CONCISE EXPLANATORY STATEMENT

Cranes, Rigging, and Personnel Lifting

Chapter 296-155 WAC, Safety Standards for Construction Work
Public Hearings: May 13, 15, & 19, 2025
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I. Purpose of Rulemaking

One purpose of this rulemaking is to amend the safety standards for cranes and derricks in construction. The Occupational Safety and Health Administration (OSHA) updated their standards in 2015 and 2018, which included clarifying each employer's duty to ensure the competency of crane operators through training, certification or licensing, and evaluation. In addition, this rulemaking implements some of the changes resulting from Washington state legislation passed in 2024. Second Substitute House Bill (2SHB) 2022 (Chapter 311, Laws of 2024), codified under RCW 49.17.400 through 49.17.445, created new requirements for tower cranes. The changes in the law are in response to an incident in 2019 in which members of the public and workers died following the collapse of a tower crane in Seattle, Washington. The incident was preventable, and 2SHB 2022 aims to address causes of that incident. For example, 2SHB 2022:

- Requires tower crane manufacturers and distributors provide operational and safety information about their tower cranes upon request by any person, and must do so within a reasonable time and in a format determined by L&I.
- Directs L&I to establish effective stop work procedures that ensure the authority of any worker to refuse or delay tasks related to a tower crane that the worker believes could reasonably result in serious physical harm or death.
- Requires the presence of an assembly/disassembly director at every assembly, disassembly, or reconfiguration, and directs L&I to develop rules which address requirements for an assembly/disassembly director to be considered competent and qualified.
- Establishes maximum allowable wind speed for tower crane assembly, disassembly, and reconfiguration.
- Sets requirements for a written job plan.

This rulemaking also intends to provide clarity on L&I's interpretation of requirements related to crane decertification and reinstatement. The changes clarify what activities are covered, and specifies that damage to critical parts of the crane will require notification to L&I. The adopted rule adds a requirement for crane tip overs to be reported to L&I, and specifies that the crane can only go back into operation once it has been inspected by a certified crane inspector.

Finally, L&I-initiated amendments were adopted to address other areas in chapter 296-155 WAC, Part L, relating to cranes that either needed to be updated based on current industry practice, or to clarify some of the language to maintain safety and health protections for workers. Additional housekeeping changes were also included.

A. Background

L&I administers and enforces the Washington Industrial Safety and Health Act (WISHA), and adopts rules governing safety and health standards for workplaces covered by WISHA. To maintain its status as an Occupational Safety and Health Administration (OSHA) State Plan state, Washington's safety and health standards must be at least as effective as standards adopted or recognized under OSHA.

Today, cranes are widely used in the construction industry and there are numerous types of cranes found on construction sites. While the utilization of cranes greatly improves the efficiency and effectiveness of construction operations, it may also impose great risk and cause tremendous damage to the workers, employers, and the communities involved if safety procedures are not followed.

State law required L&I to establish, by rule, a crane certification program and qualified crane operator requirements.

- Crane owners must ensure cranes are inspected and proof load tested by a certified crane inspector at least annually, and after any significant modification or repair of structural parts.
- Tower cranes and tower crane assembly parts must be inspected both prior to assembly and following assembly of the tower crane.
- A certified crane inspector must notify L&I if the inspector finds the crane does not meet safety or health standards.
- Operation of a crane by a nonqualified crane operator is prohibited.

L&I established, by rule, the requirements to be a qualified crane operator. Qualified crane operators must have a valid crane operator certificate, for the type of crane being operated, issued by a crane operator testing organization which has an accredited program. Qualified crane operators must also have a certain number of hours of experience, which depends on the type of crane being operated, and pass a substance abuse test. Qualified crane operators must also be evaluated by a qualified evaluator.

L&I has created the duties of assigned personnel. This includes duties for crane owners, crane users, site supervisors, lift directors, riggers, A/D directors, and operators to follow.

All rigging must be performed by a qualified rigger present, and all signals must be given by a qualified signal person.

B. Summary of the rulemaking activities

Chronologic summary of this rulemaking:

- March 20, 2018 – CR-101 (Preproposal Statement of Inquiry) filed to initiate proposed rulemaking relating to crane decertification and reinstatement. This rulemaking was intended to provide clarity on L&I's interpretation of these requirements.
- July 18, 2018 (Tukwila) – A stakeholder meeting was held to review preliminary draft language. There was an opportunity for stakeholder questions and input during the meeting.
- November 19, 2019 – CR-101 filed to initiate proposed rulemaking relating to the OSHA's recent updates to their standard for cranes and derricks in construction.

- January 15, 2020 (Tukwila) – A stakeholder meeting was held to share and review preliminary draft rule language. There was an opportunity for stakeholder questions and input during the meeting.
- January 23, 2020 (Moses Lake) – A stakeholder meeting was held to share and review preliminary draft rule language. There was an opportunity for stakeholder questions and input during the meeting.
- February 28, 2020 (Tukwila) – Continuation of the January 15, 2020, stakeholder meeting to finish review of the preliminary draft rule language. There was an opportunity for stakeholder questions and input during the meeting.
- July 6, 2021 – CR-101 Preproposal Statement of Inquiry (WSR 21-14-080) filed to initiate rulemaking relating to: OSHA's recent updates; provide clarification relating to crane decertification and reinstatement; propose state-initiated amendments throughout chapter 296-155 WAC, Part L, to reflect current industry practices; and clarify language to maintain safety and health protections for workers.
- July 6, 2021 – Withdrew CR-101's filed on March 20, 2018 (WSR 18-07-091), and on November 19, 2019 (WSR 19-23-082), in order to consolidate this current rulemaking into one rulemaking. [WSR 21-14-078; WSR 21-14-079].
- July 15, 2021 – Virtual stakeholder meeting held to share and discuss updated preliminary draft rule language. There was an opportunity for stakeholder questions and input during the meeting.
- November 17, 2021 – Virtual stakeholder meeting held to share and discuss updated preliminary draft rule language. There was an opportunity for stakeholder questions and input during the meeting.
- January 5, 2022 – Virtual stakeholder meeting held to discuss specifically powered industrial truck (PIT) requirements and crane operator experience. There was an opportunity for stakeholder questions and input during the meeting.
- August 1, 2023 (Moses Lake) – A stakeholder meeting was held to share and discuss updated preliminary draft rule language. There was an opportunity for stakeholder questions and input during the meeting.
- August 3, 2023 (Seattle) – A stakeholder meeting was held to share and discuss updated preliminary draft rule language. There was an opportunity for stakeholder questions and input during the meeting.
- August 7, 2023 – Virtual stakeholder meeting held to share and discuss an updated preliminary draft rule language. There was an opportunity for stakeholder questions and input during the meeting.
- October 12, 2023 (Tukwila) – A small workgroup met with L&I to focus on the proposed changes to the preliminary draft rule. There was active participation from this group.
- November 28, 2023 (Tukwila) – Continued working with the small workgroup on updates to the preliminary draft rule. There was active participation from this group.
- December 19, 2023 (Tukwila) – Continued working with the small workgroup on updates to the preliminary draft rule. There was active participation from this group.
- January 30 and 31, 2024 (Tukwila) – Continued working with the small workgroup on updates to the preliminary draft rule. There was active participation from this group.

- February 22, 2024 (Tukwila) – Continued working with the small workgroup on updates to the preliminary draft rule. There was active participation from this group.
- April 2, 2024 (Tukwila) – A stakeholder meeting was held to share and discuss key changes to the preliminary draft rule. There was an opportunity for stakeholder questions and input during the meeting.
- April 3, 2024 (Spokane) – A stakeholder meeting was held to share and discuss key changes to the preliminary draft rule. There was an opportunity for stakeholder questions and input during the meeting.
- September 3, 2024 – A preliminary draft of rule language addressing some of the changes resulting from 2SHB 2022 was circulated to stakeholders for feedback.
- March 18, 2025 – CR-102 filed to propose changes to Chapter 296-155 WAC, Part L (WSR 25-07-100).

