | Supplements IBC appendix AZ 132 with requirements for ventilation dB compliance.            | Technical corrections.                                                                                                   | Added metric measurements, spelled out units of measurement, and reformatted for consistency with K.C.C. and ease of reading. |
| 31                | 16.04.xxx New Section    | n/a                                                                                         | Propose to require EV charging infrastructure to be provided in accordance with a specific section of the building code. | To be consistent with other changes related to EV charging infrastructure.                                                    |
| 32                | 16.05.040                | Provides climate and geographical design criteria for building and planning in King County. | Technical corrections.                                                                                                   | Added metric conversions. No substantive code change.                                                                         |

| Ordinance Section | King County Code Section | Current Code                                                                                                        | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Intent/Rationale                                                                                                                                                                                                                                                                                                                                   |
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| 33                | 16.05.065                | Provides requirements for emergency escape windows under decks and porches.                                         | Technical corrections.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Aligned code language with 2021 IBC.                                                                                                                                                                                                                                                                                                               |
| 34                | 16.05.xxx New Section    | n/a                                                                                                                 | Modifies IRC Table R311.2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Clarified which spaces above and within garages require egress doors.                                                                                                                                                                                                                                                                              |
| 35                | 16.07.XXX New Section    | n/a                                                                                                                 | Supplements WSEC C101 with timelines for vesting of initial tenant improvements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Clarified the vesting of tenant improvements and sets limits on the use of older energy efficiency codes.                                                                                                                                                                                                                                          |
| 36                | 16.07.040                | Definitions to supplement the definitions within the IECC as adopted, amended, and supplemented by K.C.C. Title 16. | <p>Proposes to remove the following definitions:</p> <ul style="list-style-type: none"> <li>• Automatic control device,</li> <li>• Conditioned space,</li> <li>• Continuous insulation,</li> <li>• Controlled receptacle,</li> <li>• DOAS,</li> <li>• Mass transfer deck slab,</li> <li>• Multi-pass,</li> <li>• Single-pass,</li> <li>• Solar zone, and</li> <li>• Temperature maintenance.</li> </ul> <p>Proposes to add the following definitions:</p> <ul style="list-style-type: none"> <li>• Best efficiency point</li> <li>• Clean water pump,</li> <li>• High-end trim,</li> <li>• Occupied standby mode, and</li> <li>• Pump energy index.</li> </ul> | <p>Identical or equivalent definitions for the terms being removed were integrated into the 2021 model codes.</p> <p>Best efficiency point, clean water pump, and pump energy index are added to support proposed code additions in IECC 403.15. Other definitions are added to support emerging technologies that meet the goals of the SCAP.</p> |
| 37                | 16.07.xxx New Section    | n/a                                                                                                                 | WSEC C402.1.3 provides guidance on how to calculate insulation to meet energy code requirements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | This section simplifies the use of the code.                                                                                                                                                                                                                                                                                                       |

| Ordinance Section | King County Code Section | Current Code                                                                  | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                       |
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| 38                | 16.07.060                | Provides requirements for the U-factor of opaque thermal envelope assemblies. | Proposes technical corrections, including: <ul style="list-style-type: none"> <li>• Reduce maximum allowed metal frame building assembly u-value (from U-0.052 to U-0.0050) to match state code change.</li> <li>• Reduce maximum allowed nonswinging door assembly u-value (from U-0.34 to U-0.31) to match state code change.</li> <li>• Added garage doors with more than 14 percent glazing to the table to match state code change.</li> <li>• Did not adopt state footnotes b, d</li> <li>• Updated footnote a to reflect WSEC rather than IECC</li> <li>• Updated footnotes h, i, j, k to match state</li> <li>• Added footnote l</li> </ul> | Align with WSEC (State code changes) for greater thermal performance of building thermal envelope elements.                                                                                                                                                                                                                                                            |
| 39                | 16.07.xxx New Section    | n/a                                                                           | Proposed modification to clarify how to address the high-performance fenestration requirements of the modified Table C402.4 in the component performance alternative calculation (WSEC C402.1.5).                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Proposed changes to Table C402.4 (see description of 16.07.100 below) required that this section be updated to provide instructions on how to incorporate the requirements of the table into this equation.                                                                                                                                                            |
| 40                | 16.07.100                | Provides U-factor requirements for fenestration.                              | Modifies the fenestration table (WSEC C402.4) to require a minimum of 20 percent of all glazing in a building to be at "high-performance" fenestration. The remaining 80 percent of fenestration is permitted to meet standard (state code) thermal performance requirements.                                                                                                                                                                                                                                                                                                                                                                       | Increased required thermal performance for a portion of the windows in new buildings will assist in transitioning the industry to triple-glazing as typical in the region. An increased demand for triple-glazing will eventually reduce cost and lead time and help support a market transition, possibly leading to a 100 percent requirement in future code cycles. |

| Ordinance Section | King County Code Section | Current Code                                                                                                                        | Proposed Change                                                                                                                                                                                                                                  | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| 41                | 16.07.XXX<br>New Section | n/a                                                                                                                                 | Modifies the allowable area of vertical glazing from a flat 30% for all building types, to a percentage based on building occupancy and use type.                                                                                                | <p>Proposed change sets maximum allowable glazing area by occupancy and use type, rather than a standard 30 percent or 35 percent for every building type. Setting allowable areas by use type more closely aligns with typical designs for building use types and provides more equitable implementation of the provisions.</p> <p>Large office and multifamily will have a 35 percent baseline. Grocery and standalone retail percentages were doubled (from ASHRAE baseline) to allow for exceptional circumstances and schools were increased from 22 percent to 26 percent. Changes also required re-wording for Equation 4-3. Overall, the stringency of the code would increase even if some building types exceed the original maximum of 30 percent.</p> |
| 42                | 16.07.XXX<br>New Section | n/a                                                                                                                                 | Modifies code section WSEC C402.4.1 which outlines how to calculate high performance alternates. These changes were needed since Section 41 requires high-performance glazing as a baseline.                                                     | The base code limits the amount of glazing in new buildings. This alternative allows buildings to be designed with more glazing (including windows) if the glazing installed has a higher performance rating. Since amendments in other sections increase the stringency of the base code, this section had to be amended accordingly.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 43                | 16.07.110                | Provides requirements for high-performance fenestration.                                                                            | Proposes to decrease the required U-factor for glazing to qualify as high-performance, making the standard essentially triple-glazing or equivalent. These changes were needed since Section 41 requires high-performance glazing as a baseline. | The base code limits the amount of glazing in new buildings. This alternative allows buildings to be designed with more glazing (including windows) if the glazing installed has a higher performance rating. Since amendments in other sections increase the stringency of the base code, this section had to be amended accordingly.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 44                | 16.07.130                | Provides a list of medical office and residential occupancy listings and whether the areas are included or excluded from HVAC TSPR. | Move code text into tabular form.                                                                                                                                                                                                                | The proposed amendment puts the requirements in a table that is easier to read than a text version.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                        | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Intent/Rationale                                                                                                                                                                                                                                             |
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| 45                | 16.07.140                | Supplements WSEC C403.1.4 and restricts the types of electric resistance and fossil fuel HVAC heating equipment. Provides several dozen exceptions. | <p>Modifications made to the exceptions to WSEC C403.1.4 Use of electric resistance and fossil fuel-fired HVAC heating equipment. Removes climate zones not applicable to the County.</p> <ul style="list-style-type: none"> <li>Exception 2: Permits electric resistance wattage to be averaged over all the rooms in one apartment.</li> <li>Exception 11: Requires hydronic systems using district heating coils to be sized large enough to work with 118°F water, to accommodate future change to heat pump.</li> <li>Exception 16: Clarification for King County climate</li> <li>Exception 18: Permits fossil fuel for essential facility emergency generators and emergency heating to be used during power outages</li> <li>Exception 19: Clarification requested by staff that electric resistance "standby equipment" is permissible.</li> <li>Exception 20: Clarifies that emergency generators for any building type are permitted to use fossil fuel.</li> <li>Exception 21: Covers auxiliary electric resistance heating for wastewater heat pump systems.</li> </ul> | Various clarifications for when electric resistance and/or fossil fuels may be used to promote design flexibility.                                                                                                                                           |
| 46                | 16.07.XXX New Section    | n/a                                                                                                                                                 | WSEC C403.3.2 allows HVAC equipment to meet efficiency values including HSPF2, EER2, and SEER2 after they have been published by the US Department of Energy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | HSPF2, EER2, and SEER2 are newer metrics which more accurately represent real-world efficiency and performance of equipment. Adding this sentence clarifies that once equipment is rated to the new metrics, those can be used in lieu of the previous ones. |
| 47                | 16.07.xxx New Section    | n/a                                                                                                                                                 | Residential occupancies (dwelling and sleeping units) are required by the mechanical code to be provided with balanced ventilation with heat recovery, meaning that they are already designed with dedicated outdoor air systems (DOAS). This change proposes to apply the energy code DOAS rules to buildings that use central or rooftop systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | This amendment ensures that DOAS is clearly required rather than being implied, and hence all DOAS rules apply. This also clarifies which conditions do or do not require it.                                                                                |



| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                                                                                                                                  | Intent/Rationale                                                                                                                                                                                                                                                                                                                                             |
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| 48                | 16.07.xxx New Section    | n/a          | Modifies section WSEC C403.3.5.2 to reduced fan power allowance from 1 watt per cfm to 0.8 watts per cfm for DOAS systems.                                                                                                                                                                                       | Reduces fan power and increased required energy efficiency of installed DOAS systems. Requiring a more efficient fan for outdoor air delivery improves overall system energy efficiency, which is in line with SCAP goals, as well as the State's target to construct increasingly energy efficient homes and buildings by the year 2031 per RCW 19.27A.020. |
| 49                | 16.07.xxx New Section    | n/a          | Added an exception 2 to Section C403.3.5.5 to allow for supplemental heating in DOAS systems in residential occupancies.                                                                                                                                                                                         | Allows supplemental heating to be used in residential occupancies with zonal systems for increased system design options while maintaining energy efficiency goals.                                                                                                                                                                                          |
| 50                | 16.07.xxx New Section    | n/a          | Adds a new section C403.3.5.6 that, in some situations, requires that the DOAS be equipped with an air economizer bypass damper, energy recovery media bypass damper, or energy recovery wheel speed control. Controls must be configured to minimize energy recovery operation or maintain an appropriate DOAS. | Requires additional controls for larger air systems (over 500 cfm) to prevent overheating of supply air to maximize energy efficiency.                                                                                                                                                                                                                       |
| 51                | 16.07.xxx New Section    | n/a          | Renumbering subsection due to new section added in Section 51 of the ordinance.                                                                                                                                                                                                                                  | The code section references need to be updated to reflect new section numbering. No substantive changes.                                                                                                                                                                                                                                                     |
| 52                | 16.07.xxx New Section    | n/a          | WSEC C403.3.6 is duplicated in State code by WSEC C403.7.6.1, so it does not need to be adopted.                                                                                                                                                                                                                 | Removes duplicative section and provides a reference to where the information can be found for readability and ease of use.                                                                                                                                                                                                                                  |
| 53                | 16.07.xxx New Section    | n/a          | Adds an exception to WSEC C403.4.1.7 for R-2 dwelling units (apartments) to be exempted from providing demand responsive controls.                                                                                                                                                                               | Exempting apartments from demand responsive controls allows more flexibility in design and aligns with other proposed amendments regarding off-hours controls (found in Section 55).                                                                                                                                                                         |
| 54                | 16.07.xx New Section     | n/a          | The proposed change to WSEC C403.4.2 adds common areas in residential buildings to the use types which must be provided with off-hours controls be provided for heating setback.                                                                                                                                 | Off-hours controls increase system efficiency and reduce waste for areas that are not always occupied. This energy efficiency measure aligns with SCAP goals by reducing heating and cooling energy use in spaces that are not always occupied.                                                                                                              |
| 55                | 16.07.xx New Section     | n/a          | Modifications to economizer exceptions found in WSEC C403.5. Adds options d and e to Table C403.5(9) for more design flexibility for equipment used to cool server rooms, etc.                                                                                                                                   | Exception clean-up for code clarity. Allows more flexibility in design for medical and lab uses, and spaces provided with DOAS systems which either include, or are not required to be provided with, energy recovery.                                                                                                                                       |
| 56                | 16.07.xxx New Section    | n/a          | Adds code reference to clarify ventilation and exhaust systems must comply with newly proposed Section C403.8.7.                                                                                                                                                                                                 | Provides necessary clarification to ensure applicability of proposed subsection C403.8.7.                                                                                                                                                                                                                                                                    |

