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**SENATE BILL 5900**

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**State of Washington 68th Legislature 2024 Regular Session**

**By** Senators Frame, Keiser, Nobles, Saldaña, and Valdez

AN ACT Relating to construction crane safety; amending RCW 49.17.400, 49.17.420, and 49.17.440; adding new sections to chapter 49.17 RCW; adding a new section to chapter 36.70B RCW; and creating a new section.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

NEW SECTION. **Sec.**  The legislature finds that there is significant opportunity to improve worker and public safety in tower crane assembly, disassembly, and reconfiguration. The Seattle tower crane incident on April 27, 2019, killing two members of the public, Sarah Pantip Wong and Alan Jay Justad, and two iron workers, Travis Daniel Corbet and Andrew W. Yoder, exposed weaknesses in construction safety efforts. Requirements for permitting, street closures, and penalties are created to ensure that assembly, disassembly, and reconfiguration of tower cranes proceed safely.

NEW SECTION. **Sec.**  A new section is added to chapter 49.17 RCW to read as follows:

Sections 3 through 9 of this act apply to construction crane safety.

**Sec.**  RCW 49.17.400 and 2007 c 27 s 2 are each amended to read as follows:

The definitions in this section apply throughout ((~~RCW 49.17.400 through 49.17.430~~)) this section and sections 4 through 8 of this act unless the context clearly requires otherwise.

(1) "Apprentice operator or trainee" means a crane operator who has not met requirements established by the department under RCW 49.17.430.

(2) "Attachments" includes, but is not limited to, crane-attached or suspended hooks, magnets, grapples, clamshell buckets, orange peel buckets, concrete buckets, drag lines, personnel platforms, augers, or drills and pile‑driving equipment.

(3) "Certified crane inspector" means a crane inspector who has been certified by the department.

(4) "Construction" means all or any part of excavation, construction, erection, alteration, repair, demolition, and dismantling of buildings and other structures and all related operations; the excavation, construction, alteration, and repair of sewers, trenches, caissons, conduits, pipelines, roads, and all related operations; the moving of buildings and other structures, and the construction, alteration, repair, or removal of wharfs, docks, bridges, culverts, trestles, piers, abutments, or any other related construction, alteration, repair, or removal work. "Construction" does not include manufacturing facilities or powerhouses.

(5) "Crane" means power‑operated equipment used in construction that can hoist, lower, and horizontally move a suspended load. "Crane" includes, but is not limited to: Articulating cranes, such as knuckle-boom cranes; crawler cranes; floating cranes; cranes on barges; locomotive cranes; mobile cranes, such as wheel-mounted, rough-terrain, all-terrain, commercial truck mounted, and boom truck cranes; multipurpose machines when ((~~configured~~)) used to ((~~hoist~~)) lift and lower ((~~by means of a winch or hook and~~)) a suspended load, or horizontally move a suspended load; industrial cranes, such as carry-deck cranes; dedicated pile drivers; service/mechanic trucks with a hoisting device; a crane on a monorail; tower cranes, such as fixed jib, hammerhead boom, luffing boom, and self-erecting; pedestal cranes; portal cranes; overhead and gantry cranes; straddle cranes; side-boom tractors; derricks; and variations of such equipment.

(6) "Crane operator" means an individual engaged in the operation of a crane.

(7) "Professional engineer" means a professional engineer as defined in RCW 18.43.020.

(8) "Qualified crane operator" means a crane operator who meets the requirements established by the department under RCW 49.17.430.

(9) "Safety or health standard" means a standard adopted under this chapter.

(10) "Assembly, disassembly, and reconfiguration" means the assembly, disassembly, or reconfiguration of cranes covered under this section and sections 4 through 8 of this act.

(11) "Assembly/disassembly work zone" is applicable to tower cranes and means the total area that the crane and/or components or attachments could reach if the crane were to collapse. Height of the crane, length of boom, attachments, and loads, shall all be considered to calculate the area, which can shrink or grow as the work progresses.

(12) "Crane owner" means the company or entity that has custodial control of a crane by virtue of lease or ownership.

(13) "Crane user" means the person or entity that arranges the crane's location on a worksite and controls its use.

(14) "Prime contractor" means the person or entity that has overall responsibility for the construction of the project, its planning, quality, and completion and serves as the site supervisor.

(15) "Reconfiguration" means adding or subtracting components that alter the height, length, or capacity of a crane. The set-up of a crane is not considered reconfiguration.

NEW SECTION. **Sec.**  A new section is added to chapter 49.17 RCW to read as follows:

(1) The prime contractor must obtain a permit from the department prior to performing or allowing the performance of any work involving the operation, assembly, disassembly, or reconfiguration of a tower crane. An exemption from the permit requirement may be allowed by the department for exceptions as determined by the department. For example, exceptions may be allowed for self-erecting and mobile cranes if determined by the department.