II. Changes to the Rules (Proposed rule versus rule adopted)

The following are the changes between the proposed rules and the rules as adopted, other than minor editing:

The adopted rule was reviewed for its use of "and/or" and changes were made throughout the rule to provide clarity. The adopted rule was also reviewed and updated for where it stated "effective date of this section" referring to rules that became effective on February 1, 2012.

WAC 296-155-52900(3)(b) – Added a reference to chapter 296-863 WAC, Forklifts and other powered industrial trucks.

WAC 296-155-52902

- In the definition of "A/D director (assembly/disassembly) director" added "and is a qualified person who meets the requirements in WAC 296-155-53303" for clarity and consistency.
- In the definition of "assembly/disassembly work zone" added a reference to WAC 296-155-53400(42) and 296-155-53414(8).
- In the definition of crane user, removed the plural references to "crane" and "equipment", and adjusted for clarity and consistency.
- In the definition of "free rated test load", corrected grammatical error.
- In the definition of "multipurpose machine", and updated definition for clarity and consistency.
- In the definition of "operator-in-training", amended this definition to align with OSHA.
- In the definition of "personnel lifting", removed the "and/or" for clarity and consistency. Also removed the word "transporting".
- In the definition of "qualified evaluator (not a third party)", replaced "third party" with "employer".
- In the definition of "qualified evaluator (third-party)", added a hyphen.

WAC 296-155-53100 – Reorganization of the entire section, to increase understanding of the section, and add back into the rule previously removed existing language addressing the need for crane/equipment certifiers to submit information to the department to be recognized by the department as accredited crane/equipment certifies under the rule.

WAC 296-155-53114 – Updated “load proof” to “proof load” for clarity and consistency.

WAC 296-155-53202(4)(c) – Corrected grammatical error.

WAC 296-155-53206(1) – Added allowance for a separately qualified A/D director to perform the inspection of tower crane components for post disassembly only. This is in addition to the requirement for a certified crane inspector to perform component inspection prior to, and following, every assembly, disassembly, and reconfiguration of a tower crane. This is supported by A/D directors being required to be qualified to inspect tower crane components prior to assembly and reconfiguration of the tower crane. This change is necessary to ensure the rule is reasonably necessary and appropriate to provide safe and healthful employment and places of employment.

WAC 296-155-53300 Table 3 – Added clarifying language relating to increasing or decreasing the height of the tower/mast. Amended the term “signal person”, making it two words for consistency, and added a reference for operator-in-training.

WAC 296-155-53400(42)(b)(i) – Replaced the term “crane owner” with “employer”. Made adjustments for clarity, and removed reference to the Manual on Uniform Traffic Control Devices (MUTCD) because it’s already referenced in chapter 296-155 WAC, Part E, Signaling and flaggers.

WAC 296-155-53401 – Subsections (5)(c) and (f) – Added language to provide clarity that the site supervisor ensures certain roles are properly designated and on-site; (5)(n) – Replaced “business” with “working”; (9)(k) – Corrected numbering errors.

WAC 296-155-53403(5) – Removed reference to “reconfiguration”; (10) – Removed the redundant note.

WAC 296-155-53410(1) – Corrected a reference.

WAC 296-155-53412 – Changes were made to this section to align with OSHA requirements. Due to an oversight, these changes were not included in the proposal. As stated on the CR-102 and reiterated throughout stakeholdering, one of the purposes of this rulemaking is to align all of Part L with OSHA cranes. The change establishes a definitive timeline for using a specified temporary alternative measure, and clearly defines the timeframe allowed for repairing defective operational aids.

WAC 296-155-53414(9)(b)(i) – Removed reference to the Manual on Uniform Traffic Control Devices (MUTCD) because it’s already referenced in chapter 296-155 WAC, Part E, Signaling and flaggers.

WAC 296-155-53715 – Subsections (2), (6), (7), and (8) – Replaced the term “employer” with “operator”.

WAC 296-155-53815(7) – Replaced “employers” with “the employer” for consistency.

WAC 296-155-53900 – Subsection (3) – Removed this subsection relating to the certification requirements for lift directors and riggers. The language in the proposed rule is no longer needed based on stakeholder feedback, a review of the proposed language, and the establishment of a separate Tower Crane Permitting Program. Renumbered the rest of this section. Subsections (57) and (58) – Replaced “wind velocity indicating device” with “wind velocity indicator”. Subsection (63) – Changes were made to this section to align with OSHA requirements. Due to an oversight, these changes were not included in the proposal. As stated on the CR-102, and reiterated throughout stakeholdering, one of the purposes of this rulemaking was to align all of Part L with OSHA cranes. The change establishes a definitive timeline for using a specified temporary alternative measure, and clearly defines the timeframe allowed for repairing defective operational aids.

WAC 296-155-53900(69) – Replaced “business” with “working”.

WAC 296-155-53910(1) – Replaced “business” with “working”.

WAC 296-155-53915 – Subsections (9) – (11) – Replaced “employers” with “the employer” for consistency.

WAC 296-155-54100 – Subsection (11) – Replaced “employer” with “site supervisor”; subsection (41) – Replaced “wind velocity indicating device” with “wind velocity indicator”; subsection (43) – Changes were made to this section to align with OSHA requirements. Due to an oversight these changes were not included in the proposal. As stated on the CR-102 stated and reiterated throughout stakeholdering, one of the purposes of this rulemaking was to align all of Part L with OSHA cranes. The change creates a definitive timeline on what is allowed when utilizing one of the specified temporary alternative measures, while the repair is being made to the operational aid. This section was updated to align with two other sections of Part L that set requirements for operational aids. The change in this section is to ensure there is alignment across all of Part L.

WAC 296-155-54215(9)(a) – Replaced the term “employer” with “operator”.

WAC 296-155-55205(1)(c)(i)-(vii) – Renumbered subsection.

WAC 296-155-56425 Table 3 – Added clarifying language relating to increasing or decreasing the height of the tower/mast.

III. Comments on Proposed Rule

A. Comment Period

The formal public comment period for this rulemaking began on March 19, 2025, and ended May 23, 2025. L&I received 13 written comments and 10 people provided oral testimony during public hearings.

B. Public Hearings

DOSH held three public hearings.

Date	Location	Attendees	Testified
May 13, 2025	Spokane	11	4
May 15, 2025	Tukwila	35	6
May 19, 2025	Virtual via Zoom	33	0

C. Summary of Comments Received and L&I's Responses

Below is a summary of the comments L&I received, both through testimony and written comments, and the responses. Comments received are summarized by topic in order to provide clarity for response, and are not a verbatim accounting of each individual comment.