| Ordinance Section | King County Code Section | Current Code                                                               | Proposed Change                                                                                                                                                   | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| 57                | 16.07.180                | Requires and provides regulations for energy recovery ventilation systems. | Proposes to increase the minimum efficiency from 60 percent to 67 percent for R-2 occupancies. Also proposes to add an exception for certain listed H-ERVs.       | Requiring a more efficient mechanical system installed up front in residential units improves overall system energy efficiency, which is in line with SCAP goals, as well as the State's target to construct increasingly energy efficient homes and buildings by the year 2031 per RCW 19.27A.020. Further, this will result in decreased energy bills for residents.                                                                                                                                                                      |
| 58                | 16.07.xxx New Section    | n/a                                                                        | Proposes to reduce the system airflow requirement which triggers low leakage relief dampers in systems from 5,000 cfm to 300 cfm.                                 | Requiring low leakage motorized dampers in smaller systems to reduce air leakage from buildings results in better air quality and more precise temperature control. This also reduces energy usage from heating or cooling loads lost due to leakage from the building thermal envelope.                                                                                                                                                                                                                                                    |
| 59                | 16.07.XXX New Section    | n/a                                                                        | Proposes to supplement WSEC C403.8.4 by clarifying efficiency requirements for low-capacity ventilation fans.                                                     | Provides more granular requirements for different fan types which more readily matches industry standards.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 60                | 16.07.XXX New Section    | n/a                                                                        | Proposes to supplement WSEC C403.8.7 by requiring occupied standby controls in certain use types, and outlines the functionality requirements for these controls. | Occupied standby controls increase efficiency ventilation systems by pausing ventilation air and setting the temperature back 1-degree when the space is unoccupied. Requiring a more efficient mechanical system installed up front in residential units improves overall system energy efficiency, which is in line with SCAP goals, as well as the state's target to construct increasingly energy efficient homes and buildings by the year 2031 per RCW 19.27A.020. Further, this will result in decreased energy bills for residents. |
| 61                | 16.07.XXX New Section    | n/a                                                                        | WSEC C403.10.1.2.insulation requirements for duct systems. The proposed changes add requirements for two scenarios not previously addressed.                      | Clarifies insulation requirements for ducts conveying unconditioned air by providing specific instructions for how to handle those instances with specific directions. This will reduce heat loss for greater energy efficiency, reduce wear and tear on HVAC systems, as well as increase air quality by preventing condensation which can lead to mold growth. Further, this will improve comfort for occupants with a more constant air temperature.                                                                                     |
| 62                | 16.07.xxx New Section    | n/a                                                                        | Adds reference to duct testing requirements in proposed section C403.10.2.4.                                                                                      | Reference is needed to clarify applicability of added subsection for duct testing.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 63                | 16.07.XXX New Section    | n/a                                                                        | Proposes to modify WSEC C403.10.2.4 to include duct leakage testing requirements for high pressure duct systems and clarifies testing procedures.                 | Duct leakage testing identifies leaks in HVAC ductwork, which waste energy by allowing conditioned air to escape, leading to higher utility bills, inconsistent temperatures, and potential indoor air quality issues. Duct testing ensures that the HVAC system is operating as designed and at peak efficiency.                                                                                                                                                                                                                           |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                                      | Proposed Change                                                                                                                                                                                                                                                                                                                                               | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| 64                | 16.07.xxx New Section    | n/a                                                                                                                                                                                                                               | WSEC C403.11.1 states that systems installed to provide heat outside a building or in unheated spaces shall be radiant systems. They must be controlled by an occupancy sensing device or timer.                                                                                                                                                              | Including unheated spaces in the scope of this section is in line with the code intent, and adding a 20-minute time limitation more clearly defines when a space is "not occupied."                                                                                                                                                                                                                                                                                                                                               |
| 65                | 16.07.XXX New Section    | n/a                                                                                                                                                                                                                               | Proposes add new section WSEC C403.15, which sets minimum efficiency standards for clean water pumps.                                                                                                                                                                                                                                                         | Increases hydronic pump systems efficiency for systems delivering heat through liquids. Does not apply to potable water pumps. The language mimics the 2024 IECC C403.17 model code. The methodology, requirements, and exceptions contained in this proposal mirror what is already included in ASHRAE 90.1-2019 and what is required by DOE to demonstrate compliance. Listing them in the IECC will provide designers with the necessary information on how to calculate PEI and which pumping systems are required to comply. |
| 66                | 16.07.XXX New Section    | n/a                                                                                                                                                                                                                               | Modifies exception to clarify that (1) lab sinks are considered process equipment and (2) exempt manufacturing, industrial or commercial process equipment is still required to comply with C404.6 (insulation of hot water piping).                                                                                                                          | Clarifies that laboratory sinks are classified as "process" equipment, for purposes of this code, and which C404 subsections apply to process and industrial equipment.                                                                                                                                                                                                                                                                                                                                                           |
| 67                | 16.07.XXX New Section    | n/a                                                                                                                                                                                                                               | Proposes to modify Table 404.2 by adding a new footnote, Footnote M.                                                                                                                                                                                                                                                                                          | Provides pointer to section on required storage tank insulation, to improve code readability.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 68                | 16.07.220                | Requires that buildings with more than four R-1 or R-2 dwelling or sleeping units and any other building with a heated water circulation system over a certain capacity cannot use fossil fuel combustion or electric resistance. | Aligns text to current WSEC language and adds allowance for ground-source heat pump water heaters systems. Removes allowance for fossil-fuel supplemental water heating. Adds exceptions 8-10 for certain point of use instantaneous electric water heaters, unitary air source heat pump water heaters, and standby water heating using electric resistance. | Transitioning to heat pump technology for water heating improves overall system energy efficiency, which is in line with SCAP goals, as well as the State's target to construct increasingly energy efficient buildings by the year 2031 per RCW 19.27A.020. Further, this will result in decreased energy bills for owners and tenants.                                                                                                                                                                                          |
| 69                | 16.07.XXX New Section    | n/a                                                                                                                                                                                                                               | Increases allowable piping length between hot water source and fixture for supply pipe sizes between 3/8" to 5/8".                                                                                                                                                                                                                                            | Provides additional flexibility for installers and reduces development costs without reducing efficiency.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 70                | 16.07.XXX New Section    | n/a                                                                                                                                                                                                                               | Proposes to supplement WSEC C404.3.3 that determines piping size for dwelling units in R-2 occupancies.                                                                                                                                                                                                                                                       | This proposed amendment provides criteria for sizing hot water supply systems for residential uses, ensuring systems installed are not over-sized for the demand, which can result in higher energy usage than necessary and reduce equipment lifespan.                                                                                                                                                                                                                                                                           |

| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                                                                                                                                                                                                     | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| 71                | 16.07.XXX<br>New Section | n/a          | Proposes to modify WSEC C404.6 to add Table C404.6 rather than referring to Table C403.10.3 (in another section of the code).                                                                                                                                                                                                                                                       | <p>This consolidates all hot water pipe insulation requirements together into one place for easier code use. Only two temperature ranges are displayed because domestic hot water is rarely heated outside the 105-degree to 200-degree range. The footnote re: "outside the stated range" addresses these exceptions.</p> <p>This edit removes irrelevant information, clarifies the "vertical support" exception, and states that tubular insulation is still subject to pipe insulation requirements even if a manufacturer recommends thinner insulation. New Table C404.6 makes requirements more readable, consolidating hot water pipe insulation thickness requirements in one place, instead of having to refer to a table in C403 and its footnotes.</p> <p>Compared to the State table, the proposed table integrates State footnote "a" into the table. Conductivity and mean rating temperature were moved to the right. Additionally, the fluid operating temperature ranges are simplified.</p> |
| 72                | 16.07.XXX<br>New Section | n/a          | Proposes to modify WSEC C404.7.1.2 for multiple riser systems. Item 1 is clarified to include 4-hour time period, Item 2 is deleted, Item 3 is modified for more precise balancing, Item 4 is added to require a variable speed circulation pump. Exception is added, which states Group I and Group R occupancies are not required to have controls to turn off circulation pumps. | Proposed change provides more precise design criteria for multiple riser systems – by replacing the term "extended periods when hot water is not required" to a 4-hour period, and further by defining what is required for balancing each riser and piping zone.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 73                | 16.07.XXX<br>New Section | n/a          | State code requires heat recovery be provided for pools, spas, and hot tubs. Proposed change clarifies that solar water heating systems required by C406 credits or C411 are not permitted to be used for exemptions from this section.                                                                                                                                             | Clarifies which solar water heating systems are exempt from heat recovery. Reduces "double-dipping" of systems that are now required in base code from other proposed changes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 74                | 16.07.XXX<br>New Section | n/a          | Adds code references for receptacles, controlled receptacles, solar readiness, and renewable energy. Added a minimum efficacy for luminaires in dwelling units.                                                                                                                                                                                                                     | Provide editorial changes for code usability. Clarifies which existing sections apply to different systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 75                | 16.07.XXX<br>New Section | n/a          | Proposes to modify WSEC Table C405.2(1) to correct typos and add reference for covered parking to applicable subsection.                                                                                                                                                                                                                                                            | Editorial corrections for code usability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                                                                                                              | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                       |
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| 76                | 16.07.xxx New Section    | n/a          | Minor modifications related to lighting control functions within warehouse storage areas and library stacks (WSEC C405.2.1.2).                                                                                                                                                               | Text revision to clarify that the 50 percent required reduction must be a 50 percent reduction from full power. Requires time switch lighting controls in areas that do not have occupant sensor lighting controls. This will reduce energy usage of lighting systems in areas that are infrequently occupied, saving energy and reducing utility bills.                                                               |
| 77                | 16.07.xxx New Section    | n/a          | Clarifies functionality of time switch controls. Reduced individual override switch controls to lighting for an area not larger than 2,500 square feet (reduced from 5,000 square feet).                                                                                                     | Greater specificity of controls requirements reduces confusion for designers, installers, and inspectors. Reducing area covered by individual overrides maintains more precise control of energy usage.                                                                                                                                                                                                                |
| 78                | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C405.2.3 to prohibit stairwells and parking garages from using manual lighting control switches.                                                                                                                                                                     | For safety and security of occupants in these spaces, manual lighting controls should not be easily accessible.                                                                                                                                                                                                                                                                                                        |
| 79                | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C405.2.4 to use term “dimming” versus “light-reduction” and provides a list of space types where dimming controls are required.                                                                                                                                      | This proposed amendment draws from a proposal for the 2024 IECC codes, expanding locations where dimming controls are to be provided. Dimming controls allow occupants more precise lighting control for occupant comfort, while also saving electricity.                                                                                                                                                              |
| 80                | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C405.2.4.1 to outline required functionality of dimming controls including manual controls readily available to occupants, and the ability to dim lighting to between 10 percent to 100 percent of full power (rather than 50 percent to 100 percent of full power). | Specific controls requirements are necessary for designers to select code compliant products and for inspectors to verify compliance. Controls which provide greater dimming capability allow occupants more precise lighting control for occupant comfort, while also saving electricity.                                                                                                                             |
| 81                | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C405.2.5.1 for daylight responsive controls function. Updates reference to sections in item 7. Item 10 is updated to not more than 60 lineal feet, item 12 is added for initial illuminance level settings.                                                          | Specific controls requirements are necessary for designers to select code compliant products and for inspectors to verify compliance. Daylight responsive controls provide automatic reduction in lighting for areas near windows or skylights that receive natural lighting. These more specific control functions allow occupants more precise lighting control for occupant comfort, while also saving electricity. |
| 82                | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C405.2.5.1.1 to require daylight responsive lighting controls be provided with continuous, rather than stepped dimming, and reduce lighting down to 10% of full power, versus 15 percent of full power.                                                              | Specific controls requirements are necessary for designers to select code compliant products and for inspectors to verify compliance. Controls which provide greater dimming capability allow occupants more precise lighting control for occupant comfort, while also saving electricity.                                                                                                                             |

| Ordinance Section | King County Code Section | Current Code                                                                            | Proposed Change                                                                                                                                                                                                                                                                                                                                                                   | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| 83                | 16.07.xx New Section     | n/a                                                                                     | Proposes to modify WSEC C405.2.6:<br>1: to add a requirement for automatic controls to turn off lighting installed within furniture in hotel rooms and sleeping units after 20 minutes of vacancy.<br>2: reference to "nonhuman life forms: edited to "plants and animals."                                                                                                       | Adding lighting installed in furniture in hotel rooms is more specific to common installations for that use type. The other edit is for readability.                                                                                                                                                                                                                                                                              |
| 84                | 16.07.310                | Provides interior lighting allowances for certain uses using the building area method.  | Proposes changes to Table C405.4.2(1), in most cases decreasing the allowed watts per square foot allowed in most building types. Proposes to remove footnotes for easier compliance.                                                                                                                                                                                             | Reduce all the interior lighting power densities (LPDs) to 10% below 2024 IECC (about 5 percent below current WA LPDs) for more energy efficient installations. This will reduce energy usage of lighting systems in most building types and is a low upfront cost way to save energy and reduce long term utility bills. Following State code by striking all the footnotes to the table and the footnotes in the table entries. |
| 85                | 16.07.320                | Provides interior lighting allowances for certain uses using the space-by-space method. | Proposes changes to Table C405.4.2(2), in most cases decreasing the allowed watts per square foot allowed in most space types. Adds some use types for more specificity in the code application. Footnotes are updated to reflect changes made at the state level for energy efficiency. Eliminate a footnote about task lighting since the code does not regulate task lighting. | Reduce all the interior LPDs to 10 percent below 2024 IECC (about 5 percent below current WA LPDs) for more energy efficient installations. This will reduce energy usage of lighting systems in most building types and is a low upfront cost way to save energy and reduce long term utility bills. Following State code by striking all the footnotes to the table and the footnotes in the table entries.                     |
| 86                | 16.07.XXX New Section    | n/a                                                                                     | Proposes to modify WSEC C405.4.2.2.1. to reduce the additional lighting power allowed in certain retail uses to highlight merchandise.                                                                                                                                                                                                                                            | This will reduce energy usage of lighting systems and is a low upfront cost way to save energy and reduce long term utility bills.                                                                                                                                                                                                                                                                                                |
| 87                | 16.07.XXX New Section    | n/a                                                                                     | Proposes to modify WSEC C405.5.5 to require full cutoff luminaires for open parking, outdoor areas, and roadways, and proposes criteria.                                                                                                                                                                                                                                          | The proposed cutoff requirements for lights mounted above 15 feet are aimed at decreasing energy consumption for exterior lighting and reducing light pollution and light spillover onto adjacent properties.                                                                                                                                                                                                                     |
| 88                | 16.07.XXX New Section    | n/a                                                                                     | Proposes to add Exception 6 to WSEC C405.8, allowing small fans to be exempted from C405.8 when they meet the modified Section C403.8.4 for low-capacity fans.                                                                                                                                                                                                                    | The proposed exception is to coordinate with the proposed change in Section C403.8.4 "Low-Capacity Ventilation Fans".                                                                                                                                                                                                                                                                                                             |
| 89                | 16.07.XXX New Section    | n/a                                                                                     | Current K.C.C. 16.07.210 requires Energy Star commercial kitchen equipment (fryers, hot food holding cabinets, steam cookers, and dishwashers). Current K.C.C. adds this to Section 403 of the WSEC, the proposed change corrects the location of this local amendment to end of Section 405 of the WSEC.                                                                         | Correcting location of local amendment within the structure of the State code only.                                                                                                                                                                                                                                                                                                                                               |

| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                       | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| 90                | 16.07.XXX<br>New Section | n/a          | Proposes to supplement WSEC C405 with a section on electrification readiness in new buildings where gas appliances are being installed in commercial kitchens. The change requires an electrical panel to be provided within or adjacent to each space with commercial cooking appliances, sized to serve future electric appliances to replace all fossil fuel-fired appliances in the space with a minimum voltage. | Allows the building owner and tenants to install electric commercial appliances instead of gas-fired appliances in the future. Conversion projects often encounter electrical service capacity issues which can be cost-prohibitive for remodels. This provision will prepare buildings to provide infrastructure for future electric appliance installations at a much lower cost.                                                                                                                                                                                                                                                                                                |
| 91                | 16.07.XXX<br>New Section | n/a          | Proposes to modify WSEC Table C406.1 to require that projects in both new buildings and building additions achieve more energy credits. Load management credit requirements are unchanged.                                                                                                                                                                                                                            | This change will require new construction or building additions to be more energy efficient by 10 percent across the board, meeting the goals of the SCAP, as well as the State's target to construct increasingly energy efficient buildings by the year 2031 per RCW 19.27A.020. Further, this will result in decreased energy bills for owners and tenants.                                                                                                                                                                                                                                                                                                                     |
| 92                | 16.07.XXX<br>New Section | n/a          | Corrects code references within WSEC C406.1.1.1.                                                                                                                                                                                                                                                                                                                                                                      | Corrected the code references that were incorrect in the State code.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 93                | 16.07.XXX<br>New Section | n/a          | Corrects code references within WSEC C406.1.1.2.                                                                                                                                                                                                                                                                                                                                                                      | Corrected the code references that were incorrect in the State code.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 94                | 16.07.XXX<br>New Section | n/a          | Proposes to modify WSEC Table C406.2(1):<br>1: removes credits that were added into the base code by other proposed changes.<br>2: amends points for certain credit options.                                                                                                                                                                                                                                          | City of Seattle contracted with the Pacific Northwest National Laboratory (PNNL) to analyze the State credit system with the final amendments in the WA code. PNNL did high-level energy modeling of 17 prototypical building types for analysis, and proposed the amended point values for the Seattle energy codes, which the County amendments are proposing to adopt. These are more accurate in terms of energy savings for each measure by building type.<br><br>Also, the enhanced commercial kitchen equipment credit (#27) is eliminated since this is already required by code and other credits are adjusted to account for increased requirements throughout the code. |
| 95                | 16.07.XXX<br>New Section | n/a          | Proposes to modify WSEC Table C406.2(2) to remove credits that were added into the base code by other proposed changes.                                                                                                                                                                                                                                                                                               | Removed two credit options that were added to the base code as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 96                | 16.07.XXX<br>New Section | n/a          | Adds Group R-1 sleeping units (such as hotel rooms) to those that can achieve credit for installation of advanced HVAC controls.                                                                                                                                                                                                                                                                                      | Allows this credit to be applied to sleeping units in R-1 occupancies (hotels).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Ordinance Section | King County Code Section | Current Code                                                             | Proposed Change                                                                                                                                                                                                                                      | Intent/Rationale                                                                                                                               |
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| 97                | 16.07.XXX New Section    | n/a                                                                      | Clarifies WSEC C406.2.2 (more efficient HVAC system performance) is not allowed to be used in low energy or semi-heating spaces, or in systems with fossil-fuel fired HVAC equipment or district energy systems.                                     | Clarifies which projects are eligible to use this credit option.                                                                               |
| 98                | 16.07.xxx New Section    | n/a                                                                      | Clarifies WSEC C406.2.2.3 (more efficient HVAC equipment heating performance) is not allowed to be used in systems with fossil-fuel fired HVAC equipment or district energy systems.                                                                 | Clarifies which projects are eligible to use this credit option.                                                                               |
| 99                | 16.07.xxx New Section    | n/a                                                                      | Clarifies WSEC C406.2.2.6 (high performance DOAS) is not allowed to be used in systems with fossil-fuel fired HVAC equipment or district energy systems. Further, provides reference to two other proposed local amendments (C403.7.6.1 and C403.8). | Clarifies the required efficiencies for DOAS systems for R-2 occupancies, and clarifies which projects are eligible to use this credit option. |
| 100               | 16.07.xxx New Section    | n/a                                                                      | Clarifies which space types are eligible for WSEC C406.2.4.2 (enhanced digital lighting controls).                                                                                                                                                   | Clarifies that this credit cannot be used in larger open office areas where the base code already requires advanced lighting controls.         |
| 101               | 16.07.xxx New Section    | n/a                                                                      | Clarifies WSEC C406.2.6 (reduced energy use in service water heating) is not allowed to be used in systems with fossil-fuel fired equipment or district energy systems.                                                                              | Clarifies which projects are eligible to use this credit option.                                                                               |
| 102               | 16.07.xxx New Section    | n/a                                                                      | Proposes to modify WSEC C406.2.6.3.1 (heat pump water heating) to require projects using this credit use refrigerants with low global warming potential.                                                                                             | Allows only the use of refrigerants with low global warming potential in alliance with SCAP goals.                                             |
| 103               | 16.07.xxx New Section    | n/a                                                                      | Proposes to not adopt WSEC C406.2.10.                                                                                                                                                                                                                | Struck because it is now required in the base code based on amendments to C404.7.1.2.                                                          |
| 104               | 16.07.xxx New Section    | n/a                                                                      | Proposes to not adopt WSEC C406.2.14.                                                                                                                                                                                                                | Struck because it is now required in the base code based on amendments to C405.14.                                                             |
| 105               | 16.07.xxx New Section    | n/a                                                                      | Proposes to modify WSEC C407.2 to allow and provide compliance measures for the "total building performance method."                                                                                                                                 | Clarifies the requirements for construction drawings needed for permit issuance based on proposed project credits.                             |
| 106               | 16.07.490                | Provides a table of building performance factors for energy conservation | Proposes to modify the performance factors.                                                                                                                                                                                                          | This sets values 10 percent below the 2021 State code, in recognition of the County's more stringent prescriptive code.                        |
| 107               | 16.07.xxx New Section    | n/a                                                                      | Proposes to modify WSEC Table C407.3(3) that provides site energy performance target to be used for compliance with Section C407.3.                                                                                                                  | This proposed amendment sets value 10% below the 2021 State code, in recognition of the County's more stringent prescriptive code.             |



| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                                                                                                                                                                      | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                    |
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| 108               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C407.3.1 that limits substandard envelopes to not more than 10 percent higher than Allowed Total UA (versus 20 percent higher as allowed by state code).                                                                                                                                                                     | Reduces the calculated UA of a proposed building to not more than 10 percent of allowed UA, rather than 20 percent as allowed by the state code. Aligns the requirements with the high-performance fenestration requirements added to Table C402.4.                                                                                                                                                                 |
| 109               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C407.3.4 to include a table of approved unregulated load types. States what is proposed for inclusion in a request for such load types. Proposes that unregulated load savings must follow this section rather than ASHRAE Appendix G Table G.31 – No. 12 Receptacle and Other Load Baseline Building Performance Exception. | Clarifies the predicted energy and carbon emission reductions for certain unregulated load types to be used in modeling.                                                                                                                                                                                                                                                                                            |
| 110               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C408.1.1 to include criteria for the commissioning process on electrical and mechanical permits.                                                                                                                                                                                                                             | Clarifies where commissioning provisions of different systems are required to be documented within permit plan sets, and at what point in the plan review and inspection process those are to be provided to the County.                                                                                                                                                                                            |
| 111               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C408.1.2 to state that a commissioning plan shall be submitted to the department prior to the first mechanical inspection.                                                                                                                                                                                                   | Allows the commissioning plan to be submitted after permit issuance, but before first mechanical inspection. This timing supports earlier developer engagement in the process and could improve third party outcomes.                                                                                                                                                                                               |
| 112               | 16.07.XXX New Section    | n/a          | Proposes to modify WSEC C408.1.3 to state that a commissioning report shall be submitted to the department prior to the final inspection.                                                                                                                                                                                                            | Allows the commissioning report to be submitted after permit issuance, but before final inspection. This timing supports typical construction scheduling and commissioning process timing.                                                                                                                                                                                                                          |
| 113               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C408.1.4.1 to state which portions of a commissioning plan shall be submitted to the department prior to completion and approval of the mechanical permit and building permit final inspection. Also, proposes requirements for post-occupancy commissioning completion.                                                     | Clarifies when final commissioning documents must be submitted and outlines a process for commissioning completion post-occupancy. This is often an issue when buildings want to be granted occupancy by the County, but certain commissioning aspects are not able to be completed for various reasons. This allows developers and contractors more flexibility, while ensuring code requirements are enforceable. |
| 114               | 16.07.xxx New Section    | n/a          | Proposes to add WSEC C408.4.2 requiring commissioning of high-end trim, where installed. This comes from the 2024 IECC code change at the national level.                                                                                                                                                                                            | High-end trim is a system that allows lighting to be initially set at about 90 percent output, and gradually ramps up over several years to accommodate degradation of the system. This avoids starting off with more lighting than is necessary.                                                                                                                                                                   |

| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                       | Intent/Rationale                                                                                                                                                                                                                                                                                                                                              |
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| 115               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C409.1 to require commissioning of buildings greater than 20,000 square feet (versus 25,000 square feet).                                                                     | Increases the threshold for commissioning from 20,000 square feet to 25,000 square feet. Clarifies that for group R-2 occupancies, the area within dwelling units may be excluded from that calculation. Requiring more buildings to be commissioned will ensure systems are installed and functioning as intended to provide the energy savings as designed. |
| 116               | 16.07.xxx New Section    | n/a          | Proposed addition of an Exception to WSEC C409.2.1 to set guidelines for metering of site lighting and other exterior non-building electrical loads.                                                  | The exception allows electrical design and installation more flexibility by explicitly allowing these loads when served by an electrical service and meter separate from the building, to be metered independently, or be combined with the metering of the rest of the building electrical data.                                                             |
| 117               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C409.2.4 to require metering of waste heat reclaimed from sewers or other off-site sources.                                                                                   | Adds a requirement to meter waste heat reclaimed from sewers. Promotes waste heat recovery and building owner awareness to ensure the system functions as designed.                                                                                                                                                                                           |
| 118               | 16.07.xxx New Section    | n/a          | Proposes to supplement WSEC C409.3.1 to require ventilation fan energy and other HVAC energy use within enclosed parking garages larger than 3,000 square feet be submetered separately.              | This will help to delineate a system that is a potentially large component of garage energy use (a separate system with separate schedules compared to other garage systems). Submetering allows building managers to monitor each individual system, which is useful if/when one of the systems begins to fail and causes spikes in energy use.              |
| 119               | 16.07.xxx New Section    | n/a          | Proposes to supplement WSEC C409.3.3 to require lighting energy use in parking garages larger than 3,000 square feet to be submetered separately.                                                     | This will help to delineate a system that is a potentially large component of garage energy use (a separate system with separate schedules compared to other garage systems). Submetering allows building managers to monitor each individual system, which is useful if/when one of the systems begins to fail and causes spikes in energy use.              |
| 120               | 16.07.xxx New Section    | n/a          | Adds an Exception to WSEC C409.3.5 which permits exclusion of electric receptacles located in fire-rated or smoke-rated corridors, enclosed stairwells, or egress passageways from required metering. | Adds an exception to omit metering of receptacles in fire rated corridors to avoid conflicts with fire-resistance rated construction.                                                                                                                                                                                                                         |
| 121               | 16.07.xxx New Section    | n/a          | Proposed addition of an Exception to WSEC C409.4.1 to set guidelines for metering of site lighting and other exterior non-building electrical loads.                                                  | The exception allows electrical design and installation more flexibility by explicitly allowing these loads, when served by an electrical service and meter separate from the building, to be metered independently, or be combined with the metering of the rest of the building electrical data.                                                            |

| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                                                                                                                                                                                      | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                          |
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| 122               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C410.1 to regulate walk-in coolers, walk-in freezers, refrigerated warehouse coolers, refrigerated warehouse freezers, and refrigerated display cases.                                                                                                                                                                                       | Clarifies that refrigerated warehouses must comply with either the building thermal envelope requirements of C402 or C410, whichever is more restrictive.                                                                                                                                                                                                                                                 |
| 123               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C410.3 to clarify that refrigerated warehouses must comply with either the building thermal envelope requirements of C402 or C410, whichever is more restrictive. Requires evaporator fans in refrigerated warehouses to be variable speed.                                                                                                  | Provide clarification for application of code to refrigerated warehouses.                                                                                                                                                                                                                                                                                                                                 |
| 124               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C410.5.2 to clarify the minimum efficiency requirements for compressor systems in refrigerated warehouses.                                                                                                                                                                                                                                   | Provide clarification for application of code to refrigerated warehouses.                                                                                                                                                                                                                                                                                                                                 |
| 125               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C411.1 to reduce building size threshold from 10,000 square feet to 5,000 square feet for purposes of C411 scoping. Further, requires energy generation of 0.75 watts per square foot (versus 0.5 watts per square foot) for scoped buildings. Modifies exceptions to address inadequate building roof sizes and affordable houses projects. | More buildings will be required to be provided with on-site energy, and the size of the required on-site renewable energy will supply, on average, 15 percent of building energy use.                                                                                                                                                                                                                     |
| 126               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C411.1.1 to clarify quantity of additional credits from WSEC Table C406.2 a project must achieve when qualifying for an exception to omit installation of on-site renewable energy generation systems.                                                                                                                                       | The current code is increasing the amount of renewable energy required on-site, necessitating a corresponding increase in the number of credits required when solar is not pursued. This ensures actual solar capacity is being added, rather than the purchase of renewable energy certificates (RECs) for existing systems, a practice that could be discontinued following building permit completion. |
| 127               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C411.2 to include regulations for qualifying on-site and off-site renewable energy delivered or credited to the building project to comply with the code. Proposes to modify WSEC C411.2.1 to list qualifying off-site renewable energy systems.                                                                                             | Proposes additional time to secure this option. It also notes that RECs for a specific off-site project can be submitted, whereas RECs purchased on the open market would not qualify. Clarifies when power purchasing agreements are used, and that such contracts must comply primarily with 411.2.2.                                                                                                   |
| 128               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C411.2.2 to include the requirements that qualifying off-site renewable energy shall meet.                                                                                                                                                                                                                                                   | Clarifies that renewable power systems installed to comply with other code requirements also have to comply with documentation requirements and clarifies the timing of submitting the documentation.                                                                                                                                                                                                     |

| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                                                                                                                                                             | Intent/Rationale                                                                                                                                                                                          |
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| 129               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C411.3.1 to clarify that mechanical equipment clearances must be required by code or the manufacturer to be considered excluded when calculating roof area for required solar readiness.                                                                                                                            | Provides necessary clarification for the calculation for code enforceability.                                                                                                                             |
| 130               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C411.3.3 to describe what appurtenances may be excluded from and located within the solar zone.                                                                                                                                                                                                                     | Clarifies that if racking for future solar is installed at time of construction, it must meet height limits of K.C.C. zoning code.                                                                        |
| 131               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C411.3.7 to include criteria for roof penetration conduit for photovoltaic systems, and to state where interconnections of future photovoltaic systems may be provided in regard to the service panel, and the form the interconnection must be.                                                                    | Adds specific requirements for the design and installation of roof penetration conduit for photovoltaic systems.                                                                                          |
| 132               | 16.07.xxx New Section    | n/a          | Proposes to add an Exception to WSEC C502.3, exempting additions less than 500 square feet from providing air leakage testing.                                                                                                                                                                                                              | Allowing small projects to omit this from the project scope would save time and money for contractors.                                                                                                    |
| 133               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C503.3 to:<br>1: state that new building envelope assemblies that are part of an alteration shall comply with WSEC 402.1 through C402.5 and C503.3.1 through C503.3.3.<br>2: require altered or replaced opaque envelope assemblies to not have a higher overall U-value than the existing.<br>3: add an exception. | Clarifies alteration to the building envelope must be at least as thermally efficient as existing materials.                                                                                              |
| 134               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C503.3.2 to include criteria for alterations that include the addition of new vertical fenestration.                                                                                                                                                                                                                | States that the calculation for adding windows may be based on only the addition or the existing building plus the addition. The proposed revision provides clarification in the application of the code. |
| 135               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C503.3.2.1 to include criteria for existing fenestration units that are replaced with new fenestration products and adds an exception.                                                                                                                                                                              | Clarifies that replacement windows must be at least as thermally efficient as the existing windows.                                                                                                       |