(2)(a) The prime contractor must possess an active and unrestricted permit, as required under subsection (1) of this section, at all times a tower crane is present on a construction worksite.

(b) At no times may a tower crane be operated, assembled, disassembled, or reconfigured without a valid permit. If the permit is suspended or revoked, the tower crane may not be used in operations, nor can assembly, disassembly, or reconfiguration take place until all deficiencies have been addressed and the permit is reinstated by the department.

(3) The prime contractor must apply for a permit required under this section. The application must include information needed to ensure safety and establish clear responsibility for the operations, assembly, disassembly, and reconfiguration of a tower crane. The application must include, but is not limited to, the following:

(a) Name and unified business identifier number;

(b) Project site address;

(c) Contact person's name and contact information for the overall project safety;

(d) Name of the prime contractor;

(e) Name of the crane owner;

(f) Name of crane user(s) at the worksite;

(g) Contractor registration number of the prime contractor;

(h) Name of the assembly/disassembly director;

(i) Listing of all parties to be involved with the assembly, disassembly, and reconfigurations of the tower crane;

(j) Beginning January 1, 2027, a copy of the assembly/disassembly director's national assembly/disassembly director certification from an approved national accrediting organization;

(k) Number of employees for the applicant working at the worksite at the time of the permit application;

(l) Project anticipated start and end dates;

(m) Crane manufacturer and crane model;

(n) An attestation from the prime contractor that the prime contractor will comply with all applicable occupational safety and health standards;

(o) An attestation from the prime contractor that the prime contractor will comply with all manufacturer operation instructions and guidelines for the subject crane and/or written procedures from a registered professional structural engineer;

(p) Certification from the prime contractor that the prime contractor will comply with all applicable requirements of this chapter and all applicable safety standards and that the conditions, practices, means, methods, operations, or processes used or proposed to be used will be safe and healthful;

(q) Certification that the prime contractor will post at the worksite the permit to operate, assemble, disassemble, and reconfigure the tower crane, and the current crane certification;

(r) A written job plan as required under RCW 49.17.440; and

(s) Certification from the prime contractor that all assembly, disassembly, and reconfigurations will be performed with a safety representative for the tower crane distributor or manufacturer present to assure that such processes and operations are performed in accordance with manufacturer operation instructions and guidelines.

(4) Prior to issuing a permit, the department must complete a safety permit conference to ensure all parties involved with the assembly, disassembly, and reconfigurations of the tower crane are aware of the requirements and responsibilities under the permit, including manufacturer operation instructions and guidelines and recommended best practices. The safety permit conference shall require the presence of at least the following: Permit applicant, assembly/disassembly director, safety representative for the tower crane distributor or manufacturer, representatives of the employees conducting the assembly, disassembly, or reconfiguration of the tower crane and, if the project is a public works projects, representatives of the governmental entity overseeing the project. During the safety permit conference, at a minimum the following items must be evaluated:

(a) The previous history of safety and health violations, including those violations under other business identities during the previous seven-year period for the permit applicant and all entities required in the operation, assembly, disassembly, and reconfiguration of the tower crane;

(b) The potential risks of the procedures, including those addressed in the crane operating manual, as well as specific measures to be taken by the permit applicant and all entities required in the operation, assembly, disassembly, and reconfiguration of the tower crane to minimize these risks;

(c) The written accident prevention programs of the permit applicant and all entities involved in the operation, assembly, disassembly, and reconfiguration of the tower crane;

(d) Applicable tower crane requirements under this chapter and department rules and safety standards;

(e) The permit applicant's written job plan as required under RCW 49.17.440; and

(f) A written self-attestation of each crane operator's experience and qualifications in the assembly, disassembly, and reconfiguration of the tower crane being assembled, disassembled, or reconfigured, including an attached copy of the crane operator's license.

(5)(a) As a condition of a valid permit, the permit holder must notify the department when there is a change to any crane user or the crane assembly/disassembly director that is different from what was listed in the original permit application.

(b) In addition, as a condition of a valid permit, the permit holder must notify the department in advance of any assembly, disassembly, or reconfiguration of the tower crane in a time specified by the department and receive confirmation from the department to proceed. The department may require additional information or an update safety conference before issuing a confirmation to proceed. The permit holder's notice must include, but is not limited to:

(i) The type of work being performed, such as assembly, disassembly, or reconfiguration of the tower crane; and

(ii) The names and contact numbers of all employers involved and their role in performing the work.