General Comments	L&I Response
WAC 296-155-52902 Definitions	
A/D director (assembly/disassembly) director Add "and is a qualified person who meets the requirements in WAC 296-155-53303" to the end of the definition of A/D (assembly/disassembly) director to be consistent with other definitions that address roles on a job site.	Thank you for the comment. We agree adding this language will provide consistency in definitions and ensure individuals who fulfill these roles understand the requirements they must meet. This comment did result in a change to the adopted rule language.
Assembly/disassembly control zone A significant concern is the size and enforcement of exclusion zones during erection, reconfiguration, or dismantling. The concept of controlling an exclusion zone equivalent to the size of a tower crane and its components in the event of collapse is impractical. Without a clear, defined exclusion zone, contractors	Thank you for the comment. The rules incorporates the definition of "assembly/disassembly work zone" from RCW 49.17.400 with an additional note that the zone must be controlled. The assembly/disassembly work zone is

will struggle to secure the correct street closure permits. Clarity is urgently needed regarding the notification procedures for assembly, disassembly, and reconfiguration of tower cranes. The controlled area will often include a portion of the construction site, streets/roadways, sidewalks, residential and commercial buildings and public spaces. The permit holder in many cases may not have legal access to some areas that may be within the controlled area. The permit holder may not be able to legally enter an adjoining privately owned building. We recommend that the department provide formal guidance outlining acceptable notice protocols, particularly for areas not directly controlled by the permit holder. Standardized signage or placards, for instance, may serve as a reasonable and effective means of notification. The department should consider creating a clearinghouse of assembly and disassembly information for the public to make it easier for contractors, this would allow for signage directing them to that clearinghouse.	to be determined by the prime contractor when securing required street closure permits. RCW 36.70B.270 sets the requirements for street closure permits consistent with the definition of assembly/disassembly work zone as defined in RCW 49.17.400(3) and WAC 296-155-52902(7). To the extent possible, L&I is committed to engaging in outreach efforts to local jurisdictions to ensure they are informed of these requirements. Through 2SHB 2022, L&I was given broad jurisdictional authority to address both worker and public safety and is required to make adjustments related to street closures in the adopted rule. L&I recognizes that controlling access to the job site, like several other parts of the rule, are site-specific and plans to develop resources to aid in compliance. The definition was amended to provide cross references to other areas of Part L that describe how to minimize exposure of workers and the public when moving loads. The new definition will read “Applicable to tower cranes. The total area that the crane/equipment, and/or components, and/or attachments could reach if the crane/equipment were to collapse during the assembly, disassembly, or reconfiguration of a tower crane. Height of the crane, length of boom, attachments, and loads shall all be considered in order to calculate the area, which can shrink or grow as the work progresses. Control access as necessary to restrict unauthorized access to the zone in accordance with WAC 296-155-53400(42) and WAC 296-155-53414(9).” This comment did result in a change to the adopted rule language.
Cranes, Forklifts, and Multipurpose Machines	Thank you for the comment.

Definitions of a crane in RCW 49.17.400 differ in meaning and language substantially as compared to the proposed definition of a crane in WAC 296-255-52902, and OSHA 1926.1401. There are also severe discrepancies and inconsistencies when defining or discerning definitions between the CFR's, RCW and WAC as to machinery meanings related to cranes, forklifts and multipurpose machines. The Department, Contractors, Commissions and the Courts should **NOT** need to guess or estimate which definition applies to a given construction crane work operation or the use of any other machinery (e.g., forklift, MPM's); especially as related to the ways/means construction building materials are being handled or maneuvered by such widely-used industry machinery. Until such time as the WAC adopts the RCW definition of a crane, or vice-versa, and until the RCW and WAC clearly, conclusively and consistently defines a forklift, multipurpose machine or other lifting machinery this proposed crane rule **should NOT be moved forward**. What is extremely frightening about compliance and potential fines/citations, and that the RCW fails to define a Multipurpose Machine, is that a Contractor could be operating a variable reach forklift or similar machine using the manufactures picking eye with rigging, and the Department could classify or cite that this "forklift machine use" is that of a Multipurpose Machine (be well assured, the Department will make every effort to classify a variable reach forklift as a multi-purpose machine, this will happen and Contractors will be unwarrantedly cited). Then, unfortunately, thorough costly administrative proceedings, it would be up to a "quasi-judge or fact-finder" to decide what exactly is the definition of the equipment being used by a Contractor and from which a citation was issued, this is patently unfair for all parties and is detrimental to public policy.	The differences found between RCW 49.17.400 and the adopted rule language are minimal and provide clarification. The differences in the definitions include an additional sentence that the term "equipment" is interchangeable with "crane", consistent with OSHA. The definition was also adjusted to be clear that a multipurpose machine lifting a suspended load is still covered by this part, regardless of it is moving the load horizontally at the same time or not. As of 2012, in Washington State, a forklift used like a crane to perform construction work, by lifting a suspended load with a hook/shackle, must follow chapter 296-155 WAC, Part L. Forklift operators and equipment had not previously been required to obtain certification under Washington law. However, CFR 1926.1400(c)(8) states, "Forklifts are covered by Subpart CC when configured with a winch or hook and used like a crane." In order to align Washington rules with OSHA's updated changes to CFR 1926.1400 Subpart CC, Washington State will also be requiring a certified operator when using a forklift to lift a suspended load with a hook/shackle. There has been some confusion around the terms "hoist" and "hoisting". Cranes which do not have a hoist, but do lift by a hook/shackle, such as an articulating crane, are covered by this standard. That requirement is reflected in the scope for both Washington State and OSHA, which states "by means of a winch or hook". The rule provides clarity, while remaining in alignment with OSHA. OSHA's current definition of "hoisting" in CFR 1926.1401 reads: "Hoisting is the act of raising, lowering or otherwise moving a load in the air with equipment covered by this standard. As used in this standard, "hoisting" can be done by means other than wire rope/hoist drum equipment."

	Additionally, to assist industry, the requirement for forklift operators to obtain certification or qualification does not become effective until January 1, 2027, and L&I committed in the rule to evaluate this requirement within two years of January 1, 2027. While there is no definition for a multipurpose machine in chapter 49.17 RCW, there is one in WAC 296-155-52902(116), which is also in alignment with OSHA's, and states "A machine that is designed to be configured in various ways, at least one of which allows it to hold, lift, lower, and horizontally move a suspended load. For example, a machine that can be configured with removable forks/tongs (for use as a forklift). along with a built in hook/shackle designed for hoisting a load (for use like a crane), is not covered by this part when using the fork/tongs like a forklift. When using the built-in hook/shackle for hoisting a suspended load, like a crane, it is covered by this part. See WAC 296-155-53300(1)(d) for more information on operator qualifications and certifications for multipurpose machines. This comment did not result in a change to the adopted rule language.
Multipurpose machine. Request clearer and more specific language concerning the term "most similar" as it pertains to equipment certification. This phrase creates uncertainty about the range of equipment included and how decisions will be made regarding what constitutes an appropriate or equivalent certification. We believe the Department should clearly identify the corresponding certification required for each type of multi-purpose equipment to ensure consistent understanding and compliance.	Thank you for the comment. It is DOSH's policy to match and align formatting and language with OSHA as often as possible. The adopted rule language is consistent with OSHA's latest updated language on "most similar". CFR 1926.1427(b)(2) states: If no accredited testing agency offers certification examinations for a particular type and/or capacity of equipment, an operator will be deemed to have complied with the certification requirements of this section for that equipment if the operator has been certified for the type/capacity that is most similar to that equipment and for which a certification

	examination is available. The operator's certificate must state the type/capacity of equipment for which the operator is certified. OSHA directive number CPL 02-01-063 provides clarity that if it is unclear whether there is a certification available for similar equipment, to contact the testing organization and, if necessary, consult with the Regional Office of Enforcement Programs and Directorate of Construction. This comment did not result in a change to the adopted rule language.
Operator Recommend **CHANGING** (125) to say: "Operator. A <u>qualified</u> person who is operating the crane/equipment and must meet the requirements established by the department under WAC 296-155-53300." b. Rationale: Stating that an operator is qualified is consistent with Federal OSHA definitions that state: 1926.1427(a) General requirements for operators. The employer must ensure that each operator is trained, certified/licensed, and evaluated in accordance with this section before operating any equipment covered under subpart CC, except for the equipment listed in paragraph (a)(2) of this section. 1926.1427(a)(1) Operation during training. An employee who has not been certified/licensed and evaluated to operate assigned equipment in accordance with this section may only operate the equipment as an operator-in-training under supervision in accordance with the requirements of paragraph (b) of this section. 1926.1427(c) Operator certification and licensing. The employer must ensure that each operator is certified or licensed to operate the equipment as follows:	Thank you for the comment. The definition refers to the section of the rule that outlines what a person must do to be a qualified operator, which includes minimum hours of experience for each crane type, certification, and evaluation. Adding qualified into the definition would be redundant. A person already must meet the standards in WAC 296-155-53300 to operate a crane/equipment under this rule. To ensure clarity and consistency it is better to refer to the entire section that outlines what requirements must be met to be an operator or operator-in-training. This comment did not result in a change to the adopted rule language.
Operator-in-training Recommend **CHANGING** (126) to say: "Operator-in-training. A ~~crane/equipment operator who has not *met* requirements~~ person	Thank you for the comment.