| Ordinance Section | King County Code Section | Current Code | Proposed Change                                                                                                                                                                                                                                          | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| 136               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C503.4.2, C503.4.3, and C503.4.6. Proposes to state that when a mechanical cooling system is added to a space not previously cooled, the mechanical system shall comply with either WSEC 403.3.5 or C403.5, and adds exceptions. | Reorganizes section and makes several significant changes to the rules from moving from gas to heat pump heating:<br>Exception 1 categorically exempts affordable housing, I occupancies (hospital, correctional, etc.), buildings housing nonprofits, and buildings smaller than 20,000; however, those buildings have to provide a "future decarbonization plan" per C503.4.6.1 below.<br>Exception 2 permits buildings to retain half of their existing fossil fuel capacity, controlled to operate only during cold weather or other high-load situations.<br>Exception 3 allows like-for-like temporary emergency replacement of one (or more) boilers beyond the 50 percent allowed by Exception 8. These projects also have to provide a "future decarbonization plan" per C503.4.6.1, and they have to ensure timely replacement of the temporary equipment with heat pumps via either a TCO or performance bond.<br>Exception 4 of the new code is retained and modified, exempting buildings that would require a disproportionately expensive electric service upgrade.<br>Exception 5 exempts several types of equipment, most from the original exceptions that have been struck. |
| 137               | 16.07.xxx New Section    | n/a          | Proposes to modify WSEC C503.5 to add regulations for new service water heating systems and adds exceptions.                                                                                                                                             | Adds multiple exceptions from full compliance with C404 (heat pump water installation) for replacement of water heating equipment when it would require a utility service upgrade, and in certain building types such as affordable housing, and in emergency equipment replacement situations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| Ordinance Section | King County Code Section | Current Code                                                                       | Proposed Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Intent/Rationale                                                                                                                                                                                                        |
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| 138               | 16.07.xxx New Section    | n/a                                                                                | <p>Proposes to modify WSEC C505.2 to state that for the purposes of this section, space conditioning area categories include low energy space, semi-heated space, and conditioned space. Proposes the cases in which space undergoing a change in space conditioning shall be brought up to full compliance and adds exceptions.</p> <p>This proposed amendment generally requires that when a room or space that already has heating (in a building subject to this code) proposes to add cooling, that project or space must either:</p> <ul style="list-style-type: none"> <li>• Be brought up to code, or</li> <li>• The HVAC heating system for that area must be replaced with an electric heat pump, which also provides cooling.</li> </ul> | This proposed update addresses requirements for existing gas heating systems and helps clarify existing code.                                                                                                           |
| 139               | 16.07.xxx New Section    | n/a                                                                                | Proposes to supplement WSEC C506, requiring metering where HVAC equipment is added or replaced.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Proposes to require electric and natural gas metering at the time of HVAC equipment replacement for building owner awareness and to ensure systems are functioning as designed.                                         |
| 140               | 16.07.xxx New Section    | n/a                                                                                | Proposes to supplement WSEC C506, requiring metering where service water heating equipment is added or replaced C506.3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Proposes to require electric and natural gas metering at the time of water heating equipment replacement for building owner awareness and to ensure systems are functioning as designed.                                |
| 141               | 16.07.xxx New Section    | n/a                                                                                | Proposes to supplement WSEC C506, requiring metering when a tenant improvement is permitted where a single tenant will occupy a full floor or multiple floors of a building. C506.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Proposes to require electrical submetering at time of building permit when a tenant will occupy a full floor of a building for tenant and building owner awareness and to ensure systems are functioning as designed.   |
| 142               | 16.07.xxx New Section    | n/a                                                                                | Proposes to supplement WSEC C506, requiring all metering provisions of C409 to be met when all or substantially all of an existing electrical system is replaced under a single electrical permit or within a twelve-month period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Proposes to require all the metering provisions of Section C409 to be met when a building's electrical system is substantially replaced for building owner awareness and to ensure systems are functioning as designed. |
| 143               | 16.08.050                | Sets out maintenance requirements for address numbers                              | Proposes to add language from IFC 2021 and added metric units.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Consistency with the IFC.                                                                                                                                                                                               |
| 144               | 16.14.090                | States that the right of entry is in accordance with procedures in K.C.C. Title 23 | Proposes to update the IPMC reference section.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Consistency with the IPMC.                                                                                                                                                                                              |

| Ordinance Section | King County Code Section | Current Code                                                                                               | Proposed Change                                                                                                                                                                                     | Intent/Rationale                                                                                                                                                                                                                                                                                                                                 |
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| 145               | 16.14.100                | States it is unlawful to build, repair, etc. in violation of the code                                      | Proposes to update the IPMC reference section.                                                                                                                                                      | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 146               | 16.14.110                | Requires public nuisances to be abated in accordance with K.C.C. Title 23                                  | Proposes to update the IPMC reference section.                                                                                                                                                      | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 147               | 16.14.200                | Authorizes the code official to condemn a structure                                                        | Proposes to update the IPMC reference section.                                                                                                                                                      | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 148               | 16.14.210                | Requires notice of unsafe structures pursuant to K.C.C. Title 23                                           | Proposes to update the IPMC reference section, and minor verbiage revision.                                                                                                                         | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 149               | 16.14.220                | Provides regulations associated with a placard to vacate                                                   | Proposes to update the IPMC reference section.                                                                                                                                                      | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 150               | 16.14.280                | Authorizes the code official to perform emergency repairs                                                  | Proposes to update the IPMC reference section.                                                                                                                                                      | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 151               | 16.14.290                | Does not adopt Sections 109.5 and 109.6 of the IPMC                                                        | Proposes to update the IPMC reference section.                                                                                                                                                      | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 152               | 16.14.430                | State that appeals must be in accordance with K.C.C. Titles 20 and 23                                      | Proposes to update the IPMC reference section.                                                                                                                                                      | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 153               | 16.14.450                | Requires building owners to be responsible for safe sanitation and structural conditions.                  | Proposes to add language that grants authority to the Hearing Examiner to determine liability for violations. Proposes to change the term "health ordinance" to "King County Board of Health Code". | Proposes to grant the Hearing Examiner authority to avoid doing substantial injustice to a non-culpable property owner and bring this code into alignment with K.C.C. 23.36.030.B. "Health ordinance" means "King County Board of Health Code" (KCBOH code). Stating "KCBOH code" more clearly incorporates KCBOH and directives into the K.C.C. |
| 154               | 16.14.460                | Authorizes the jurisdiction to prosecute if an owner fails to abate a premises to avoid fire or explosion. | Proposes more specific language for how a premises should be maintained and allows the jurisdiction to cut and destroy noxious weeds.                                                               | Clarifies existing intent by specifying that neither noxious weeds nor vegetation that creates a fire hazard can be present on a property.                                                                                                                                                                                                       |
| 155               | 16.14.490                | Requires addresses to be provided and visible from the road.                                               | Proposes a slight rewording.                                                                                                                                                                        | Proposed rewording for clarity.                                                                                                                                                                                                                                                                                                                  |
| 156               | 16.14.540                | Requires dwelling units and guest rooms to have a heat supply.                                             | Proposes a slight rewording.                                                                                                                                                                        | Proposed rewording for clarity.                                                                                                                                                                                                                                                                                                                  |
| 157               | 16.14.550                | Does not adopt Section 602.4 of the IPMC.                                                                  | Proposes substitute language for IPMC 602.4 and to require indoor occupiable workspaces to have heating and provides exceptions.                                                                    | Consistency with the IPMC.                                                                                                                                                                                                                                                                                                                       |
| 158               | 16.32.030                | Adopts specific editions of various codes as part of the Uniform Plumbing Code.                            | Proposes to adopt the 2021 edition of the codes, which is the current edition for this update.                                                                                                      | Proposes to specify which edition of the codes are being adopted and will be in effect.                                                                                                                                                                                                                                                          |
| 159               | 16.32.050                | Grants authority to enforce the plumbing code.                                                             | Proposes rewording.                                                                                                                                                                                 | Proposed to be reworded for clarity while maintaining the original intent.                                                                                                                                                                                                                                                                       |

| Ordinance Section | King County Code Section | Current Code                                                                         | Proposed Change                                                                                                                                                                                                                                                        | Intent/Rationale                                                                                                                                                                                                                                                                    |
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| 160               | 16.32.080                | Provides a fee schedule for plumbing applications.                                   | Proposes to amend language in 16.32.080 to align with Board of Health (BOH) code language that describes how to review and adjust fees.                                                                                                                                | The language in this code section differs from the fee adjustment authorization language in the BOH code. Because the code sections are not currently identical, they yield different outcomes.                                                                                     |
| 161               | 16.32.195                | Designates the "authority having jurisdiction".                                      | Proposes to update the applicable adopted code section.                                                                                                                                                                                                                | Proposes to correct the reference to the UPC, because the sections of the newest edition of the UPC have been renumbered.                                                                                                                                                           |
| 162               | 16.32.215                | Authorizes use of a stop work order and provides procedures                          | Proposes to revise numbering.                                                                                                                                                                                                                                          | Proposed revision to improve code usability.                                                                                                                                                                                                                                        |
| 163               | 16.32.235                | Clarifies that the code does not create or form the basis of liability of the county | Proposes to add some commas.                                                                                                                                                                                                                                           | Proposed revisions for ease of reading, maintain consistency with King County drafting standards.                                                                                                                                                                                   |
| 164               | 16.32.xxx New Section    | n/a                                                                                  | Proposes to grant authority to the jurisdiction, and provides criteria for, issuance of plumbing permits.                                                                                                                                                              | This new section proposes to provide clarity of the authority granted to the jurisdiction and to provide clear criteria for the issuance of plumbing permits, including all applicable fees being paid and construction documents having been reviewed and approved when necessary. |
| 165               | 16.32.xxx New Section    | n/a                                                                                  | Proposes criteria for determination of complete plumbing permit applications and provides exceptions.                                                                                                                                                                  | Provides additional criteria for plumbing permit applications.                                                                                                                                                                                                                      |
| 166               | 16.32.285                | Provides a basis for the validity of plumbing permits                                | Proposes to revise numbering.                                                                                                                                                                                                                                          | Consistency with chapter.                                                                                                                                                                                                                                                           |
| 167               | 16.32.295                | Provides criteria for the suspension or revocation of plumbing permits               | Proposes to revise numbering.                                                                                                                                                                                                                                          | Consistency with chapter.                                                                                                                                                                                                                                                           |
| 168               | 16.32.306                | Provides regulations for reinspection of plumbing projects.                          | Proposes to allow a reinspection fee to be assessed when an inspection is called but an inspection cannot take place for various reasons and restricts a reinspection fee from being applied after the first inspection that is rejected or does not comply with code. | Proposes a revision to include a comprehensive list of conditions that would prevent an inspector from being able to complete a field inspection and allows the County to conduct and charge for a reinspection. Proposes to set limits on when a reinspection fee may be required. |
| 169               | 16.32.xxx New Section    | n/a                                                                                  | Proposes to modify UPC 308 to not allow plumbing or piping to be installed exterior to a building, unless required or approved. Proposes exceptions.                                                                                                                   | Requested change by field inspectors to have an enforcement mechanism to prohibit unnecessary exterior plumbing installations.                                                                                                                                                      |
| 170               | 16.32.xxx New Section    | n/a                                                                                  | Proposes to modify UPC 418.3 to list the areas where floor drains need to be installed.                                                                                                                                                                                | Proposes to address "toilet rooms" which are a new trend of gender neutral or "family" style framed rooms containing toilets. Also proposes to close a code loophole that allowed multiple toilet rooms without any sort of floor drainage.                                         |
| 171               | 16.32.xxx New Section    | n/a                                                                                  | Proposes to supplement UPC 418.5 and to state that floor shall be sloped to floor drains and provides exceptions.                                                                                                                                                      | Resolves previous ambiguity regarding how to comply with standards for existing buildings with post tensioned concrete (PT) slabs.                                                                                                                                                  |



| Ordinance Section | King County Code Section | Current Code                                                                                                                         | Proposed Change                                                                                                                                                        | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| 172               | 16.32.338                | Provides regulations for potable water heating devices that use refrigerant-to-water heat exchangers.                                | Proposes to remove the UPC section reference number.                                                                                                                   | Proposes to remove the reference to the UPC, because the section is not located within the UPC.                                                                                                                                                                                                                                                                                                                                                                   |
| 173               | 16.32.340                | Requires plumbing fixtures to be drained to the sanitary waste system by gravity flow and provides an exception to this requirement. | Proposes to update the section number and proposes to consolidate the exception into the main part of the regulation as a permitted action.                            | Language in this section is proposed to be brought into alignment with the Seattle Plumbing Code (SPC) which removes the ambiguous term "practicable" and defaults to approval of the authority having jurisdiction for systems draining by means other than gravity. Aligning K.C.C. and SPC code language will ensure enforcement and compliance is consistent across jurisdictions, as both jurisdictions are served by public health - Seattle & King County. |
| 174               | 16.32.341                | Provides regulatory authority for plan review fees.                                                                                  | Proposes to add language specifying when permit approval may be rescinded or when permit issuance may be denied and proposes to add an exception to these regulations. | Reflects standard operating procedures.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 175               | 16.32.342                | Provides air admittance valve regulations.                                                                                           | Proposes to update the section number, and to add new language to mimic the 2018 and 2021 Seattle Plumbing Code Section 913.                                           | The code section number is not found in the Uniform Plumbing Code (UPC). This update is proposed to adopt language from the SPC Section 913.0. The SPC language mimics standard model code language and format where the current K.C.C. 16.32.342 language does not. Aligning K.C.C. and SPC code language will ensure enforcement and compliance is consistent across jurisdictions, as both jurisdictions are served by public health-Seattle & King County.    |
| 176               | 16.32.343                | Provides grease interceptor regulations                                                                                              | The proposed amendment deletes the regulations about grease interceptors but maintains the existing exception.                                                         | Removes duplicate code language.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 177               | 16.32.xxx New Section2   | n/a                                                                                                                                  | Proposes to modify UPC 608.1 to require water pressure to be at least 15 pounds per square inch.                                                                       | AASE devices are tested at a pressure higher than 15 psi. There is no guarantee of performance outside of the tested pressure range.                                                                                                                                                                                                                                                                                                                              |
| 178               | 16.32.xxx New Section    | n/a                                                                                                                                  | Proposes to modify UPC 609.12 to require water piping within commercial buildings to be insulated in accordance with the WSEC.                                         | The model Plumbing Code conflicts with WSEC in this section of pipe insulation. The State Plumbing Code (UPC as amended by WA) amends section 609.12 to comply with WSEC. Because the County is proposing to amend sections of the WSEC, the State version of 609.12 is not adopted and compliance with the WSEC as adopted and amended by the County is required.                                                                                                |

