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HOUSE BILL 2022

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State of Washington

68th Legislature

2024 Regular Session

By Representative Reed

Prefiled 12/22/23.

1 AN ACT Relating to construction crane safety; amending RCW  
2 49.17.400, 49.17.420, and 49.17.440; adding new sections to chapter  
3 49.17 RCW; adding a new section to chapter 36.70B RCW; and creating a  
4 new section.

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

6 NEW SECTION. **Sec. 1.** The legislature finds that there is  
7 significant opportunity to improve worker and public safety in tower  
8 crane assembly, disassembly, and reconfiguration. The Seattle tower  
9 crane incident on April 27, 2019, killing two members of the public,  
10 Sarah Pantip Wong and Alan Jay Justad, and two iron workers, Travis  
11 Daniel Corbet and Andrew W. Yoder, exposed weaknesses in construction  
12 safety efforts. Requirements for permitting, street closures, and  
13 penalties are created to ensure that assembly, disassembly, and  
14 reconfiguration of tower cranes proceed safely.

15 NEW SECTION. **Sec. 2.** A new section is added to chapter 49.17  
16 RCW to read as follows:

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

1       **Sec. 3.** RCW 49.17.400 and 2007 c 27 s 2 are each amended to read  
2 as follows:

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

6       (1) "Apprentice operator or trainee" means a crane operator who  
7 has not met requirements established by the department under RCW  
8 49.17.430.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

26 NEW SECTION. Sec. 4. A new section is added to chapter 49.17  
27 RCW to read as follows:

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

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

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

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

- 12 (a) Name and unified business identifier number;
- 13 (b) Project site address;
- 14 (c) Contact person's name and contact information for the overall  
15 project safety;
- 16 (d) Name of the prime contractor;
- 17 (e) Name of the crane owner;
- 18 (f) Name of crane user(s) at the worksite;
- 19 (g) Contractor registration number of the prime contractor;
- 20 (h) Name of the assembly/disassembly director;
- 21 (i) Listing of all parties to be involved with the assembly,  
22 disassembly, and reconfigurations of the tower crane;
- 23 (j) Beginning January 1, 2027, a copy of the assembly/disassembly  
24 director's national assembly/disassembly director certification from  
25 an approved national accrediting organization;
- 26 (k) Number of employees for the applicant working at the worksite  
27 at the time of the permit application;
- 28 (l) Project anticipated start and end dates;
- 29 (m) Crane manufacturer and crane model;
- 30 (n) An attestation from the prime contractor that the prime  
31 contractor will comply with all applicable occupational safety and  
32 health standards;
- 33 (o) An attestation from the prime contractor that the prime  
34 contractor will comply with all manufacturer operation instructions  
35 and guidelines for the subject crane and/or written procedures from a  
36 registered professional structural engineer;
- 37 (p) Certification from the prime contractor that the prime  
38 contractor will comply with all applicable requirements of this  
39 chapter and all applicable safety standards and that the conditions,

1 practices, means, methods, operations, or processes used or proposed  
2 to be used will be safe and healthful;

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

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

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

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

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

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

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

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

1 (e) The permit applicant's written job plan as required under RCW  
2 49.17.440; and

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

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

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

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

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

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

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

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

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

38 (7) The department must deny a permit if:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

38 (e) The applicant or permit holder shall notify the employees or  
39 employees' representatives of such hearing a reasonable time prior to  
40 the hearing, but in no case later than 24 hours prior to the hearing.

1 Proof of such notification by the applicant or permit holder must be  
2 made at the hearing.

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

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

11 NEW SECTION. **Sec. 5.** A new section is added to chapter 49.17  
12 RCW to read as follows:

13 An employer is guilty of a misdemeanor if the employer:

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

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

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

25 **Sec. 6.** RCW 49.17.420 and 2007 c 27 s 4 are each amended to read  
26 as follows:

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

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

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

37 (b) The department shall establish a process for certified crane  
38 inspectors to issue temporary certificates of operation for a crane



1 and the department to issue a final certificate of operation for a  
2 crane after a certified crane inspector determines that the crane  
3 meets safety or health standards, including meeting or exceeding  
4 national periodic inspection requirements recognized by the  
5 department;

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

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

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

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

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

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

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

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

3 **Sec. 7.** RCW 49.17.440 and 2007 c 27 s 6 are each amended to read  
4 as follows:

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

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

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

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

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

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

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

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

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

38 (h) Establishing requirements for a written job plan that  
39 addresses the requirements of the manufacturer's manual tailored to

1 the site conditions where the tower crane will be installed, as  
2 appropriate for assembly, disassembly, and reconfiguration of a tower  
3 crane;

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

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

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

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

18 NEW SECTION. Sec. 8. A new section is added to chapter 49.17  
19 RCW to read as follows:

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

33 NEW SECTION. Sec. 9. A new section is added to chapter 36.70B  
34 RCW to read as follows:

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

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

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

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

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