who is operating the crane/equipment who has not met requirements established by the department under WAC 296-155-53300. See WAC 296-155-53300 (2) for requirements." b. Rationale: Currently proposed definition is not consistent with Federal OSHA definitions to define an Operator-in-training a "crane/equipment operator who has not met requirements ... " when Federal OSHA defines in 1926.1427(a)(1) an "Operation during training" as "an employee who has not been certified/licensed and evaluated to operate assigned equipment in accordance with this section may only operate the equipment as an operator-in-training under supervision in accordance with the requirements of paragraph (b) of this section."	The adopted language was amended to match language from OSHA in CFR 1926.1427(a)(1) to clarify that the operator-in-training is an employee who may operate a crane while supervised. The definition will now read "An employee who has not been certified/licensed and evaluated to operate assigned equipment in accordance with this chapter may only operate equipment as an operator-in-training under supervision in accordance with WAC 296-155-53300(2)." This comment did result in a change to the adopted rule language.
WAC 296-155-53206 Additional inspection criteria and proof load testing—Tower cranes.	
Proposed rule is consistent with SHB 2022, Section 5 (d) which states: *"Tower cranes and tower crane assembly parts must be inspected by a certified crane inspector prior to and following every assembly, disassembly, and reconfiguration of a tower crane. Any issues identified throughout the procedure must be tracked and corrected according to this chapter and applicable department rule;"* The statute is clear that a certified crane inspector must complete a post-disassembly inspection. Following the Seattle incident, this language was advocated for due to potential safety concerns about cranes, or parts of cranes, being moved from job site to job site without thorough inspection, and not back to the yard where detailed inspections occur, and repairs can happen. Consequently, we disagree with industry that there is no safety benefit from a post-disassembly inspection. If the Department determines that a post disassembly inspection is not warranted or does not need to be completed by a certified crane inspector, the department or stakeholders should approach the legislature for a change in the law.	Thank you for the comment. 2SHB 2022, specifically RCW 49.17.420(2)(f), does state tower cranes and tower crane assembly parts must be inspected by a certified crane inspector. RCW 49.17.020(8) also requires all safety and health rules adopted by L&I to be "reasonably necessary or appropriate to provide safe or healthful employment and places of employment." All provisions of the Washington State Industrial Safety & Health Act must be read together. This rulemaking included changes made by 2SHB 2022 after its passage in 2024. Concerns around requiring a certified crane inspector for post-disassembly inspections of tower crane components were raised during stakeholder meetings and informal discussions with industry, crane inspector certifying organizations, and labor. The disassembly of a tower crane does not always occur in one day and can take place over the course of several days. Tower crane components are not always kept together. A standard practice can include components actively being disassembled and immediately loaded onto trucks to be removed from the job site and transported to a storage yard or a different job site. Stakeholders highlighted post disassembly inspections were redundant and did not increase safety of the job

	site, or disassembly of the tower crane requiring a certified crane inspector could create a rule that employers would be unable to comply with. Based on this feedback, the adopted rule balances alignment with the spirit of the statute against the risk of creating a burdensome requirement that employers cannot always meet, aiming to ensure a feasible rule that safeguards both worker and public safety. WAC 296-155-53303, Assembly/disassembly director qualifications, states in subsection (3)(d) that an A/D director must "Know and fulfill the relevant duty requirements of WAC 296-155-53401(9) and this section…" WAC 296-155-53401(9)(g) establishes one of the assigned duties of the A/D director as "Inspecting all crane components and attachments to ensure that they meet the manufacturer's recommendations, prior to assembling or reconfiguring. For tower cranes, the A/D director may review and rely on the accredited crane certifier's preassembly inspection…" The A/D director is responsible for inspecting crane components and attachments prior to assembly and reconfiguration, and L&I believes that this requirement also qualifies an A/D director to inspect crane components following disassembly. The adopted rule language requires that the individual qualified as an A/D director and performing the post-disassembly inspection be someone other than the A/D director assigned to perform the duties of an A/D director during disassembly, which aligns with the statute by ensuring these are two separate individuals assigned different tasks during disassembly. Given the above, the adopted rule language in WAC 296-155-53206(1) includes the following change regarding who can perform the post-disassembly inspection only: "For the purposes of this subsection and following disassembly only, an individual qualified as an A/D director under WAC 296-155-53303 can satisfy the requirement for performing an inspection. This

	individual is separate from, and in addition, to the A/D director already assigned on the job site to perform A/D director duties for the assembly, disassembly, and reconfiguration disassembly activities." This change does not require the inspection to be performed by an A/D director. Rather it provides the option for a separate individual qualified as an A/D director to perform a post-disassembly inspection as an alternative to a certified crane inspector.
We are opposed to the requirement in WAC 296-155-53206 that requires a certified crane inspector to perform a post-disassembly inspection. This requirement is in addition to the existing post-assembly, quarterly, and annual inspections and testing. Adding both pre- and post-disassembly inspections to this process is not only redundant but could hinder operations unnecessarily. Possibly the A/D director could be given the added responsibility of doing inspection during disassembly.	Thank you for the comment. This comment did result in a change to the adopted rule language in WAC 296-155-53206(1). "For the purposes of this subsection, and following disassembly only, an individual meeting the requirements to be qualified as an A/D director under WAC 296-155-53303 can satisfy the requirement for performing an inspection. This individual is separate from, and in addition to, the A/D director already assigned on the job site to perform A/D director duties for the assembly, disassembly, and reconfiguration activities." This comment did result in a change to the adopted rule language.
WAC 296-155-53300 Operator qualifications and certification.	
Recommend **CHANGING:** the note under (3)(f) to: "Note: A signed declaration from the crane operator attesting to actual hours of crane operator experience and crane related experience, separated out by crane type and capacity, is ~~acceptable~~ <u>required in addition to actual hours of crane operator experience and crane related experience attestations by third parties approved by the department."</u> Rationale: Attestations of crane operator experience should be obtained from qualified evaluators approved by the department	Thank you for the comment. WAC 296-155-53300(3)(f) requires an employer to obtain documentation of a crane operators hours of experience and crane related experience separated out by crane type and capacity. The note following (3)(f) allows for a signed declaration by the crane operator attesting to their hours of experience to satisfy that requirement. The crane operator is the person who is