| Ordinance Section | King County Code Section | Current Code                                                                                                    | Proposed Change                                                                                                                                                                         | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| 179               | 16.32.xxx New Section    | n/a                                                                                                             | Proposes to replace Table 610.3 of the UPC. Proposes to provide the fixture branch pipe size for each type of appliance, appurtenance, or fixture.                                      | 3/8" tubing is increasingly popular due to Energy Code requirements. With 1.2 gallons per minute lavatories being required by State law for private use, the flow rate from a single lavatory will not exceed the velocity limit of 3/8" PEX tubing. Rather than making applicants submit an Alternate Means and Methods Request Form (AMMRF) to use 3/8" water supply branches for lavatories, the code will propose allowing 3/8" tubing.                                                                                                        |
| 180               | 16.32.xxx New Section    | n/a                                                                                                             | Proposes to replace Table 702.2(2) of the UPC. Proposes to provide equivalency of gallons per minute flow to number of fixture units.                                                   | Table 702.2(2) is used for uses like fire/sprinkler blowdown, reduced pressure backflow assembly relief, and other intermittent uses exceeding 50 gallons per minute, but it is not clear what drainage fixture unit value to assign without first asking the authority having jurisdiction. The proposed revision would extend the table to cover most uses.                                                                                                                                                                                      |
| 181               | 16.32.xxx New Section    | n/a                                                                                                             | Proposes to modify UPC 704.3 to require plumbing fixtures, drains, 3-compartment sinks, etc., to be connected to the drainage system, except where required to be connected indirectly. | There has been confusion about how to connect a 3-compartment sink. The proposed amendment provides clarification.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 182               | 16.32.xxx New Section    | n/a                                                                                                             | Proposes to modify UPC 710.4 to provide criteria for discharge lines for ejector pump or other mechanical device and provides an exception.                                             | No official guidance has been provided in code since hoistway pumps or drains became an ASME A17.1 requirement. Adds clarity and provides the potential option for removing check valves in the future.                                                                                                                                                                                                                                                                                                                                            |
| 183               | 16.32.xxx New Section    | n/a                                                                                                             | Proposes to modify UPC 710.5 to require building drains and sewers receiving discharge from a pump ejector to be adequately sized and provides an exception.                            | The County has been allowing firms to submit an AMMRF to use Table 702.2(2) for pump discharge from elevator hoistway and similar pumps for emergency operation. Only certain engineering firms are aware of this allowance. This will let others know that this is an option.                                                                                                                                                                                                                                                                     |
| 184               | 16.32.xxx New Section    | n/a                                                                                                             | Proposes to modify UPC 803.3 to include regulations for indirect waste piping, along with an exception.                                                                                 | Hoistway drainage is required to be indirect, but from hoistway to indirect receptor may exceed 15 feet. This indirect drainage pipe will likely never be used, and if it is, it will dry out within hours of the emergency situation being resolved. A standard trap in the indirect waste line (required for indirect waste exceeding 15') could be siphoned through elevator car movement in the hoistway and the trap would act as a settlement area for any debris at the bottom of the hoistway as there is no regular scouring of the trap. |
| 185               | 16.32.344                | Prohibits food waste disposers and dishwasher from being connected to or discharging into a grease interceptor. | Proposes to eliminate this code section except for the exception.                                                                                                                       | All but the exception to UPC 1014.1.3 are contained with the UPC model code, so that duplicate language no longer needs to be in the County's code.                                                                                                                                                                                                                                                                                                                                                                                                |

| Ordinance Section | King County Code Section | Current Code                                                                                                                     | Proposed Change                                                                                                                      | Intent/Rationale                                                                                                                                                                                    |
|-------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 186               | 16.32.345                | Regulates parking garage drainage systems.                                                                                       | Proposes to delete the old UPC language and provides SPC language.                                                                   | The UPC does not address parking garage drainage systems; therefore, this entire section is proposed to be revised to mirror the 2021 SPC to capture parking garages in unincorporated King County. |
| 187               | 16.32.xxx New Section    | n/a                                                                                                                              | Proposes to modify Section 1101.12.2.2.2 of the UPC to describe how to connect secondary roof drains to the storm drainage system.   | This creates a relief path in case of main storm drain blockage so roof drainage does not back up onto a roof.                                                                                      |
| 188               | 16.82.130                | Provides procedures for abatement of a clearing and grading violation                                                            | Proposes new language for clarity and expands authority of the director to provide flexibility for abatement.                        | Strengthens the County's ability to enforce clearing and grading violations, while at the same time providing flexibility that can help applicants achieve compliance.                              |
| 189               | 17.04.010                | Adopts the IFC along with amendments, additions, deletions, and modifications as referenced or adopted in Title 17               | Proposes to add Appendix D (Fire Apparatus Access and Roads), and updated dates.                                                     | For consistency with the International Fire Code (IFC).                                                                                                                                             |
| 190               | 17.04.200                | Provides authorities and responsibilities of the fire marshal                                                                    | Proposes a minor text revision.                                                                                                      | For internal consistency within K.C.C.                                                                                                                                                              |
| 191               | 17.04.210                | Provides enforcement authorities and responsibilities of the fire marshal                                                        | Proposes minor text revisions.                                                                                                       | Corrects spelling.                                                                                                                                                                                  |
| 192               | 17.04.220                | Describes the fire marshal's authority                                                                                           | Proposes a minor text revision.                                                                                                      | For internal consistency within K.C.C.                                                                                                                                                              |
| 193               | 17.04.280                | Requires applicants to provide notice of permit applications to fire districts, and describes responsibilities of fire districts | Proposes to update an IFC reference number and minor text revisions.                                                                 | For ease of reference with the IFC and consistency with K.C.C.                                                                                                                                      |
| 194               | 17.04.xxx New Section    | n/a                                                                                                                              | Proposes to modify IFC 105.3.1. Proposes an expiration and renewal criteria for operational permits.                                 | Provides clarity for applicants and staff.                                                                                                                                                          |
| 195               | 17.04.290                | Requires fees to be doubled when a fire protection system is started before obtaining approval                                   | Proposes minor text revisions.                                                                                                       | Proposed revision for consistency and clarity.                                                                                                                                                      |
| 196               | 17.04.xxx New Section    | n/a                                                                                                                              | Proposes to modify IFC 105.5.38. Proposes to require an operational permit for an outdoor assembly event that exceeds 50 persons.    | Clearly defines when an outdoor assembly permit is required.                                                                                                                                        |
| 197               | 17.04.295                | Requires a permit for the installation of solar photovoltaic systems, and provides an exception                                  | Proposes to update the IFC reference section, clarifies that a permit is not required for maintenance, and adds metric measurements. | For consistency with the K.C.C., IFC, and clarity.                                                                                                                                                  |
| 198               | 17.04.xxx New Section    | n/a                                                                                                                              | Proposes to modify IFC 105.6.21 to include criteria for a special event structure.                                                   | Provide clarity for applications for a special event structure.                                                                                                                                     |
| 199               | 17.04.310                | Does not adopt Section 109 of the IFC                                                                                            | Proposes to update the IFC section number.                                                                                           | Consistency with the IFC.                                                                                                                                                                           |
| 200               | 17.04.320                | Grants the fire marshal authority to issue a stop work order and require corrections of violations                               | Proposes to update IFC section numbers and deletes some language about stop work orders.                                             | Consistency with the IFC and proposes to move the deleted language to the new section below.                                                                                                        |

| Ordinance Section | King County Code Section | Current Code                                                                                             | Proposed Change                                                                                                                                                                                                                       | Intent/Rationale                                                                                                                                                                                                                                                          |
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| 201               | 17.04.330                | Does not adopt Section 112.4 of the IFC                                                                  | Proposes to add language stating that enforcement violations of a stop work order shall be in accordance with K.C.C. Title 23.                                                                                                        | Proposes to refer to Title 23 concerning violations of a stop work order.                                                                                                                                                                                                 |
| 202               | 17.04.341                | Provides definitions for the Fire Code                                                                   | Proposes to eliminate a definition for "critical fire service areas" and proposes to revise the definition "fire detection system" to "automatic fire detection system," and proposes to add metric measurements and minor revisions. | The 2021 IFC covers the types of rooms known as "critical fire service areas" with the definitions, so this definition is no longer needed. The definition for "automatic fire detection system" and other changes are proposed for consistency with K.C.C.               |
| 203               | 17.04.xxx New Section    | n/a                                                                                                      | Proposes to modify Section 322.4 of the IFC to require signage for lithium-ion and lithium metal battery installations.                                                                                                               | Builds on WA state amendments to the IFC addressing lithium-ion and lithium metal batteries; signage required for anything subject to IFC 322.2 (requiring permits, i.e., occupying more than 15 cubic feet). Derived from New York City Fire Department Rule 30, item 6. |
| 204               | 17.04.375                | Requires fire apparatus roads to be installed and arranged in accordance with IFC 503.2.1 and 503.2.2    | Proposes to update an IFC reference.                                                                                                                                                                                                  | For consistency with the IFC.                                                                                                                                                                                                                                             |
| 205               | 17.04.377                | Provides the minimum dimensions of a fire apparatus access road                                          | Proposes to add metric measurements.                                                                                                                                                                                                  | For internal consistency within K.C.C.                                                                                                                                                                                                                                    |
| 206               | 17.04.380                | Provides the surfacing standards of a fire apparatus access road                                         | Proposes to add metric measurements.                                                                                                                                                                                                  | For internal consistency within K.C.C.                                                                                                                                                                                                                                    |
| 207               | 17.04.390                | Provides the turning radius standards of a fire apparatus access road                                    | Proposes to add metric measurements and makes one spelling revision.                                                                                                                                                                  | For internal consistency within K.C.C.                                                                                                                                                                                                                                    |
| 208               | 17.04.400                | Requires a cul-de-sac or hammerhead-like turnaround for certain dead-end roads.                          | Proposes to add metric measurements and makes one spelling revision.                                                                                                                                                                  | For internal consistency within K.C.C.                                                                                                                                                                                                                                    |
| 209               | 17.04.420                | Provides criteria for marking, establishment, and obstruction of fire lanes                              | Proposes to revise the definition of fire lanes and add metric measurements.                                                                                                                                                          | Proposed updates for consistency with the IFC and K.C.C. Inserted sentences are quoted directly from IFC 2021.                                                                                                                                                            |
| 210               | 17.04.425                | Provides criteria for security gates, bollards, and other obstructions across a fire access road         | Proposes a minor text revision, writing out numbers, and adding metric measurements.                                                                                                                                                  | For consistency with the IFC and K.C.C.                                                                                                                                                                                                                                   |
| 211               | 17.04.447                | Requires new buildings with enclosed interior courtyards to have direct access to the exterior.          | Proposes to spell out numbers and adds metric measurements.                                                                                                                                                                           | For consistency with the IFC and K.C.C.                                                                                                                                                                                                                                   |
| 212               | 17.04.462                | Requires and radio coverage systems for new buildings meeting listed conditions, and provides exceptions | Proposes wording revisions to bring the section into conformance with the IFC, and proposes to spell out numbers, and add metric measurements.                                                                                        | For consistency with the IFC.                                                                                                                                                                                                                                             |
| 213               | 17.04.467                | Describes the minimum signal strength for emergency responder Radio coverage outside of a building       | Proposes to revise the outbound signal level and spells out a number.                                                                                                                                                                 | For consistency with the IFC and K.C.C.                                                                                                                                                                                                                                   |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                            | Proposed Change                                                                                                                         | Intent/Rationale                                                                                                                                                                                                                                                           |
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| 214               | 17.04.476                | Prohibits rebroadcasting of amplification systems capable of operating on frequencies licensed to any public safety agency without approval of the fire marshal and public safety radio system operator | Proposes to revise the IFC section number.                                                                                              | For consistency with the IFC.                                                                                                                                                                                                                                              |
| 215               | 17.04.489                | Provides the scope of chapter 17.04, and lists additional requirements                                                                                                                                  | Proposes minor text revisions.                                                                                                          | For consistency with the K.C.C.                                                                                                                                                                                                                                            |
| 216               | 17.04.520                | Requires an automatic fire-extinguishing system in new construction and those undergoing substantial improvement. An exception is provided                                                              | Proposes minor text revisions, adds a reference to another K.C.C. chapter, spells out numbers, and adds metric measurements.            | For consistency with the K.C.C.                                                                                                                                                                                                                                            |
| 217               | 17.04.560                | Provides conditions for when sprinkler systems shall be installed in habitable space for structures built under the IRC                                                                                 | Proposes to spell out numbers, add metric measurements, and delete exceptions.                                                          | For consistency with the K.C.C. No WACs provide for such exceptions. These exceptions were created "in house" over 40 years ago and should no longer be in place as lifting them will promote additional homes being sprinklered, promoting improved safety for residents. |
| 218               | 17.04.563                | Requires automatic sprinklers in buildings exceeding 10,000 square feet.                                                                                                                                | Proposes to add metric measurements.                                                                                                    | For consistency with the K.C.C.                                                                                                                                                                                                                                            |
| 219               | 17.04.572                | Provides fire sprinkler design requirements.                                                                                                                                                            | Proposes to spell out a number.                                                                                                         | For consistency with the King County code drafting standards.                                                                                                                                                                                                              |
| 220               | 17.04.574                | Requires supervised indicating control valves on each floor and provides an exception.                                                                                                                  | Proposes to add metric measurements.                                                                                                    | For consistency with the K.C.C.                                                                                                                                                                                                                                            |
| 221               | 17.04.582                | Provides the criteria for when Class I standpipe shall be installed and provides exceptions.                                                                                                            | Proposed to add metric measurements.                                                                                                    | For consistency with the K.C.C.                                                                                                                                                                                                                                            |
| 222               | 17.04.590                | Does not allow fire apparatus connections on a building without the fire marshals approval and must be located within 50 feet of a hydrant.                                                             | Proposes to spell out a number and adds a metric measurement.                                                                           | For consistency with the K.C.C.                                                                                                                                                                                                                                            |
| 223               | 17.08.030                | Lists which permits and approvals are exempt from the fire flow and fire hydrant requirements of the chapter                                                                                            | Proposes to remove some types of permits and approvals from the list exempt for fire flow and fire hydrant requirements of the chapter. | The proposed strikeouts/removals in this section align with the strikeouts in section 17.04.560. Exemption C is proposed to be removed because it is no longer needed because of the requirements that are proposed to be removed from section 17.04.560.                  |
| 224               | 17.08.090                | Grants the fire marshal the authority to approve deviations from fire code standards.                                                                                                                   | Proposes to change the spelled-out number "five hundred" to "500" for consistency with the rest of the fire code.                       | Technical corrections.                                                                                                                                                                                                                                                     |
| 225               | 17.08.100                | Describes the role of water authorities in regard to the fire code.                                                                                                                                     | Proposes to remove a semicolon at the end of a paragraph and replaces it with a period for grammatical accuracy.                        | Technical corrections.                                                                                                                                                                                                                                                     |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                        | Proposed Change                                                                                                                                                                                                                                                           | Intent/Rationale                                                                                                                                                                                        |
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| 226               | 17.08.140                | Does not allow more than 60 feet of piping that connects a customer's plumbing service to a purveyor's water main or meter in a public right-of-way unless in compliance with K.C.C. chapter 14.28. | Proposes to add a metric measurement.                                                                                                                                                                                                                                     | For consistency with the K.C.C.                                                                                                                                                                         |
| 227               | 17.08.xxx New Section    | n/a                                                                                                                                                                                                 | This section introduces a series of new code sections, including sections 229 through 234.                                                                                                                                                                                | Creates a new chapter in the K.C.C.                                                                                                                                                                     |
| 228               | 17.09.xxx New Section    | n/a                                                                                                                                                                                                 | Proposes to adopt IFC Appendix D.                                                                                                                                                                                                                                         | For consistency with the IFC.                                                                                                                                                                           |
| 229               | 17.09.xxx New Section    | n/a                                                                                                                                                                                                 | Proposes to modify IFC D103.2. Does not allow the gradient of fire apparatus access roads to exceed 15 percent.                                                                                                                                                           | Ensures access of emergency response equipment to property and structures.                                                                                                                              |
| 230               | 17.09.xxx New Section    | n/a                                                                                                                                                                                                 | Proposes to modify IFC 103.3 to provide criteria for the dimensions of fire apparatus roads.                                                                                                                                                                              | Ensures access and maneuverability of emergency response equipment to property and structures.                                                                                                          |
| 231               | 17.09.xxx New Section    | n/a                                                                                                                                                                                                 | Proposed to modify IFC D103.4 to require a cul-de-sac or a hammerhead-like turn around for dead end roads exceeding a specified length.                                                                                                                                   | Ensures access and maneuverability of emergency response equipment to property and structures.                                                                                                          |
| 232               | 17.09.xxx New Section    | n/a                                                                                                                                                                                                 | Proposes to modify IFC D103.5 to require approval for and provides criteria for gate, bollard, and other obstructions; these must be maintained and have an emergency means of operation. Proposes to prohibit the installation of tire spikes and provides an exception. | Ensures access of emergency response equipment to property and structures.                                                                                                                              |
| 233               | 17.09.xxx New Section    | n/a                                                                                                                                                                                                 | Proposes to modify IFC D103.6 to include sign specifications for fire apparatus access roads.                                                                                                                                                                             | Ensures adequate area for access of emergency response vehicles.                                                                                                                                        |
| 234               | 17.11.040                | Provides fireworks regulations.                                                                                                                                                                     | Proposes to revise numbering and minor text revisions.                                                                                                                                                                                                                    | Ensures clarity for staff and applicants and consistency with the K.C.C.                                                                                                                                |
| 235               | 17.11.060                | Provides the enforcement provisions specific to the Fireworks Code                                                                                                                                  | Proposes to remove a paragraph that stated that enforcement of the Fireworks Code would not occur until one year after the ordinance adopting the code took effect.                                                                                                       | The paragraph that is proposed for deletion is no longer needed as the one-year warning regarding enforcement has passed.                                                                               |
| 236               | n/a                      | n/a                                                                                                                                                                                                 | Lists the code sections proposed for repeal.                                                                                                                                                                                                                              | Multiple sections in the K.C.C. are outdated or no longer needed based on current and past State and ICC code changes and K.C.C. amendments. Each repeal is discussed further in the subsections below. |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                    | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                 |
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| 236.A             | 16.02.160                | Establishes that when differences occur between provisions of the county's adopted code and the referenced code and standards, the county's provisions of the code shall apply. | Repealed        | No longer needed as it is provided in the model code.                                                                                                                                                                                                                                                                                                                            |
| 236.B             | 16.02.170                | States which codes shall apply for the permitting of moved buildings.                                                                                                           | Repealed        | This section is not necessary as it is covered by IEBC 1401.2                                                                                                                                                                                                                                                                                                                    |
| 236.C             | 16.02.230                | States that Sections 105.1.1 and 105.1.2 of the IBC are not adopted.                                                                                                            | Repealed        | This code section removes authorization for King County to issue annual permits (for institutional uses with licensed contractors). There is no reason to take this option away. In addition, the language references scopes that permitting does not cover. Those scopes, gas and plumbing, are regulated by public health - Seattle & King County in a different code section. |
| 236.D             | 16.02.310                | States who applicant's plans that need corrections may be returned to.                                                                                                          | Repealed        | Outdated reference to paper plans. Now that permit applications are submitted and reviewed digitally, this is no longer applicable.                                                                                                                                                                                                                                              |
| 236.E             | 16.02.316                | Describes how live loads postings must occur.                                                                                                                                   | Repealed        | This is duplicative with the IBC.                                                                                                                                                                                                                                                                                                                                                |
| 236.F             | 16.02.370                | Provides responsibilities of the design professional in charge.                                                                                                                 | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |
| 236.G             | 16.02.410                | Requires an inspection record card at construction sites.                                                                                                                       | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |
| 236.H             | 16.02.470                | Allows either a certificate of occupancy or a certificate of shell completion to be issued.                                                                                     | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |
| 236.I             | 16.02.480                | Provides required contents of a certificate of occupancy.                                                                                                                       | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |
| 236.J             | 16.02.490                | Provides required contents of a certificate of shell completion.                                                                                                                | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |
| 236.K             | 16.02.500                | Allows either a temporary certificate of occupancy or a temporary certificate of shell completion to be issued.                                                                 | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |
| 236.L             | 16.02.510                | Provides the conditions under which a temporary certificate of occupancy may be issued.                                                                                         | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |
| 236.M             | 16.02.520                | Provides the conditions under which a temporary certificate of shell completion may be issued.                                                                                  | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |
| 236.N             | 16.02.530                | Grants authority to revoke a certificate of occupancy.                                                                                                                          | Repealed        | K.C.C. 16.02.370 through 16.02.530 are duplicative/irrelevant with the IBC.                                                                                                                                                                                                                                                                                                      |

