

NEW SECTION

WAC 296-155-53911 Tower cranes—Permits. (1) Beginning January 1, 2026, prior to performing or allowing the performance of any work involving the operation, assembly, disassembly, or reconfiguration of a tower crane, the prime contractor must obtain a permit issued by the department. The prime contractor must possess a permit at all times a tower crane is present on a job site.

(a) For tower cranes in operation prior to January 1, 2026, the prime contractor must submit a permit application to the department by February 1, 2026. No work involving reconfiguration or disassembly may occur prior to the prime contractor obtaining a permit issued under subsection (5) of this section.

(b) The permit requirements contained in this section do not apply to self-erecting tower cranes, as defined by ASME B30.29. Self-erecting tower cranes must still meet all other applicable requirements contained in chapter 296-155 WAC, Part L.

(2) The prime contractor must apply for a permit through the application portal on the department's website. The application must be submitted at least 20 working days in advance of the planned date of assembly.

(3) All of the following information must be provided and addressed when applying for a permit:

(a) Acknowledgment that all applicable safety orders, crane manufacturer operation instructions and guidelines, written procedures from an RPSE, and recommended practices prior to the assembly, disassembly, and reconfiguration of a tower crane will be followed and adhered to.

(b) Name of the A/D director. Beginning the later of January 1, 2027, or 12 months after the date an A/D director program is approved by a nationally accredited organization recognized by the department, the application must include a copy of the A/D director's national A/D director certification.

(c) The written accident prevention programs for all employers that will be involved with the operation, assembly, disassembly, or reconfiguration of the tower crane. If an employer is added to the project after a permit is issued under subsection (5) of this section, for each employer added, the prime contractor must also provide the department with a copy of the written accident prevention program five working days prior to the employer engaging in any operation, assembly, disassembly, or reconfiguration activities on the job site.

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

(e) Certification that all assembly, disassembly, and reconfiguration will be performed with a technical representative of the distributor or manufacturer present on-site to assure that such processes and operations are performed in accordance with manufacturer operation instructions and guidelines, or alternate plans/instructions approved by an RPE. The technical representative must be knowledgeable of the assembly, disassembly, and reconfiguration procedures.

(f) Experience and qualification documentation for all employees directly involved in the operation, assembly, disassembly, or reconfiguration of a tower crane. If an employee is added to the project af-

ter a permit is issued under subsection (5) of this section, the prime contractor must provide to the department experience and qualification documentation for the employee five working days prior to the employee engaging in any operation, assembly, disassembly, or reconfiguration activities on the job site. Experience and qualification documentation includes:

(i) A copy of the employee's qualification(s) or certification(s), including all crane operator licenses; and

(ii) Documentation demonstrating employee experience.

(g) Information detailing if the crane manufacturer instructions and guidelines will be followed, or if alternate plans/instructions approved by an RPE will be utilized for assembly, disassembly, or reconfiguration.

(4) Prior to issuing a permit, a safety permit conference will be scheduled and conducted by the department to ensure all parties involved with the assembly, disassembly, or reconfiguration of the tower crane are aware of the requirements and responsibilities under the permit, including manufacturer operation instructions and guidelines, or alternate plans/instructions approved by an RPE, and recommended best practices. At the department's discretion, it may be attended remotely utilizing video technology.

(a) The prime contractor must attend the safety conference and ensure that:

(i) The A/D director, lift director, and a technical representative of the distributor or manufacturer attend the safety permit conference as required attendees. If the A/D director or lift director specifically performing the work is unable to attend, another A/D director or lift director representing the same employer may attend on their behalf; and

(ii) The following individuals are invited to participate in, but are not required to attend, the safety permit conference: A safety representative of the prime contractor, a representative of the tower crane operator's employer and mobile crane operator's employer, and the local government entity issuing street closure permits under RCW 36.70B.270.

(b) At a minimum, the safety conference will address:

(i) The requirements and responsibilities of the prime contractor;

(ii) Manufacturer operation instructions and guidelines, or alternate plans/instructions approved by an RPE, and recommended best practices;

(iii) 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, or reconfiguration of the tower crane to minimize these risks;

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

(v) The permit applicant's written job plan as required under subsection (3)(d) of this section; and

(vi) For each employee directly involved with the permitted work, a review of their experience, and qualifications or certifications, including a copy of all crane operator licenses.