and not be self-attestations alone to satisfy retraining and evaluation requirements.	most knowledgeable about their experience and is the most appropriate person to sign a declaration. This comment did not result in a change to the adopted rule language.
The proposed WAC provision states that the evaluator must be an employee or agent of the employer, and that once an operator is successfully evaluated, the employer may allow the operator to operate other equipment, provided the employer can demonstrate that such equipment does not require "substantially different skills, knowledge, or ability to recognize and avert risk to operate." We respectfully request clarification on what constitutes a "substantial" difference in this context. Without clear criteria or examples, employers may face uncertainty in determining whether an operator's evaluation is applicable to additional equipment. This ambiguity could lead to inconsistent application across job sites and increase the risk of noncompliance, despite good-faith efforts to meet the standard. Clear guidance is essential to help contractors make informed, defensible decisions regarding operator assignments.	Thank you for the comment. The adopted rule language is identical to OSHA's regulations in CFR 1926.1427(f)(5). Additionally, OSHA directive number CPL 02-01-063 provides clarity that the "focus should be on whether operation of the different equipment requires different knowledge, skills, or abilities to recognize and avert risk." L&I commits to addressing this in a DOSH directive. This comment did not result in a change to the adopted rule language.
Recommend **CHANGING** Table 3 Crane Operator Experience for Cranes Used in the Construction Industry to say: "Hours of crane related experience: Time as a qualified signal person ... " Rationale: For consistency, a "signal person" is represented as two words throughout the document.	Thank you for the comment. The adopted language was amended to make signal person two words. This comment did result in a change to the adopted rule language.
Recommend **ADDING** to Table 3 Crane Operator Experience for Cranes Used in the Construction Industry: "Hours of actual crane operating experience. For all cranes: Time while the operator or operator-in-training is at the controls of the crane; and/or a combination of operating hours within the same crane type. For mobile cranes: It ... For tower cranes: It includes time while climbing (decreasing or increasing the height of the tower/mast)" Rationale: The additions allow for operators-in-training to obtain	Thank you for the comment. The adopted language was amended to include "or operator-in-training" and "increasing or decreasing" for change in height of the tower/mast. This comment did result in a change to the adopted rule language.

actual crane operating experience hours and defines climbing to be consistent with the definition as given on page 6, WAC 296-155-52902 Definitions (35).	
WAC 296-155-53400 General requirements.	
Recommend **ADDING:** to (57)(b) to say: "Where manufacturer is unavailable or has refused to review a request. The manufacturer is provided, in writing, a detailed description of the proposed modification/addition, is asked to approve the modification/addition, but ~~it~~ declines to review the technical merits of the proposal or fails, within 30 days, to acknowledge the request or initiate the review, and all of the following are met: (i) A RPE who is a qualified person with respect to the crane/equipment involved: (A) Approves in writing the modification/addition and specifies the crane/equipment configurations to which that approval applies; and" Rationale: Modifications/additions affecting a crane/equipment's capacity or safe operation require qualified oversight; documentation supporting these changes is likely necessary if in the case for a tower crane permit.	Thank you for the comment. The requested change would establish a new requirement not previously discussed with stakeholders that would result in a violation or sanction and would need to be analyzed for any potential costs. The current practice and expectation is that this would be done in writing and is not done verbally. The site supervisor, crane owner, and crane user could all be cited for noncompliance. This comment did not result in a change to the adopted rule language.
WAC 296-155-53401 Duties of assigned personnel.	
(9) The A/D director duties include the following: Page 73 , I'm not seeing the (v) above this line to continue this numbering. (vi) Verifying assist crane loads. When using an assist crane, the loads that will be imposed on the assist crane at each phase of assembly, disassembly, or reconfiguration work, must be verified in accordance with WAC 296-155-53400(60) before assembly, disassembly, or reconfiguration begins; [73] RDS-6059.2	Thank you for the comment. The language was updated to correct the numbering errors. This comment did result in a change to the adopted rule language.
WAC 296-155-53403 Fall protection.	
Recommend **CHANGING** the note into a rule as (10(b): ~~Note:~~ If the equipment is running and the employer is at or near the draw-works, precautions should be taken to ensure the fall protection gear will not become entangled." And, **Reindex** the currently proposed (10)(b) to (10)(c). Rationale: The content of the note is important and should be incorporated into the body of Part L. The exactly worded notes on	Thank you for the comment. The language identified was inadvertently left in and was removed to be consistent with changes made to other areas of the proposed rule language. This language identified in the comment was already incorporated into WAC 296-155-53403(7).

Page 83 (5) and (6) have already been struck from the proposed language.	This comment did result in a change to the adopted rule language.
Recommend **CHANGING** (5) to say: "For nonassembly, assembly, disassembly, or reconfiguration work, the employer must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 6 feet above a lower level as follows:" b. Rationale: This is the only use of the term "nonassembly" in the entirety of Part L and is not defined. From the context of the sentence, it appears the intent is about assembly (see use of "assembly" in (6)).	Thank you for the comment. The language in the proposal was incorrect, and was changed to realign with CFR 1926.1423(e). This comment did result in a change to the adopted rule language.
WAC 296-155-53408 Power line safety	
Recommend **CHANGING** (4)(j) to say: "If a problem occurs implementing the procedures being used to comply with (e) of this subsection, or there is indication that those procedures are inadequate to prevent electrocution, <u>all workers</u> ~~the employer~~ must safely stop operations and <u>the utility owner/operator, RPE who is a qualified person with respect to electrical power transmission and distribution, and all employers of any employees involved in the work must</u> either develop new procedures to comply with (e) of this subsection, or have the utility owner/operator deenergize and visibly ground or relocate the power line at the job site before resuming work;" b. Rationale: Page 102 (4)(i) suggests that multiple employers may be involved in the work and that a single person be identified to direct the work. The proposed rule only specifies an employer to stop work. HB 2022 empowers any and all workers, not just employers, on a job site to stop work in cases of unsafe or potentially unsafe conditions.	Thank you for your comment. The employer is ultimately responsible for providing a safe and healthy workplace free from recognized hazards. The term “employer” is necessary in this subsection to reflect that multiple employers could be cited for violations of this subsection due to job sites typically having more than one employer on-site. There is sufficient stop work authority procedures when it comes to job sites that must consider power line safety under this section. 2SHB 2022 only addresses stop work authority related to the operation, assembly, disassembly, or reconfiguration of a tower crane. This comment did not result in a change to the adopted rule language.
Overhead power line rules, we were told that wherever our crane could reach, within 20 feet of power lines that we had to get a hold of the power company. And if you couldn't get ahold of them, just say you tried to get ahold of them. We have to do that on every job because if we're parked on the other side of the street,	Thank you for your comment. The rule requires **before** equipment is operated, assembled, disassembled, or reconfigured, a work zone must be identified. If the crane or load can get closer than 20 feet of a power line that

there's power lines over there well over 20 feet away, but we're not even booming that way, we have to pause and try to get ahold of the power company and then keep paperwork for something that doesn't even pertain like I said, I totally understand if you got an overhead crane hitting three, four blocks or whatever.	is up to 350 kV, or closer than 50 feet of a power line that exceeds 350 kV during the assembly, disassembly, or reconfiguration, the employer must follow one of the options provided in WAC 296-155-53408(1)(a). Additionally, WAC 296-155-53408(1)(e) and 296-155-53408(2)(c) require the utility owner to provide the requested voltage information prior to commencement of work or within two working days of the request. This comment did not result in a change to the adopted rule language.
The section for operation, 53408 is the power line rule and it is about the operation, number two, of crane or derrick. It starts off with saying identify the work zone. I think the meeting should be the number one thing on this list that the entities have to do which identifies the voltage, safe working distance, etc., so then you can establish your work zone. You cannot just throw up a line and say, "We're going to snuggle past this line", when you do not even know the voltage. You can guess, but that does not work. Having investigated three fatalities for power lines with cranes and riggers, etc., this needs to change. I believe that's a mistake having it first. And since they're bringing in the new language for the needing to be documented and stuff, I think it should be at the very top. Justification: This is the way it is listed in the ASME B30.5 2011 Preferred method: Contact the utility company and determine voltage. This is also the requirement for cranes in WAC 296-24.	Thank you for the comment. It is DOSH's policy to match and align formatting and language with OSHA as often as possible. The sequencing of when the meeting requirement exists is in alignment with both OSHA and ASME B30.5. Knowing the voltage information is needed to determine the proper safe working distances. However, knowing the voltage information is separate from the documented meeting requirement. This comment did not result in a change to the adopted rule language.
WAC 296-155-53414 Cranes/equipment with a rated hoisting capacity of 2,000 pounds or less.	
Recommend **CHANGING** (5)(a) to say: "The employer must ensure that safety devices and operational aids ... in accordance with manufacturer procedures. ~~The employer~~ Workers and operators must immediately cease operations or follow safe shut-down procedures in the event safety devices or operational aids fail. .. "	Thank you for the comment. The employer is ultimately responsible for providing a safe and healthy workplace free from recognized hazards. The term "employer" is necessary in this subsection to reflect that multiple employers could be cited for violations of this subsection due to job sites typically having more than one employer on-site. There