| Ordinance Section | King County Code Section | Current Code                                                                          | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                      |
|-------------------|--------------------------|---------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 236.O             | 16.02.550                | States where a certificate of occupancy must be posted.                               | Repealed        | Current section says Section 112 of the IBC is not adopted, but this should be adopted, so this section is proposed to be repealed. This section allows the building official to regulate utility connections and disconnections.                                                     |
| 236.P             | 16.02.600                | States that the "Unsafe structures and equipment" section of the IBC is not adopted.  | Repealed        | The County wants to use IBC 116 rather than this code section.                                                                                                                                                                                                                        |
| 236.Q             | 16.03.057                | Definition of Boiler                                                                  | Repealed        | Based on the updated definition of water heater, a definition of boiler is no longer necessary.                                                                                                                                                                                       |
| 236.R             | 16.04.260                | Provides criteria for location of portable classrooms.                                | Repealed        | This code section is not necessary as this regulation is covered by IFC chapter 9.                                                                                                                                                                                                    |
| 236.S             | 16.04.270                | Provides criteria for location of portable classrooms.                                | Repealed        | This code section is not necessary as this regulation is covered by IFC chapter 9.                                                                                                                                                                                                    |
| 236.T             | 16.04.290                | Requires fire and life safety systems to comply with the IFC.                         | Repealed        | This code section is not necessary as this regulation is covered by IFC chapter 9.                                                                                                                                                                                                    |
| 236.U             | 16.04.310                | Requires sprinklers to comply with the IFC.                                           | Repealed        | This code section is not necessary as this regulation is covered by IFC chapter 9.                                                                                                                                                                                                    |
| 236.V             | 16.04.330                | Requires sprinklers systems for buildings constructed under the IRC.                  | Repealed        | This code section is not necessary as this regulation is covered by IFC chapter 9.                                                                                                                                                                                                    |
| 236.W             | 16.04.344                | Requires special doors and security grilles to comply with IBC.                       | Repealed        | References K.C.C. 16.04.346, which is proposed for deletion. This code section is no longer needed.                                                                                                                                                                                   |
| 236.X             | 16.04.346                | Requires access doors to storage rooms in mini-storage facilities to comply with IBC. | Repealed        | By repealing this section, the code would revert to the State code requirements for egress from mini storage facilities. This action would align K.C.C. with the State.                                                                                                               |
| 236.Y             | 16.04.348                | Exempts some stairways to mechanical rooms from the IBC.                              | Repealed        | This code section is not necessary as this regulation is covered by the IBC.                                                                                                                                                                                                          |
| 236.Z             | 16.04.360                | Provides an exception for under floor ventilation.                                    | Repealed        | This code section is not necessary as this regulation is covered by the IBC.                                                                                                                                                                                                          |
| 236.AA            | 16.04.475                | Provides foundation wall standards.                                                   | Repealed        | This was an amendment to the 2006 edition of the International Building Code (IBC). The current 2021 edition of the IBC provides foundation wall standards; this local amendment is no longer necessary.                                                                              |
| 236.BB            | 16.04.490                | Determines the number of fixtures required in a building.                             | Repealed        | This code section is not necessary as this regulation is covered by the IBC.                                                                                                                                                                                                          |
| 236.CC            | 16.04.890                | Requires inspection of a building when being converted to a condominium.              | Repealed        | This code section is not in compliance with RCW 64.34.050 which prohibits any requirements that would not be imposed on any other form of ownership. This code section is no longer necessary as RCW 64.55 requires inspection of buildings that are being converted to condominiums. |