(5) Permit issuance.

(a) If the application materials, and the materials presented by the prime contractor at the safety permit conference, are complete,

the department will issue a permit under this section within five working days of the initial safety permit conference under subsection (4) of this section;

(b) If the application or safety permit conference materials are not complete, the department will provide the prime contractor with a written list of missing or incomplete materials before leaving the safety conference. Upon receipt of completed materials from the prime contractor, the department will:

(i) Issue the permit within five working days of receiving the outstanding materials; or

(ii) Deny the permit in writing as provided in subsection (7) of this section.

(6) Additional requirements.

(a) The prime contractor must notify the department of any assembly, disassembly, or reconfiguration of a tower crane.

(i) The notification must be made at least 20 working days in advance of the activity, and the prime contractor must receive confirmation from the department to proceed with assembly, disassembly, or reconfiguration.

(A) For assembly only, if the date of assembly provided on the permit application does not change, notification under this subsection is not required.

(B) If the date of assembly, disassembly, or reconfiguration changes from the date initially provided to the department, the prime contractor must notify the department as soon as practicable, but not less than two working days in advance of the initial date provided to the department under this subsection, unless it is infeasible to do so.

(ii) The department must respond to the initial notification within five working days.

(iii) Prior to receiving confirmation from the department to proceed, the prime contractor may be required to provide additional information, participate in an updated safety conference, or both.

(b) If it is infeasible for the prime contractor to have a technical representative of the distributor or manufacturer present on-site as required under subsection (3)(e) of this section, the prime contractor must make timely notification to the department, and must receive confirmation from the department prior to proceeding with any assembly, disassembly, or reconfiguration of the tower crane.

(c) The department must inspect permitted activities for the tower crane once assembled, following any reconfiguration, or any other permitted activities. However, the tower crane may resume operation once the requirement in WAC 296-155-53206(1) has been met, and there are no deficiencies affecting the structural integrity or safe operation of the tower crane.

(d) If the department identifies deficiencies that directly affect the structural integrity or safe operation of a tower crane, the deficiencies must be addressed immediately, and the tower crane cannot be operated until the deficiencies are corrected.

(e) Within five working days following completion of disassembly, the prime contractor must make notification to the department indicating that disassembly is complete.

(f) The department will conduct programmed inspections of workplaces that contain tower cranes.

(7) Permit denials, suspension, and revocation. If the permit is suspended or revoked, the tower crane may not be used in operations, nor can assembly, disassembly, or reconfiguration occur until all de-

iciencies have been addressed and the permit is reinstated by the department. The department will provide written notice of denials, suspensions, or revocation of a permit specifying the reasons for the denial, suspension, or revocation.

(a) The department must deny a permit if the prime contractor submitting the permit application has a record of safety and health violations, within the three years preceding the date of the application, which indicates that the prime contractor may not be maintaining a safe job site or operation.

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

(i) Has failed to comply with applicable occupational health and safety standards or regulations involving tower cranes;

(ii) Fails to notify the department in advance of the assembly, disassembly, or reconfiguration of a fixed tower crane as required under subsection (6) of this section;

(iii) Fails to ensure that a technical representative of the distributor or manufacturer of the tower crane who is knowledgeable of assembly, disassembly, and reconfiguration procedures is present on-site during assembly, disassembly, or reconfiguration, or to provide notification to the department as required under subsection (6)(b) of this section;

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

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

(vi) Has refused the department entry to a worksite that contains activity for which a permit issued under subsection (5) of this section is required.

(8) Appeals.

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

(b) The department will hold a hearing at such place designated by the director or authorized representative for the convenience of the attending parties within two working days of receipt of the appeal by the department.

(c) The applicant, or suspended or revoked permit holder, has the burden of establishing that they qualify 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 at 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 working 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.

WAC 296-155-53401 Duties of assigned personnel. (1) While the organizational structure of various construction activities may differ, the duties described in this section are for purposes of assignment. All assignments outlined in this section must be assigned in the job site organization. (A single individual may perform one or more of these assignments concurrently, excluding during tower crane assembly, disassembly, or reconfiguration.)