Rationale: HB 2022 empowers all on a job site to stop work in cases of unsafe or potentially unsafe conditions. Workers should not wait for employers to mandate ceasing of operations or following of safe shut-down procedures. Verbiage should mirror the second sentence of page 106 (a)(2) which states, "If a device stops working properly during operations, the operator must safely stop operations."	is sufficient stop work requirements in this section. L&I encourages employers to foster a safety culture that empowers all workers to raise concerns about safety. Additionally, 2SHB 2022 only addresses stop work authority related to the operation, assembly, disassembly, or reconfiguration of a tower crane. This comment did not result in a change to the adopted rule language.
WAC 296-155-53416 Forklifts when lifting a suspended load.	
In the proposed rule the department has added requirements for certain workers to become certified or qualified through an employer's or third-party qualified evaluator program to operate a forklift to lift and move a suspended load. This requirement goes above OSHA and creates confusion on when an operator requires certification versus qualification. Additionally, there does not seem to be compliance data to support this change.	Thank you for the comment. L&I added this requirement to align with OSHA requirements for certification. OSHA requires a certified operator when a forklift is configured to hoist or lower a suspended load with a winch or a hook. That requirement can be found in CFR 1926.1400(a) Subpart CC and CFR 1926.1400(c)(8). The requirement in the adopted rule allows for an employer to establish their own qualification program to mitigate cost of obtaining certifications for their workers. In addition to aligning with OSHA, L&I does have compliance data documenting forklifts improperly used to lift suspended loads that have resulted in job site hazards and injuries. To assist industry, this section of the adopted rule does not become effective until January 1, 2027, and L&I committed in the rule to evaluate this requirement within two years of January 1, 2027. This comment did not result in a change to the adopted rule language.
There is support for requiring certification or qualification for a worker to operate a forklift to lift and move a suspended load. However, this requirement should not be in chapter 296-155	Thank you for the comment.

WAC, Part L. This requirement should be located in either chapter 296-863 WAC, Forklifts And Other Powered Industrial Trucks Or Chapter 296-155 WAC, Part M, Motor Vehicles, Mechanized Equipment, And Marine Operations. Additionally, a reference to the correct ANSI standard should be made. ANSI B56.6-2011 for rough terrain forklifts has a section on suspended loads. Forklifts not manufactured under ANSI B30.5, Mobile Cranes, do not, and should have a reference to ANSI B56.6-2011 to have a minimum standard applied to all.	L&I placed the requirement for certification/qualification of forklift operators in chapter 296-155 WAC, Part L because the equipment is being used in the same manner as a crane. The adopted language was amended to add a cross reference to chapter 296-863 WAC in WAC 296-155-52900, to be clear that forklifts have other requirements they must meet. L&I commits to adding a cross reference in chapter 296-863 WAC to chapter 296-155 WAC, Part L and evaluating the addition of American National Standards Institute (ANSI) standards when that chapter is opened or as part of a clean-up rulemaking. This comment did result in a change to the adopted rule language.
Support the added requirements for certain workers to become certified or qualified through an employer's or third-party qualified evaluator program to operate a forklift to lift and move a suspended load. We have seen contractors already certifying their operators, wanting to have that extra knowledge and it will contribute to safer worksites.	Thank you for the comment. This comment did not result in a change to the adopted rule language.
Under the Crane rule, companies would not only need to provide a trained varied reach forklift operator, but would also need to provide, 1) lift director, 2) riggers, 3) signalers/dedicated spotters, and 4) site supervisor – using the lift director cost analyses estimate above, these additional costs would indeed exceed $100 Million, yet the Department indicates that an economic impact analysis is negligible or not required.	Thank you for the comment. This is currently a requirement. An operator certification is separate, and does not negate the qualification requirements one must accomplish in order to become a qualified rigger or lift director. The operator may perform one or more assigned duties concurrently, meaning the operator may also be the site supervisor, qualified rigger, and lift director. If the work performed requires a signal person, they must be a separate person. This comment did not result in a change to the adopted rule language.

Are there trades being able to train the workers too and have them available to us -- laborers, carpenters for the operation of forklifts legally?	Thank you for the comment. The adopted rule establishes a pathway for forklift operators to become certified and a pathway to become qualified through an employer or qualified evaluator (third-party) to use forklifts to lift a suspended load. A qualified evaluator (third-party) is defined in WAC 296-155-52902(145) as “an entity that, due to its independence and expertise, has demonstrated that it is competent in accurately assessing whether individuals meet the qualification requirements in this part for a crane operator, A/D director, lift director, signal person, or a rigger.” The adopted rule established these two pathways to alleviate concerns raised by industry on the availability of certification courses that could have caused delays or interruptions to construction projects. Any person can become a qualified evaluator (third-party) to create a course that employers can use to get their workers qualified to use forklifts to lift a suspended load. This comment did result in a change to the adopted rule language.
WAC 296-155-53715 Mobile cranes – operations.	
Recommend **CHANGING** (2) to say: "On wheel-mounted cranes, the <u>operator</u> ~~employer~~ must not lift loads over the front area, except as permitted by the crane manufacturer." b. Rationale: An employer is not lifting a load - an operator is lifting a load.	Thank you for the comment. L&I agrees the responsible party in this subsection is the operator. This comment did result in a change to the adopted rule language.
WAC 296-155-53900 Tower cranes – general.	

Recommend **ADDING:** "{71) <u>It is the responsibility of the prime contractor to ensure that all employers and workers on the job site requesting relevant manufacturer operation instructions and guidelines. including assembly, disassembly, or reconfiguration instructions have received requested materials within seven business days from the date of the request</u>." b. Rationale: The primary intent of SHB 2022 is to ensure that employers and workers have the critical information they need to do their work properly and safely. In the Seattle tower crane incident, workers and their employers were denied access to the tower crane operation manuals that contained the crane disassembly procedures unless each climbed the crane to read the single copy of the manual located in the cab.	Thank you for the comment. The requested change would establish a new requirement on the prime contractor not previously discussed with stakeholders that would result in a violation or sanction and would need to be analyzed for any potential cost. WAC 296-155-53401(3)(e) already requires the crane owner must provide field assembly, disassembly, reconfiguration, operation, maintenance information, and operator's manual to any entity that requests it. Additionally, WAC 296-155-53900(69) requires the manufacturer/distributer to provide all relevant manufacturer operation instructions and guidelines to any individual requesting them. This comment did not result in a change to the adopted rule language.
We question why a higher standard of training and certification is required specifically for the erection, dismantling, or reconfiguration of tower cranes. Under WAC 296-155-53900 (3)(a)(3)(b), it is stated that workers performing these tasks must hold certifications from a nationally accredited organization for rigging and as lift directors. Why are these elevated certification requirements necessary only during assembly/disassembly phases and not for crane operators during regular operations? In particular, the certification requirement for riggers seems unnecessary, as there is no independent rigging being performed during these processes. All pick points are pre-determined by the crane manufacturer or technical representative, meaning the rigger is not making independent rigging decisions. This distinction appears unwarranted and does not reflect the actual work being done.	Thank you for the comment. The adopted rule language has been amended to remove the certification requirement from this section to ensure qualifications for lift directors and riggers are the same across chapter 296-155 WAC, Part L. With the implementation of the tower crane permit program, the initial concerns raised for the requirement of certified personnel has now been satisfied. This comment did result in a change to the adopted rule language.
Recommend **CHANGING** (29) to say: "When counterweight position is controlled by wire ropes, the site supervisor must provide means to prevent uncontrolled movement ~~in the event of~~	Thank you for the comment.