| Ordinance Section | King County Code Section | Current Code                                                                                                                            | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                     |
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| 236.DD            | 16.04.900                | Requires the county to maintain a fund for repairs to buildings that are being converted to a condominium.                              | Repealed        | This code section is not in compliance with RCW 64.34.050 which prohibits any requirements that would not be imposed on any other form of ownership. This code section is no longer necessary as RCW 64.55 requires inspection of buildings that are being converted to condominiums.                                                                                                |
| 236.EE            | 16.04.930                | Standards for location, review, and installation of manufactured and mobile homes, and factory built commercial structures and coaches. | Repealed        | Covered in WAC under Factory Assembled Structures.                                                                                                                                                                                                                                                                                                                                   |
| 236.FF            | 16.04.940                | Standards for location, review, and installation of manufactured and mobile homes, and factory built commercial structures and coaches. | Repealed        | Covered in WAC under Factory Assembled Structures.                                                                                                                                                                                                                                                                                                                                   |
| 236.GG            | 16.04.950                | Standards for location, review, and installation of manufactured and mobile homes, and factory built commercial structures and coaches. | Repealed        | Covered in WAC under Factory Assembled Structures.                                                                                                                                                                                                                                                                                                                                   |
| 236.HH            | 16.04.960                | Standards for location, review, and installation of manufactured and mobile homes, and factory built commercial structures and coaches. | Repealed        | Covered in WAC under Factory Assembled Structures.                                                                                                                                                                                                                                                                                                                                   |
| 236.II            | 16.04.970                | Standards for location, review, and installation of manufactured and mobile homes, and factory built commercial structures and coaches. | Repealed        | Covered in WAC under Factory Assembled Structures.                                                                                                                                                                                                                                                                                                                                   |
| 236.JJ            | 16.04.980                | Standards for location, review, and installation of manufactured and mobile homes, and factory built commercial structures and coaches. | Repealed        | Covered in WAC under Factory Assembled Structures.                                                                                                                                                                                                                                                                                                                                   |
| 236.KK            | 16.05.080                | Fire sprinklers shall be required per the IRC.                                                                                          | Repealed        | Removes an unnecessary pointer in the code. All construction must comply with K.C.C. Title 17, which regulates when fire sprinklers are required in IRC buildings.                                                                                                                                                                                                                   |
| 236.LL            | 16.07.050                | Describes the application of Table C402.13 for the insulation component R-value method.                                                 | Repealed        | K.C.C. 16.07.050 "Insulation Component R-value Method – applications for Table C402.1.3" added a footnote to the table for when the total area of through-wall mechanical equipment is more than 1% of the opaque above-grade wall area. State code Table 402.1.3 now has integrated this footnote (see state-amended footnote i). As such, this code section is no longer required. |
| 236.MM            | 16.07.070                | This section addresses thermal resistance of mechanical equipment penetrations.                                                         | Repealed        | This text is now integrated in the State code under 402.1.4.3                                                                                                                                                                                                                                                                                                                        |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                                                                                                                                                                                                                                                        | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| 236.NN            | 16.07.080                | Provides criteria for above-grade exterior concrete slabs.                                                                                                                                                                                                                                                                                                                                                                                          | Repealed        | This item is now integrated in State code under C402.2.8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 236.OO            | 16.07.090                | Provides criteria for vertical fenestration intersection with opaque walls.                                                                                                                                                                                                                                                                                                                                                                         | Repealed        | This item is now integrated in State code under C402.2.9.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 236.PP            | 16.07.120                | Regulates lighting controls in daylight zones under skylights.                                                                                                                                                                                                                                                                                                                                                                                      | Repealed        | IECC 405.2.3.1 is no longer cited in this section, nullifying the need for citing a replacement section.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 236.QQ            | 16.07.130                | K.C.C. 16.07.130 amendments require HVAC TSPR for medical offices and dwelling units and common areas of R-2 multifamily, with an exception for buildings or medical office areas that comply with ASHRAE Standard 170.                                                                                                                                                                                                                             | Repealed        | These amendments require HVAC TSPR for medical offices and dwelling units + common areas of R-2 multifamily, with an exception for buildings or medical office areas that comply with ASHRAE Standard 170. These amendments are now integrated in baseline state code IECC 405.2.3.1 so this K.C.C. section is no longer needed.                                                                                                                                                                                                                                                                   |
| 236.RR            | 16.07.150                | Compared to the 2018 State codes, these amendments increased the enthalpy recovery effectiveness up to 60 percent, and limited exception 1 to spaces under 650 square feet, with a modified exception to R-1 and R-2 occupancies.                                                                                                                                                                                                                   | Repealed        | The new 2021 state code requires an enthalpy recovery effectiveness higher than 60 percent; removes exception 1 entirely, nullifying the 650 square foot exception; and adds a similar R-2 occupancy exception. The local K.C.C. amendment is no longer necessary.                                                                                                                                                                                                                                                                                                                                 |
| 236.SS            | 16.07.160                | Provides regulations and an exception for heat pump supplementary heat.                                                                                                                                                                                                                                                                                                                                                                             | Repealed        | Present in 2021 State code, so a local amendment is no longer needed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 236.TT            | 16.07.170                | Compared to the 2018 State codes, these amendments required demand control ventilation at occupant loads of 15 people per 1,000 square feet (vs. 25 persons); amended an exception for makeup supply air to focus on supply air from adjacent commercial kitchens; and added an exception for dormitory sleeping areas.                                                                                                                             | Repealed        | The new 2021 State code section 403.7.1 incorporates all of these provisions. The local K.C.C. amendment is no longer necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 236.UU            | 16.07.180                | Compared to the 2018 State codes, these amendments required energy recovery ventilation systems to provide a change in outdoor air supply enthalpy at least 60 percent of the difference between outdoor and return air enthalpies (vs. 50 percent); added an exception for R-1 and R-2 ERVs to instead provide 60 percent sensible heat recovery; and added an exception for occupancy type-2 hospitals, medical office buildings, and lab spaces. | Repealed        | Compared to the 2018 state codes, these amendments required energy recovery ventilation (ERV) to provide a change in outdoor air supply enthalpy at least 60 percent of the difference between outdoor and return air enthalpies (vs. 50 percent); added an exception for R-1 and R-2 ERVs to instead provide 60 percent sensible heat recovery; and added an exception for occupancy type-2 hospitals, medical office buildings and lab spaces.<br>The new 2021 State code sections 403.7.6.1 and 403.7.6.2 incorporate all these provisions. The local K.C.C. amendments is no longer necessary. |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                                                                             | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                                               |
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| 236.VV            | 16.07.190                | Compared to the 2018 State codes, this added to the code sections that applied to construction of the HVAC system elements; applicable state code sections ended C403.10.3.1; whereas this included local amendment C403.10.4, the subsequent K.C.C. local code section. | Repealed        | The local addition of section 403.10.4 is proposed for repeal, nullifying the need for this K.C.C. amendment.                                                                                                                                                                                                                  |
| 236.WW            | 16.07.200                | Provides criteria for insulation of refrigerant piping.                                                                                                                                                                                                                  | Repealed        | The text under the "insulation of refrigerant piping" is now integrated into, and expanded upon, within State code section 403.10.4. This K.C.C. local amendment is no longer needed.                                                                                                                                          |
| 236.XX            | 16.07.210                | Lists commercial food service equipment that must comply with energy-efficiency and water-efficiency criteria.                                                                                                                                                           | Repealed        | This provision is proposed for repeal because the same code language has been relocated. It is now found in C405.14, rather than C403.14.                                                                                                                                                                                      |
| 236.YY            | 16.07.230                | Provides system design criteria for heat pumps, along with an exception.                                                                                                                                                                                                 | Repealed        | The text under K.C.C. "system design" section is now integrated throughout the multiple state code sections including:<br>404.2.1.1 Primary heat pump sizing<br>404.2.1.2 Primary hot water storage sizing<br>404.2.1.3 System design<br>404.2.1.3.1 Mixing valve<br>As such, this K.C.C. local amendment is no longer needed. |
| 236.ZZ            | 16.07.240                | Provides a list of uses for which supplemental electric resistance heating is allowed.                                                                                                                                                                                   | Repealed        | The "supplemental water heating" section is now integrated in state code section 404.2.1.4, with some additional detail for ground source heat pumps, with minor reductions on when supplemental water heating is allowed. As this code has been integrated at the state level, this K.C.C. section is no longer needed.       |
| 236.AAA           | 16.07.250                | Requires insulation for unfired storage tanks used to store service hot water.                                                                                                                                                                                           | Repealed        | The text under the "storage tank insulation" section is now integrated in state code section 404.6.1. This K.C.C. local amendment is no longer needed.                                                                                                                                                                         |
| 236.BBB           | 16.07.260                | Requires a thermostatic balancing valve for some heated water circulations systems.                                                                                                                                                                                      | Repealed        | The text under the "Multiple riser systems – thermoplastic balancing valve" section is now integrated in state code section 404.7.1.2. This K.C.C. local amendment is no longer needed.                                                                                                                                        |
| 236.CCC           | 16.07.270                | Provides a requirement for an electronic mixing valve for a heated water circulation system.                                                                                                                                                                             | Repealed        | The text under the "electronic thermostatic mixing valve" section is now integrated in state code section 404.7.1.3. This K.C.C. local amendment is no longer needed.                                                                                                                                                          |
| 236.DDD           | 16.07.280                | Provides a pipe insulation standard for heated water circulation systems.                                                                                                                                                                                                | Repealed        | Insulation increases are being directly integrated to be building-wide in WSEC Section & Table C404.6. This K.C.C. local amendment is no longer needed.                                                                                                                                                                        |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                                                                      | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                        |
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| 236.EEE           | 16.07.300                | Provides standards for lighting controls.                                                                                                                                                                                                                         | Repealed        | Proposed for repeal so that the state's standards for lighting controls will be used, without amendment by County standards.                                                                                                                                                                            |
| 236.FFF           | 16.07.330                | States that covered parking garage lighting is not considered exterior lighting for the purposes of the calculation.                                                                                                                                              | Repealed        | The text of K.C.C. 16.07.330 "Exterior lighting power allowance – covered parking garages", is no incorporated into the state code (C405.5.3 #2), so a local amendment is no longer needed.                                                                                                             |
| 236.GGG           | 16.07.340                | Provides criteria for electric receptacles at dwelling unit gas appliances.                                                                                                                                                                                       | Repealed        | The text under the "Electric receptacles at dwelling unit gas appliances" section is now integrated in state code section 405.7.1. This K.C.C. local amendment is no longer needed.                                                                                                                     |
| 236.HHH           | 16.07.350                | Provides additional energy efficiency credit requirements along with exceptions.                                                                                                                                                                                  | Repealed        | Rather than articulating the credits available per measure, Table C406.1 now lists the number of credits needed for different project types (new buildings, building additions, and new load management requirements). As the content of this section has changed, this section is proposed for repeal. |
| 236.III           | 16.07.360                | Describes how tenant space energy credits may be achieved.                                                                                                                                                                                                        | Repealed        | The State code lays out a different approach to achieve energy efficiency measures. It also increases efficiency requirements overall. As such, local K.C.C. amendments for the "tenant spaces" section are no longer needed.                                                                           |
| 236.JJJ           | 16.07.370                | Compared to the "More efficient HVAC equipment and fan performance" 2018 State code, this section was expanded to building additions or building areas; eliminated an exception for low energy and semi-heated spaces; and incorporated an HVAC TSPR requirement. | Repealed        | The 2021 State code now incorporates building additions or building areas in its text; has removed the exception for low energy and semi-heated spaces; and now has as separated HVAC TSPR options (406.2.2.1). As such, local K.C.C. amendments for this section are no longer needed.                 |
| 236.KKK           | 16.07.380                | Compared to "HVAC system selection" 2018 State code, this section disallowed electric resistance and fossil-fuel fired equipment.                                                                                                                                 | Repealed        | The current 2021 State code 406.2.2 requires all heating and cooling systems to meet the minimum requirements of Section C403. C403.1.4 prohibits the use of electric resistance or fossil-fueled HVAC systems. As such, local K.C.C. amendments for this section are no longer needed.                 |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                                                                         | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| 236.LLL           | 16.07.400                | Compared to the "On-site renewable energy" 2018 State code, this section required 0.25 watts on top of renewable energy required elsewhere in the code.                                                              | Repealed        | The 2021 IECC equivalent section of 406.2.5 requires 0.1 watts on top of requirements elsewhere in the code, but the requirements elsewhere in the code have increased (compare K.C.C. 16.07.530 modifying 2018 IEC 412.1 (which set a 0.25W baseline requirement) to 2021 411.1, which this ordinance proposes amending from a 0.5W to a 0.75W baseline requirement. As such, previous code would have required 0.5W to achieve this credit, whereas the proposed code amendments in this ordinance and the state code would require 0.85W to achieve this credit. A such, local K.C.C. amendments for this section are no longer needed. |
| 236.MMM           | 16.07.410                | Prohibits fossil fuel-fired HVAC from using a credit found in section C406.6 of the IECC.                                                                                                                            | Repealed        | This 2018 credit "Dedicated outdoor air system" is no longer an option in the 2021 code. Proposing for repeal accordingly.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 236.NNN           | 16.07.420                | Prohibits fossil fuel-fired HVAC from using a credit found in section C406.7 of the IECC.                                                                                                                            | Repealed        | This is based on the current code before the SBCC lawsuit. Currently 406.2.2 (parent section to 406.2.2.6) requires all systems to comply with Section 403, and 403.1.4. has been proposed for modification in this ordinance to disallow fossil fuel systems. Therefore, this code section is no longer needed.                                                                                                                                                                                                                                                                                                                           |
| 236.OOO           | 16.07.430                | Provides regulations for buildings with service hot water heating equipment. Prohibits fossil fuel-fired service hot water heating equipment from using a credit found in section C406.8.1 and C406.8.2 of the IECC. | Repealed        | The credit for "reduced energy use in service water heating" was not carried forward in current State code.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 236.PPP           | 16.07.440                | Provides standards for high performance service water heaters in hotel and multifamily buildings.                                                                                                                    | Repealed        | The State code approach to heat pump hot water systems has changed; previous State code (406.9) only applied to multifamily buildings, though the equivalent current code section (406.2.6.3) has expanded its application to multiple building types. The existing K.C.C. amendment limiting the amount of electric resistance heat used in these systems is now included in this new State code section. The other K.C.C. amendment, stipulating the global warming potential of the refrigerant uses, is included as a new proposed amendment to the current state section 406.2.3 in this proposed ordinance.                          |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                              | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 236.QQQ           | 16.07.450                | Provides a standard for enhanced envelop performance.                                                                                                                     | Repealed        | <p>The Performance-based compliance “mandatory requirements” 2021 State code section now meets or exceeds K.C.C. amendments.</p> <p>Compared to the 2018 State code, local amendments:</p> <ul style="list-style-type: none"> <li>• Require schedule, plug, and process load modeling.</li> <li>• Replace some document requirements with a list of IECC Table C407.2 compliance.</li> <li>• Require references to undesigned future building components to refer to specific table subsections on design, lighting, service water heating, and receptables.</li> <li>• Require HVAC systems to meet specific requirements and adds additional details on building lighting evaluation and Energy modeler requirements.</li> </ul> <p>As such, this K.C.C. amendment is no longer needed.</p> |
| 236.RRR           | 16.07.470                | Sets standards for performance-based compliance.                                                                                                                          | Repealed        | <p>Compared to the “Enhanced envelope performance” code section, local amendments applied the credit option to building area and occupancy type. State code now incorporates this language in its new corresponding section of 406.2.12. As such, local K.C.C. amendments are no longer needed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 236.SSS           | 16.07.480                | Provides limits on substandard envelopes.                                                                                                                                 | Repealed        | <p>This WESC section, WSEC C407.3.1, has been moved into a new code section.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 236.TTT           | 16.07.500                | Requires solar zones to be provided on buildings that are 20 stories or less and provides an exception.                                                                   | Repealed        | <p>Compared to the “Solar readiness – general” 2018 code, this amendment struck a reference that did not apply to code sections for residential buildings. The 2021 code section 411.3 now integrates this provision. As such, local K.C.C. amendments are no longer needed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 236.UUU           | 16.07.510                | Describes how to account for mechanical equipment when measuring a solar zone.                                                                                            | Repealed        | <p>Local code language under the “Minimum area – mechanical equipment” section on the solar zone is now integrated in state code section 411.3.1. As such, local K.C.C. amendments are no longer needed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 236.VVV           | 16.07.520                | Requires and provides criteria for roof penetration sleeves for solar.                                                                                                    | Repealed        | <p>The requirements from 16.07.520 “Photovoltaic interconnection – roof penetration” are in the new amendment, WSEC C411.3.7. As such, local K.C.C. amendments are no longer needed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 236.WWW           | 16.07.530                | Requires any new building or addition larger than 5,000 square feet of conditioned floor area to have an on-site renewable energy generation system. Provides exceptions. | Repealed        | <p>This section was amended to the extent that this section is proposed for repeal and a new section has been written and proposed for adoption. This amends State code C411.1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| 236.XXX           | 16.07.540                | Requires augmented or replaced HVAC heating systems to comply with IECC C403.14, and provides an exception                                                  | Repealed        | This section was amended to the extent that this section is proposed for repeal and a new section has been written and proposed for adoption. This amends State code C503.4.6.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 236.YYY           | 16.07.550                | Does not require building envelope improvements for bakeries, commercial kitchens, or commercial laundries if electric Energy star-rated equipment is used. | Repealed        | Proposed to add the language from this section to K.C.C. base code for section C405.14.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 236.ZZZ           | 16.10.010                | Established minimum standards to make dwelling units resistant to unlawful entry.                                                                           | Repealed        | Part of the proposed repeal of Chapter 16.10. This is an outdated code chapter that has largely been made unnecessary by updates to the IBC and IRC over the code cycles. Code was first adopted by KC in 1996. The removal of this chapter is consistent with current division practices. Further, this section implies an inspection would be required by Permitting for conversion of owner-occupied dwelling to a leased or rented dwelling. Removal of this chapter removes the inspection requirement for and streamlines the ability of property owners to make housing units available for rent. |
| 236.AAAA          | 16.10.020                | This is the "Scope" section of Chapter 16.10, King County Building Security Code.                                                                           | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 236.BBBB          | 16.10.030                | Requires dwelling unit exterior doors on leased or rented units to have a view of the area outside the door without opening the door.                       | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 236.CCCC          | 16.10.040                | Provides criteria for strike plate installation.                                                                                                            | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 236.DDDD          | 16.10.050                | Provides criteria for locking hardware.                                                                                                                     | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 236.EEEE          | 16.10.060                | Provides lock requirements for dwelling unit sliding doors.                                                                                                 | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 236.FFFF          | 16.10.070                | Requires latching devices for windows.                                                                                                                      | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 236.GGGG          | 16.10.080                | Grants building official to approve alternative security devices.                                                                                           | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 236.HHHH          | 16.10.100                | States that security methods shall not obstruct any means of emergency egress or opening.                                                                   | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 236.IIII          | 16.10.110                | Provides criteria for bars, grilles, grates, etc.                                                                                                           | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| Ordinance Section | King County Code Section | Current Code                                                                                                                                                     | Proposed Change | Intent/Rationale                                                                                                                                                                                                                                                                                                                                                                  |
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| 236.JJJJ          | 16.10.120                | Provides criteria for hinges.                                                                                                                                    | Repealed        | Part of the proposed repeal of Chapter 16.10.                                                                                                                                                                                                                                                                                                                                     |
| 236.KKKK          | 16.14.020                | Provides the scope for Chapter 16.14 International Property Maintenance Code.                                                                                    | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14. The proposed repeal of multiple sections of Chapter 16.14 is due to the incorporation or replacement of many of the repealed requirements into the IBC and the IRC, which have been specifically adopted by the County. Repealing the sections proposed for repeal avoids duplication and potential confusion. |
| 236.LLLL          | 16.14.040                | States that repairs, additions, or alterations to a structure, or changes of occupancy, may be done in accordance with the International Existing Building Code. | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.MMMM          | 16.14.050                | Does not adopt Section 102.7 of the IPMC.                                                                                                                        | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.NNNN          | 16.14.060                | Does not adopt Section 103 of the IPMC.                                                                                                                          | Repealed        | Part of the proposed repeal of Chapter 16.14.                                                                                                                                                                                                                                                                                                                                     |
| 236.OOOO          | 16.14.140                | Allows the code official to condemn a structure, equipment, or premises when found to be unsafe, unfit for occupancy, or unlawful.                               | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.PPPP          | 16.14.150                | Describes an unsafe structure or premises.                                                                                                                       | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.QQQQ          | 16.14.250                | Provides the code official authority to require occupants to vacate premises and lists the circumstances under which the code official could do so.              | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.RRRR          | 16.14.480                | Requires pools, hot tubs, and spas to be surrounded by a fence or barrier. Provides criteria for those fences and barriers.                                      | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.SSSS          | 16.14.510                | Does not adopt Section 304.18, and all of its subsections, of the IPMC.                                                                                          | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.TTTT          | 16.14.530                | Does not adopt Section 602.2 of the IPMC.                                                                                                                        | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.UUUU          | 16.14.570                | Does not adopt Section 602.4 of the IPMC.                                                                                                                        | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.VVVV          | 16.14.580                | Does not adopt Section 605.2 of the IPMC.                                                                                                                        | Repealed        | Part of the proposed repeal of Chapter specific sections of 16.14.                                                                                                                                                                                                                                                                                                                |
| 236.WWWW          | 16.14.590                | Does not adopt Section 606 of the IPMC.                                                                                                                          | Repealed        | Part of the proposed repeal of specific sections of Chapter 16.14.                                                                                                                                                                                                                                                                                                                |