(6)(a) As part of the permit process, the department shall inspect permitted activities including but not limited to the tower crane once assembled or reconfigured, and the department may inspect permitted activities at any time.

(b) A permit holder may not operate the tower crane once assembled or reconfigured unless approved by the department following the initial inspection required under this subsection.

(c) Deficiencies that directly affect the structural integrity of a tower crane must be addressed immediately to ensure the health and safety of worksite personnel and the public. The tower crane may not be operated until deficiencies are corrected.

(d) Deficiencies that directly affect the safe operation of a tower crane must be corrected. The tower crane may not be operated until deficiencies are corrected.

(7) The department must deny a permit if:

(a) The application fails to include all required elements;

(b) The safety conference is not held in compliance with the requirements under this chapter; or

(c) The permit applicant has a record of safety and health violations which indicates that the permit applicant may not be maintaining a safe worksite or operation.

(8) The department must suspend or revoke a permit if the permit holder:

(a) Has failed to comply with any requirement of this chapter or applicable occupational health and safety standard or regulation involving tower cranes;

(b) Fails to notify the department in advance of the assembly, disassembly, or reconfiguration of a fixed tower crane as required under this section;

(c) Fails to ensure that a safety representative for the distributor or manufacturer of the tower crane was present during assembly, disassembly, or reconfiguration;

(d) Fails to immediately correct deficiencies directly affecting the structural integrity of a tower crane;

(e) Fails to correct deficiencies directly affecting the safe operation of a tower crane; or

(f) Has refused the department entry to a worksite that contains activity for which a permit is required.

(9) The department will provide written notice of the denial, suspension, or revocation of a permit to the applicant, specifying the reasons for such denial, suspension, or revocation.

(10)(a) A denial, suspension, or revocation of a permit may be appealed to department within 15 working days after the denial, suspension, or revocation order is communicated.

(b) The department shall hold a hearing at such place designated by the director or authorized representative for the convenience of the attending parties within 2 working days of the applicant's or suspended or revoked permit holder's appeal.

(c) The applicant or suspended or revoked permit holder has the burden of establishing that it qualifies for a permit.

(d) The director or authorized representative shall preside at the hearing, which must be open to employees or employees' representatives.

(e) The applicant or permit holder shall notify the employees or employees' representatives of such hearing a reasonable time prior to the hearing, but in no case later than 24 hours prior to the hearing. Proof of such notification by the applicant or permit holder must be made at the hearing.

(f) The director or authorized representative shall issue a decision within 10 business days of the hearing. The director's or authorized representative's decision may affirm the order, reverse the order, or reverse the order with conditions to mitigate any deficiencies.

(g) The director's or authorized representative's decision is subject to appeal to the board of industrial insurance appeal under RCW 49.17.140.

NEW SECTION. **Sec.**  A new section is added to chapter 49.17 RCW to read as follows:

An employer is guilty of a misdemeanor if the employer:

(1) Allows any person to engage in the assembly, disassembly, or reconfiguration of a tower crane without direct supervision by an assembly/disassembly director as required under this chapter;

(2) Allows any person to act as an assembly/disassembly director of a tower crane when the person fails to meet all qualifications for the role of assembly/disassembly director as set by the department; or

(3) Allows a tower crane to be assembled, disassembled, or reconfigured not in accordance with manufacturer operation instructions and guidelines or written procedures from a registered professional structural engineer.

**Sec.**  RCW 49.17.420 and 2007 c 27 s 4 are each amended to read as follows:

(1) The department shall establish, by rule, a crane certification program for cranes used in construction. In establishing rules, the department shall consult nationally recognized crane standards.

(2) The crane certification program must include, at a minimum, the following:

(a) The department shall establish certification requirements for crane inspectors, including an experience requirement, an education requirement, a training requirement, and other necessary requirements determined by the director;

(b) The department shall establish a process for certified crane inspectors to issue temporary certificates of operation for a crane and the department to issue a final certificate of operation for a crane after a certified crane inspector determines that the crane meets safety or health standards, including meeting or exceeding national periodic inspection requirements recognized by the department;

(c) Crane ((~~owners~~)) suppliers must ensure that cranes are inspected and load proof tested by a certified crane inspector at least annually and after any significant modification or significant repairs of structural parts. If the use of weights for a unit proof load test is not possible or reasonable, other recording test equipment may be used. In adopting rules implementing this requirement, the department may consider similar standards and practices used by the federal government;

(d) Tower cranes and tower crane assembly parts must be inspected by a certified crane inspector ((~~both~~)) prior to and following every assembly ((~~and following erection~~)), disassembly, and reconfiguration of a tower crane. Any issues identified throughout the procedure must be logged with a mitigation plan. If the crane inspector is unable to certify, the procedure may not commence;

(e) Before installation of a nonstandard tower crane base, the engineering design of the nonstandard base shall be reviewed and acknowledged as acceptable by an independent professional engineer;

(f) A certified crane inspector must notify the department and the crane ((~~owner~~)) supplier if, after inspection, the certified crane inspector finds that the crane does not meet safety or health standards. A certified crane inspector shall not attest that a crane meets safety or health standards until any deficiencies are corrected and the correction is verified by the certified crane inspector; and

(g) Inspection reports including all information and documentation obtained from a crane inspection shall be made available or provided to the department by a certified crane inspector upon request.