~~wire rope or~~, including uncontrolled movement from wire rope termination failure." b. Rationale: The use - not the presence - of wire rope for controlling counterweight position introduces uncontrolled movement.	The rule is sufficient to cover all uncontrolled movement, not just wire rope, as defining all uncontrolled movements is impossible. This comment did not result in a change to the adopted rule language.
Recommend **CHANGING** (64)(c)(xiv) to say: "Wind velocity measuring device ~~indicator~~. The employer must provide a wind velocity measuring device at, or above, the height of the tower crane to display the wind velocity at the operator's station or in the cab. ~~and it must be mounted at or near the top of the crane structure.~~ Temporary alternative measures: ~~Use of~~ Wind velocity information from a properly functioning wind velocity measuring ~~indicating~~ device on another tower crane on the same site at, or above the height of the subject tower crane, ~~or a qualified person estimates~~ may be used to measure wind velocity." b. Rationale: provide consistency in messaging throughout Part L.	Thank you for the comment. The adopted rule was reviewed and updated to state “wind velocity indicator” rather than “wind velocity indicating device” or other terms. Having the same term throughout chapter 296-155 WAC, Part L will ensure the rule is clear and consistently applied. This comment did result in a change to the adopted rule language.
Recommending **ADDING** to (24) to say: "Before assembling, disassembling, or reconfiguring, the A/D director must balance cranes in accordance with the manufacturer's or a qualified person's instructions. The maximum wind speed limit of the crane performing the assembly, disassembly, or reconfiguration must not be exceeded, as indicated by a wind velocity measuring device. The wind velocity measuring device shall be mounted at a height exceeding ~~near~~ the height ~~top~~ of the tower crane or assembly/disassembly crane, whichever is greater. If the tower crane wind velocity measuring device is powered off during assembly, disassembly, or reconfiguration, a battery powered wind velocity measuring device with wireless communication and velocity readout at the operator's station or in the cab must be temporarily attached at the height of the tower crane or assembly/disassembly crane, whichever is greater." b. Rationale: In the Seattle tower crane collapse, only wind speeds at the top of the mobile crane were considered before	Thank you for the comment. The adopted rule under WAC 296-155-53400 (24) and (58) requires a wind velocity indicator to be mounted at or near the top of the tower crane. This location satisfies the requirement that wind velocity indicators are mounted in a location to obtain wind velocity that would impact the tower crane and inform workers when different parts of this rule apply including shutting down of operations when maximum wind speeds or velocities are reached. Additionally, the adopted rule exceeds OSHA standards that only requires the wind velocity indicator to be mounted above the upper rotating structure. This comment did not result in a change to the adopted rule language.

disassembling the tower crane. Although powered down for disassembly, the wind speed at the top of the tower crane must be considered before assembling, disassembling, or reconfiguring.	
Recommend **CHANGING** (59) to say: "When the wind velocity measuring ~~indicating~~ device is not functioning, crane operations may continue if another crane on the site is equipped with a functioning wind velocity measuring device ~~indicator~~ at, or above, the height of the tower crane in operations. ~~or if a qualified person determines that ambient wind velocity is within permitted limits.~~ Rationale for **CHANGING:** Generally speaking, wind velocity increases with height. If the wind velocity measuring device on-site is not at the same height of the tower crane, then it will be less able to measure wind velocities affecting the tower crane. The proposed rules also do not define any individuals who are qualified to determine whether ambient wind velocities are within permitted tower operations parameters. Although ambient wind velocities (usually measured at 10 meters (or 32.8 feet) can be used to extrapolate wind velocities at the top of tower cranes 30-200 meters (or 98- 656 feet) in height, other factors such as terrain, building obstacles and specific crane geometry must be considered to make the determination. The proposed rules do not indicate who would be qualified to make this determination.	Thank you for the comment. The adopted rule was reviewed and updated to state “wind velocity indicator” rather than “wind velocity indicating device” or other terms. Having the same term throughout chapter 296-155 WAC, Part L will ensure the rule is clear and consistently applied. This comment did result in a change to the adopted rule language.
Recommend **ADDING** to (60): The employer must provide indicating devices to: "(l) display wind velocities at, or above, the height of the tower crane during operations. assembly, disassembly, and reconfiguration, including when the tower crane is powered down for assembly, disassembly, and reconfiguration procedures." b. Rationale: In the Seattle tower crane incident, only the wind speeds from the assembly/disassembly crane were considered in ceasing the assembly/disassembly crane's disassembling of the tower crane. Wind speeds at the top of the tower crane should	Thank you for the comment. The adopted rule under WAC 296-155-53400 (23) and (57) requires a wind velocity indicator to be mounted at or near the top of the tower crane. This location satisfies the requirement that wind velocity indicators are mounted in a location to obtain wind velocity that would impact the tower crane and inform workers when different parts of this rule apply, including shutting down of operations when maximum wind speeds or velocities are reached.

have been considered. If they were, efforts would have been focused on securing the tower crane from tip over.	Additionally, the adopted rule exceeds OSHA standards that only requires the wind velocity indicator to be mounted above the upper rotating structure. This comment did not result in a change to the adopted rule language.
WAC 296-155-54100 Self-erecting tower cranes – general.	
Recommend **CHANGING** (41) to say: "The employer must mount a wind velocity measuring ~~indicating~~ device at, or above the height of ~~near the top~~ of the tower crane to display the wind velocity. The employer must provide a velocity readout at the operator's station or in the cab. Temporary alternative measures: ~~Use of w~~Wind velocity information from a properly functioning wind velocity measuring ~~indicating~~ device on another tower crane functioning on the same site at, or above, the height of the subject tower crane, a qualified person estimates may be used to measure the wind velocity." b. Rationale: As previously stated, wind velocity generally increases with height. If the wind velocity measuring device on-site is not measured at the height of the tower crane or higher, then the assembly/disassembly crane operator will not be aware of the wind velocities affecting its load during assembly, disassembly, and reconfiguration - the tower crane. Also, the proposed rules do not define any individuals who are qualified to estimate wind velocities or provide guidance on how wind velocity is to be estimated. Meteorology, a very specific science, does not account for construction site terrain, building obstacles or tower crane geometry. Not knowing and accounting for the wind velocity at the top of the tower crane were critical contributors to the Seattle tower crane catastrophe on April 27, 2019.	Thank you for the comment. The adopted rule under WAC 296-155-53400 (23) and (57) requires a wind velocity indicator to be mounted at or near the top of the tower crane. This location satisfies the requirement that wind velocity indicators are mounted in a location to obtain wind velocity that would impact the tower crane and inform workers when different parts of this rule apply including shutting down of operations when maximum wind speeds or velocities are reached. Additionally, the adopted rule exceeds OSHA standards that only requires the wind velocity indicator to be mounted at or above the jib level. This comment did not result in a change to the adopted rule language.
General Comments	
Training- we are still hearing conflicting messages from cranes and department staff about what rules apply and when/where they apply. This rulemaking is confusing even for the most versed individuals. We want to partner with the Department and	Thank you for the comment. L&I looks forward to leveraging stakeholder partnerships to ensure information and new requirements are communicated