| Ordinance Section | King County Code Section | Current Code                                                                                        | Proposed Change | Intent/Rationale                                                                                                                                                                                                |
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| 236.XXXX          | 16.32.336                | Does not adopt Section 107 of the UPC.                                                              | Repealed        | This code section as adopted by the County refers to water heaters, but Section 107 is incorrectly cited because it is not related to water heaters.                                                            |
| 236.YYYY          | 16.32.337                | Provides regulations for potable water-heating and space heating water heaters.                     | Repealed        | The applicable requirements are now within the State adopted code. As such, this code section is no longer needed.                                                                                              |
| 236.ZZZZ          | 16.32.339                | Regulates termination and connections for plastic water service piping within a building.           | Repealed        | This section is now in the State adopted code. No deviations are required. As such, this code section is no longer needed.                                                                                      |
| 236.AAAAA         | 16.78.010                | Regulates ornamental pools.                                                                         | Repealed        | The entire Chapter 16.78 regarding "ornamental pools" is being removed. This chapter covered a limited scope of "koi ponds" and similar structures which do not have a nexus to enforce the barrier provisions. |
| 236.BBBBB         | 16.78.020                | Regulates ornamental pools.                                                                         | Repealed        | The entire Chapter 16.78 regarding "ornamental pools" is being removed. This chapter covered a limited scope of "koi ponds" and similar structures which do not have a nexus to enforce the barrier provisions. |
| 236.CCCCC         | 16.78.030                | Regulates ornamental pools.                                                                         | Repealed        | The entire Chapter 16.78 regarding "ornamental pools" is being removed. This chapter covered a limited scope of "koi ponds" and similar structures which do not have a nexus to enforce the barrier provisions. |
| 236.DDDDD         | 16.78.040                | Regulates ornamental pools.                                                                         | Repealed        | The entire Chapter 16.78 regarding "ornamental pools" is being removed. This chapter covered a limited scope of "koi ponds" and similar structures which do not have a nexus to enforce the barrier provisions. |
| 236.EEEEE         | 16.78.050                | Regulates ornamental pools.                                                                         | Repealed        | The entire Chapter 16.78 regarding "ornamental pools" is being removed. This chapter covered a limited scope of "koi ponds" and similar structures which do not have a nexus to enforce the barrier provisions. |
| 236.FFFFF         | 16.78.060(part)          | Regulates ornamental pools.                                                                         | Repealed        | The entire Chapter 16.78 regarding "ornamental pools" is being removed. This chapter covered a limited scope of "koi ponds" and similar structures which do not have a nexus to enforce the barrier provisions. |
| 236.GGGGG         | 17.04.445                | Provides criteria for roof hatches.                                                                 | Repealed        | This K.C.C. section is addressed in the IFC. As such, this code section is no longer needed.                                                                                                                    |
| 236.HHHHH         | 17.04.447                | Provides criteria of enclosed interior courtyards.                                                  | Repealed        | This K.C.C. section is not part of the IFC and is no longer needed.                                                                                                                                             |
| 236.IIIII         | 17.04.466                | Provides signal strength technical requirements for emergency responder radio coverage.             | Repealed        | No longer needed as it mirrors language with the IFC.                                                                                                                                                           |
| 236.JJJJJ         | 17.04.468                | Provides amplification and components technical requirements for emergency responder radio coverage | Repealed        | No longer needed as it mirrors language within the IFC.                                                                                                                                                         |

| Ordinance Section | King County Code Section | Current Code                                                                                                                      | Proposed Change | Intent/Rationale                                                                                         |
|-------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------|
| 236.KKKKK         | 17.04.471                | Provides signal booster technical requirements for emergency responder radio coverage.                                            | Repealed        | No longer needed. IFC 2021 addresses issues and is easier to understand, same for 17.04.471 through 540. |
| 236.LLLLL         | 17.04.472                | Provides system monitoring technical requirements for emergency responder radio coverage.                                         | Repealed        | This section is no longer needed. IFC 2021 covers this and is much easier to understand.                 |
| 236.MMMMM         | 17.04.477                | Provides minimum qualifications of personnel for installation requirements for emergency responder radio coverage.                | Repealed        | This section is no longer needed. IFC 2021 covers this and is much easier to understand.                 |
| 236.NNNNN         | 17.04.478                | Provides acceptance test procedures for installation requirements for emergency responder radio coverage.                         | Repealed        | This section is no longer needed. IFC 2021 covers this and is much easier to understand.                 |
| 236.OOOOO         | 17.04.479                | Provides wiring installation requirements for emergency responder radio coverage.                                                 | Repealed        | This section is no longer needed. IFC 2021 covers this and is much easier to understand.                 |
| 236.PPPPP         | 17.04.481                | Provides identification sign installation requirements for emergency responder radio coverage.                                    | Repealed        | This section is no longer needed. IFC 2021 covers this and is much easier to understand.                 |
| 236.QQQQQ         | 17.04.486                | Provides testing and proof of compliance of maintenance for emergency responder radio coverage.                                   | Repealed        | This section is no longer needed. IFC 2021 covers this and is much easier to understand.                 |
| 236.RRRRR         | 17.04.487                | Provides an alternative test procedure for testing and proof of compliance of maintenance for emergency responder radio coverage. | Repealed        | This section is no longer needed. IFC 2021 covers this and is much easier to understand.                 |
| 236.SSSSS         | 17.04.488                | Provides field testing and proof of compliance of maintenance for emergency responder radio coverage.                             | Repealed        | This section is no longer needed. IFC 2021 covers this and is much easier to understand.                 |
| 236.TTTTT         | 17.04.540                | Provides criteria for where sprinklers are required.                                                                              | Repealed        | This section no longer needed as the IFC 2021 addresses this language.                                   |

## PO 2025-0321 Building and Energy Code Update Ordinance

### Outreach and Engagement Summary

Staff contacted the following groups during the process of developing PO 2025-0321:

- Auburn Area Chamber of Commerce
- Maple Valley - Black Diamond Chamber of Commerce
- Renton Chamber of Commerce
- Snoqualmie Valley Chamber of Commerce
- Vashon Island Chamber of Commerce
- Greater Federal Way Chamber of Commerce
- Woodinville Chamber of Commerce
- Fall City Community Association
- Four Creeks Unincorporated Area Council
- Greater Maple Valley Unincorporated Area Council
- North Highline Unincorporated Area Council
- Upper Bear Creek Community Council
- Vashon-Maury Community Council
- West Hill Community Association
- White Center Community Development Association K4C outreach committee
- Master Builders Association of King and Snohomish Counties (MBAKS)
- Housing Development Consortium
- Puget Sound Energy
- Regional Code Collaboration
- Seattle Building Trades
- Seattle King County Realtors
- Muckleshoot Indian Tribe
- Puyallup Tribe of Indians
- Snoqualmie Indian Tribe
- Squamish Tribe
- Tulalip Tribes

DLS staff offered to meet with these groups and provided most<sup>1</sup> with a handout (see attached) summarizing the objectives and primary revisions proposed for the building code update. Those who requested to be kept informed were provided with the public review draft of the ordinance and the SEPA checklist and its attachments when they became available. DLS staff answered questions via phone and email, but did not meet with any groups to present the proposal. None of the groups contacted directly provided comment.

Five comments were received during the SEPA comment period, summarized below.

1. Comment 1: supported Construction and Demolition deconstruction related amendments.
2. Comment 2: supported Construction and Demolition deconstruction related amendments but felt the proposal should be base the deconstruction requirement on material yield, construction type, and salvage potential rather than building age. *This proposal was not incorporated because establishing such criteria would be overly complicated,*

*and buildings older than 90 years generally have higher quality materials that can be easily harvested.*

3. Comment 3: expressed concern about the cost of implementing new code requirements, especially those related to the energy code (e.g., heat pumps and triple glazing). *While new energy code requirements may increase the cost of construction, they also improve energy efficiency, resulting in lower utility bills over the long term. No changes were made in response to this comment.*
4. Comment 4: proposed (1) eliminating requirements to add a urinal to a single user water closet when a toilet would suffice and (2) adopting a "single exits" requirement which could result in more density in multiunit residential buildings, particularly for smaller lots. *The issue about the urinal is addressed in the proposed code, so no further consideration is required. "Single exits" for multiunit buildings has been an ongoing topic at the state level, and the state has established an advisory group to develop code language, as required by Substitute Senate Bill 5491. This change was not incorporated because the code language is still under development and will be included in the 2024 code cycle. Further information about "single exits" can be found at this [link](#).*
5. Comment 5: provided a standard advisory comment recommending the implementation of an Inadvertent Discovery Plan (IDP) in the event of any ground-disturbing activities. This comment is a general cultural resource advisory typically submitted in response to project-level SEPA reviews. *Because this proposal is a non-project action that does not authorize or involve any site-specific construction or development activity, it does not warrant modification of code. Any future development occurring under the updated code would be subject to project-level SEPA review and applicable cultural resource protections, at which point an IDP could be appropriately addressed.*



## [Construction]

# 2024 Proposed Building Code Updates

Proposed ordinance is open for public comment in winter 2025 and will run 28 days. Adoption scheduled for late summer 2025.

King County is updating the building code to align to state and international building codes. The building code includes an energy code, mechanical code, a plumbing code, a fire code, and other codes. Once amended and adopted, this groups of codes is referred to as the State Building Codes.

## Four objectives

Align to 2021 Washington State code



Improve energy efficiency and reduce greenhouse emissions

Update access information for first responders



Clarify plumbing requirements

- Adopt 2021 Washington State codes for Commercial and Residential Building, Energy Conservation, Mechanical, Fire, and Plumbing and Property Maintenance.
- Adopt and provide reference to the current applicable codes for Liquefied Petroleum Gas (propane) installations.
- Provide updated regulations for drainage to include parking garage drainage systems and pretreatment methods.
- Revise and provide new regulations for domestic water piping to include minimum pipe insulation.
- Align pathway requirements for emergency escape and rescue openings which are located under decks to a height of 6' 8" or greater.
- Clarify that work exempted from building permits still must comply with code.
- Clarify limitations for heating and use of detached buildings in order to be exempt from a building permit.
- Clarify that swimming pool barriers require a permit even if the barrier is less than six feet in height.
- Remove the permit requirement for 'agricultural wildlife exclusion fencing' if less than eight feet in height.
- Increase electric vehicle charging infrastructure, consistent with King County Strategic Climate Action Plan goals.
- Provide new criteria for determining when a plumbing permit application is complete, conditions under which a plumbing permit can be issued, and when a reinspection fee may be assessed.
- Provide more comprehensive guidance regarding information to be shown on a set of plumbing design documents submitted for jurisdictional review.
- Re-adopt solar-ready provisions for detached one- and two-family dwellings and townhouses with 600 square feet roof area to require roof orientation between 110 and 270 degrees of true north to provide for future solar photo-voltaic panels.



The proposed ordinance includes the following amendments to the Washington State Energy Code (WSEC). These amendments apply to the commercial provisions of the WSEC only.

## **Improve energy efficiency and reduce greenhouse emissions**

- Increase insulation standards for some building materials and features. Higher insulation improves energy efficiency by reducing heating and cooling loss from buildings.
- Increase window and door thermal performance requirements to require 20% of glazing meet 'high performance' standards.
- Define allowable glazing percentages by occupancy and building area type rather than a blanket allowable percentage of glazing for all building types.
- Increase HVAC and water heating efficiency requirements including increased standards for HVAC demand responsive and occupied standby controls; increase standards for energy recovery ventilation; limit gravity (nonmotorized) dampers in relief systems; increase minimum fan efficiency; add standards for clean water pumps; add minimum piping and tank insulation standards; and add requirement for heat recovery for indoor swimming pools, spas, or hot tubs over 200 square feet.
- Require that commercial kitchen fryers, hot food holding cabinets, steam cookers and dishwashers meet U.S. Environmental Protection Agency's (EPA) Energy Star program for energy and water efficiency.
- Reduce the allowed maximum lighting power density (LPD) in building areas and increase more energy-efficient lighting.
- Change the energy efficiency credit system to increase the number of required credits for most projects and disallow or modify use of credits that would become standard requirements if the proposed ordinance were adopted.
- Reduce threshold for new buildings and additions to provide energy metering and energy consumption management from 25,000 square feet to 20,000 square feet of gross conditioned floor area.
- Reduce threshold for new buildings and additions to provide a renewable energy generation system from 10,000 square feet to 5,000 square feet of gross conditioned floor area.
- Add energy metering requirements for parking garage fan energy, parking garage lighting energy, and plug load system energy use.