

ATTACHMENT 1

Highlights:

- 1) It has long been the practice of the City to adopt portions of the Washington State Electrical Code, also known as WAC rules (WAC 296-46B). This Code incorporates various WAC rules which account for much of what appear to be “new” amendments. Each amendment is followed by the WAC rule number in an Informational Note. This WAC incorporation eliminated a few conflicts between the two sets of regulations.
- 2) In 2008, the City added an exception to a requirement in the NEC that emergency power circuits provide a coordinated sequence for tripping overcurrent protective devices. The exception provided an opportunity for electrical engineers to design a sequencing of trip devices when detecting faults that have durations of 0.10 seconds and longer. The sequencing prevents the shut-down of all systems by localizing and prioritizing the shut-down of the circuits most closely related to the trip source. The exception provides a high level of safety for personnel and maintains life-safety protection within the emergency power system. The exception may only be used when an electrical engineer affixes a professional stamp to the fault-current calculations that are reviewed by the City. The exception has worked well for 6-years and is standardized throughout the 2014 proposal.
- 3) All references to section numbers of the various City codes, such as the Seattle Building Code, are changed to chapter numbers. The Seattle Electrical Code is on a different adoption schedule and other code section numbers are subject to change during the Electrical Code cycle.
- 4) 80.51(B)(h) This section was edited to provide submission requirement clarity and will improve the plan review process. Renewable energy systems have fewer submittal requirements for smaller systems. For other projects, the list of items required on plans was clarified in order to improve the review process. There is no substantive change.
- 5) 80.51(C) This new section expands the detailed list of requirements for electrical permit submissions. A new subsection C, Incomplete Submittals, was added to provide a means for reimbursement of extraordinary intake review time resulting from a lack of quality control by the applicant. An incomplete submittal fee is charged to the applicant for ongoing intake reviews at the normal DPD hourly rate. The additional fee must be approved by a reviewer’s supervisor or manager. Currently, the Fee Schedule allows the Department to charge for correction- or revision-review of electrical plans. This new incomplete submittal fee places the quality control burden on the applicant.

The Electrical Program has a streamlined intake- and review-process to move submittals quickly to permit issuance. The Program does not have intake staff to providing quality-control screening or pre-application conferences; as a result, electrical plan reviewers perform an initial, and comprehensive, intake review of the entire electrical project. Some submittals are of such poor quality as to be deemed inadequate or incomplete. The reviewer then generates a comprehensive list of missing details to guide the applicant’s resubmittal. At times, despite the comprehensive list of corrections provided by the reviewer,

the second submittal is still too incomplete or inadequate to allow for a full review and permit issuance. Repeated intake reviews, due to poor quality control by applicants, slows down the flow of approved plans and impacts the high level of service the Electrical Program strives to provide.

- 6) 210.52 added a paragraph to clearly state that reach and clearance distances for ADA accessible dwelling units are required.
- 7) 215.13 This section was edited to clarify the requirement that electrical feeders may not pass through one dwelling unit and into a separate dwelling unit to provide power a unit's electrical panel. The requirement continues from the 2008 code and allows feeders to be routed through walls that are adjacent to the exterior of the structure or through walls that are adjacent to common areas. In doing so, each tenant or occupant can access their feeders within their own unit. Because structural life expectancy is 50-75 years and, over time, uses change, this provision ensures that changes can be accommodated without a complete structural rewiring.
- 8) 220.57 When this section was added to the electrical code in 2008, electric vehicles were uncommon and the technology was still evolving. Experience guided these changes and these recommendations continue to ensure that future additions of electric vehicle charging stations will not overload the electrical system of a structure.
- 9) 250.50 A new section was added to clarify current practice requiring that grounding electrodes be inspected before being encased in concrete.
- 10) 404.13 Clarifies the requirements for use of two-way interlocking isolating knife switches by adding a definition.
- 11) 500.5 An item was added to clarify our current practice in below grade sumps in garages. A hazardous location exists were flammable liquids and gasses accumulating below grade may be ignited when an electric sump pump is activated.
- 12) 620.21(A) Elevators - An item was added to allow flexible metal conduit or liquidtight flexible metal conduit to be used in 6 ft lengths in limited locations within elevator hoistways.
- 13) 620.21(B) Escalators - Class 2 Circuit Cables section was edited to ensure damage protection for cables (which may, for example, be used for LED lighting)
- 14) 620.26 This is a new section which requires that all branch circuits serving elevator equipment, such as lighting, originate in a panel located in the elevator machine room where the overcurrent devices are located.
- 15) 625.27 This section was amended to apply to all occupancies not just residential. The section requires that designers think about the future installation of electric vehicle charging stations and plan space for the required panelboard overcurrent protection devices or space to place a new panelboard.