offer resources and support to ensure that all enforcement and consultative staff receive the training necessary for proper implementation Communication to stakeholders- presently the Department has not been issuing enough guidance to the craning community, aside from some presentations at meetings and conferences (that not all attend) and generic govdelivery emails, we have not heard enough from the Department about the timelines and expectations. We suggest that you generate a document with requirements listed by implementation date to assist employers (and your own staff) to understand what is expected and consider including in notices about annual certifications.	through robust education and outreach efforts. L&I will be updating DOSH directives to ensure industry and labor can more easily understand what compliance looks like. Directives are a helpful tool for DOSH compliance staff to ensure consistency when engaged in enforcement activities. This comment did not result in a change to the adopted rule language.
We sincerely hope that the Department considers allowing some grace on enforcement as we work to get this rule package fully promulgated and systems in place to process all the elements required by the legislature.	Thank you for the comment. The adopted rule does include two areas of the rule that have delayed effective dates, WAC 296-155-53303, Assembly/disassembly director qualifications, and WAC 296-155-53416, Forklifts when lifting a suspended load. L&I is committed to working with employers to ensure they have a clear understanding of the new requirements. We encourage employers to use DOSH Consultation and technical services at L&I to seek any clarifications on the rules that are not addressed through DOSH Education & Outreach documents and trainings, as well as DOSH directives. This comment did not result in a change to the adopted rule language.
In my business, I run an articulating boom, so it is not an overhead crane with a cable. Does this rule apply to all cranes or is there going to be a separation of some of these rules since we do not do rigging? As a lift director, our cranes have forks. We never do any rigging. So it really does not even pertain to us. Will there be any variances of commercial and residential operations?	Thank you for the comment. The requirements of the rule still apply even though there is not rigging. OSHA requires a rigger when a load is being guided. The adopted rules include this requirement to be in alignment with OSHA.

	Chapter 296-155 WAC, Part L does not make a distinction in the use of cranes in residential and commercial construction. Employers may apply to DOSH for a variance from safety and health rules. To obtain a variance, it must be proven that workers will be provided with protection equal to compliance with the standard. More information on variances can be found on the L&I website at Rule Variances & Variance Notices. This comment did not result in a change to the adopted rule language.
The proposed crane rule as part of its statues/rules iterate the language "**and/or**" approximately **135 times** and "**crane/equipment**" **130 times**. This is confusing language at best and puts Contractors in an impossible position of guessing if the language is cumulative as to the requirements. It further puts commissions and courts in an awkward position of best-guessing meanings and intent. These vague and ambiguous language positions alone warrant a complete re-write of the entire proposed rule.	Thank you for the comment. The adopted rule was reviewed for its use of "and/or" and changes were made throughout the rule to provide clarity. The adopted rule under WAC 296-155-52902(45) defines "crane/equipment" and states "for the purposes of this part, the term "equipment" is interchangeable with the term "crane." This comment did result in a change to the adopted rule language.
The family of Sarah Pantip Wong testified to the significance of losing their daughter and the impact of the lives lost and injuries incurred due to the collapse of a tower crane in Seattle, WA on April 27, 2019. The family members testified in support of the rule and asked L&I to promptly adopt the safety standards outlined in the adopted rule.	Thank you for the comment. L&I appreciates the information provided about how the updates to chapter 296-155 WAC, Part L safety requirements for cranes used in construction, will have a positive impact for workers and their families. Those who were injured or lost their lives should never be forgotten. Their memories should always be a reminder of the importance of providing a safe workplace and continually striving to improve safety to prevent any future injuries or fatalities. This comment did not result in a change to the adopted rule language.

Small Business Economic Impact Statement & Cost-Benefit Analysis	
The department announced at the public hearing that they had conducted an economic evaluation and found that these rules would not be very impactful financially to employers. However, despite our offers to have the department speak to contractors that conduct this type of work and being declined, it appears that none of the contractors we work with (we are the largest and oldest construction association) have been contacted to provide feedback on the fiscal impacts. We maintain a list of a few hundred professionals in our state that conduct this type of work, and after polling them, NONE of them were solicited for input on the fiscal impacts. So we want to know what type of companies or what type of contacts were solicited as we do not believe this survey was done accurately and ask the department to either re-do the survey or provide substantiation of the fiscal survey. There are many other sections of the proposed rules, especially for the use of variable reach forklifts that would also have a substantial economic impact to Contractors, of which the Department has failed to consider, recognize or provide direction.	Thank you for the comment. L&I announced at the public hearing that a formal small business economic impact statement was not required because the rule does not impose more than minor costs. Under Washington State law, L&I is required to perform two types of economic analyses on its rules. First, a cost-benefit analysis is required under the Administrative Procedure Act, see RCW 34.05.328, on rules that meet the definition of a significant legislative rule. Significant legislative rules are defined as "a rule other than a procedural or interpretive rule that (A) adopts substantive provisions of law pursuant to delegated legislative authority, the violation of which subjects a violator of such rule to a penalty or sanction; (B) establishes, alters, or revokes any qualification or standard for the issuance, suspension, or revocation of a license or permit; or (C) adopts a new, or makes significant amendments to, a policy or regulatory program." RCW 34.05.328(5)(b) provides exemptions from a cost-benefit analysis and includes rules that adopt without material change federal regulations and state statutes, and rules that make clarifying housekeeping changes. A link to the final Cost-Benefit Analysis is available here. The inclusion of language in the adopted rule requiring certification for an operator when a forklift is configured to lift or lower a suspended load by means of a hook/shackle matches OSHA's requirements in CFR 1926.1400(a) Subpart CC and CFR 1926.1400(c)(8). The requirement in the adopted rule allows for an employer to create their own qualification program to mitigate cost of obtaining certifications for their workers. To assist industry, this section of the adopted rule does not become effective until January 1, 2027, and L&I committed in the rule to evaluate this requirement within two years of January 1, 2027.

	Second, under the Regulatory Fairness Act, chapter 19.85 RCW, a small business economic impact statement is required for rules that will affect businesses with 50 or fewer employees that will impose more than minor cost on an industry. RCW 19.85.020(2) defines minor cost as "cost per business that is less than three-tenths of one percent of annual revenue or income, or one hundred dollars, whichever is greater, or one percent of annual payroll." RCW 19.85.025 does not require analysis for similar exemptions to RCW 34.05.328 described above. L&I did publish information on the Notice of Proposed Rulemaking (CR-102) discussing how L&I arrived at the rule not crossing the minor-cost threshold, that document is published on L&I's website. Contact information was listed on that document for interested stakeholders to request a detailed cost calculation, and is attached to this Concise Explanatory Statement for convenience. As part of developing the cost-benefit analysis for this rule, a survey was performed in accordance with L&I survey policies and practices. This comment did not result in a change to the adopted rule language.
The exclusionary zone requirements, as currently written, the law does not include the adequate impact to that statement as has been previously submitted to the in public comment period. And dismantling of some cranes that take up to 22 days and require numerous blocks in downtown Seattle to be closed to say that it's not an economic impact is very eye opening to hear the department say that. So, we'd be extremely interested to see the economic impact statements.	Thank you for the comment. As mentioned in the comment above, rules that are adopting state statutes are exempt from economic analysis due to implementing state law. This comment did not result in a change to the adopted rule language.