(3) Except as provided in RCW 49.17.410(2), any crane operated in the state must have a valid temporary or final certificate of operation issued by the certified crane inspector or department posted in the operator's cab or station.

(4) Certificates of operation issued by the department under the crane certification program established in this section are valid for one year from the effective date of the temporary operating certificate issued by the certified crane inspector.

(5) This section does not apply to maritime cranes regulated by the department.

**Sec.**  RCW 49.17.440 and 2007 c 27 s 6 are each amended to read as follows:

(1) The department of labor and industries shall adopt rules necessary to implement ((~~RCW 49.17.400 through 49.17.430~~)) sections 3 through 8 of this act.

(2) The department shall adopt rules for tower crane assembly, disassembly, and reconfiguration including, but not limited to:

(a) A process for determining when the department will be present for the assembly, disassembly, and reconfiguration of a tower crane;

(b) Requirements that the prime contractors of construction projects acknowledge all applicable safety orders, crane manufacturer operation instructions and guidelines, and recommended practices prior to the assembly, disassembly, and reconfiguration of a tower crane;

(c) Requirements that the prime contractor of the construction project ensure that a qualified safety representative of the distributor or manufacturer will be present during assembly, disassembly, and reconfiguration of a tower crane to assure that such procedures are performed in accordance with manufacturer operation instructions and guidelines;

(d) Requiring prime contractors of construction projects to follow crane manufacturer operation instructions and guidelines or alternate plans/instructions approved by a registered professional engineer when assembling, disassembling, and reconfiguring a tower crane;

(e) Requiring the presence of an assembly/disassembly director at every tower crane assembly, disassembly, and reconfiguration to directly oversee all work performed. The assembly/disassembly director may not serve in any other capacity while directly supervising a tower crane assembly, disassembly, or reconfiguration procedure;

(f) Conducting programmed inspections of workplaces that contain tower cranes;

(g) Establishing requirements for the maximum allowable wind speed for tower crane assembly, disassembly, and reconfiguration;

(h) Establishing requirements for a written job plan that addresses the requirements of the manufacturer's manual tailored to the site conditions where the tower crane will be installed, as appropriate for assembly, disassembly, and reconfiguration of a tower crane;

(i) Establishing requirements that must be met to be considered a competent and qualified assembly/disassembly director;

(j) Establishing effective stop work procedures that ensure the authority of any employee, including employees of contractors, to refuse or delay the performance of a task related to a tower crane that the employee believes could reasonably result in serious physical harm or death. The rules must ensure that employees who exercise stop work authority are protected from intimidation, retaliation, or discrimination; and

(k) Other rules necessary to implement sections 3 through 8 of this act.

(3) The department shall set fees in rule to be charged for permits issued under section 4 of this act in an amount sufficient to cover the costs of administering sections 3 through 8 of this act.

NEW SECTION. **Sec.**  A new section is added to chapter 49.17 RCW to read as follows:

Tower crane manufacturers and distributors must make available to the public certain information about each crane in a standard format. The prescribed information, format, and distribution channel must be determined by the department, and must include but not be limited to all relevant manufacturer operation instructions and guidelines for the safe use and maintenance of all tower cranes located in the state of Washington. These materials must be written in the English language with customary grammar and punctuation. A tower crane manufacturer or distributor shall, without exception, provide such materials to any person who requests access to such materials, and no manufacturer or distributor may refuse such request. Information must be provided within a reasonable time frame, as determined by the department.

NEW SECTION. **Sec.**  A new section is added to chapter 36.70B RCW to read as follows:

(1) When a worksite contains a tower crane that is over 36 feet, the municipality in which the tower crane is located must, at a minimum, do the following before any assembly, disassembly, or reconfiguration of the tower crane:

(a) Align permit issuance for street closures with the definition of assembly/disassembly work zone; and

(b) Require the permit holder to give notice to residents of buildings within the assembly/disassembly work zone.

(2) For purposes of this section, "assembly, disassembly, or reconfiguration" and "assembly/disassembly work zone" have the same meanings as those terms are defined in RCW 49.17.400.

**--- END ---**