(a) During the assembly, disassembly, or reconfiguration of a tower crane, the lift director may not perform more than one of the duties listed in this section. The lift director may assist in rigging or signaling.

(b) During the assembly, disassembly, or reconfiguration of a tower crane, the A/D director may not perform duties other than those listed in subsection (9) of this section.

(2) **Duties of the crane owner and crane user.** In some situations, the owner and the user may be the same entity, and therefore would have the same duties assigned. In other cases, the user may lease or rent a crane from the owner without supervisory, operational, maintenance, support personnel, or services from the owner. In these situations, subsection (3) and (4) of this section apply.

(3) **The crane owner's duties include the following:**

(a) Providing a crane that meets the requirements of chapter 296-155 WAC, Part L, as well as specific job requirements defined by the user;

(b) Providing a crane and all necessary components, specified by the manufacturer, that meets the user's requested configuration and capacity;

(c) Providing all applicable load/capacity chart(s) and diagrams;

(d) Providing additional technical information pertaining to the crane, necessary for crane assembly, disassembly, reconfiguration, and operation. This shall be provided to any entity when requested, and may be in digital format;

(e) Ensuring that warning decals and placards are installed, as prescribed by the crane manufacturer, and providing field assembly, disassembly, reconfiguration, operation, maintenance information, and operator's manual. This shall be provided to any entity when requested, and may be in digital format;

(f) Ensuring that inspection, testing, and maintenance are performed in accordance with chapter 296-155 WAC, Part L, and informing the crane user of these requirements;

(g) Designating and using personnel that meet the requirements for a competent and qualified person as defined in WAC 296-155-52902 and 296-155-53402 for the purposes of inspections, maintenance, repair, transport, assembly, and disassembly;

(h) Maintaining the rope information listed in WAC 296-155-53404 for the rope currently installed on each drum; and

(i) Ensuring that work involving the assembly, disassembly, or reconfiguration of a crane is supervised by an A/D director as defined in WAC 296-155-52902.

(4) **The crane user's duties include the following:**

(a) Complying with the requirements of chapter 296-155 WAC, Part L, manufacturer's requirements, and those regulations applicable at the job site;

- (b) Using supervisors for crane activities that meet the requirements for a qualified person as defined in WAC 296-155-52902;
 - (c) Ensuring that the crane is in proper operating condition prior to initial use at the job site by:
 - (i) Verifying that the crane owner has provided documentation that the crane meets the requirements of chapter 296-155 WAC, Part L; and
 - (ii) Verifying that inspections have been performed as prescribed in WAC 296-155-53405;
 - (d) Verifying that the crane has the necessary lifting capacity to perform the proposed lifting operations in the planned configuration;
 - (e) Using crane operators that meet the requirements of WAC 296-155-53300, and are qualified to perform the tasks that will be required with the crane to which they are assigned to operate;
 - (f) Ensuring the assigned operator(s) has been notified of adjustments or repairs that have not been completed, prior to commencing crane operations;
 - (g) Using personnel that meet the requirements for a competent and qualified person as defined in WAC 296-155-52902 for the purposes of inspections, maintenance, repair, transport, assembly, disassembly, or reconfiguration;
 - (h) Ensuring that all personnel involved in maintenance, repair, transport, assembly, disassembly, reconfiguration, and inspection are aware of their assigned duties, and the associated hazards; and
 - (i) Ensuring that the inspection, testing, and maintenance as required by this part are followed, and any other related requirements specified by the crane owner.
- (5) **The site supervisor's duties include the following:**
- (a) Ensuring that the crane meets the requirements of chapter 296-155 WAC, Part L, prior to initial site usage;
 - (b) Determining if additional regulations are applicable to crane operations;
 - (c) Ensuring that a qualified person is designated as the lift director as defined in WAC 296-155-52902, is on-site and supervising the lift operations;
 - (d) Ensuring that crane/equipment operations are coordinated with other job site activities that will be affected by, or will affect, lift operations;
 - (e) Ensuring that the area for the crane is adequately prepared. The preparation includes, but is not limited to:
 - (i) Access roads for the crane and associated equipment;
 - (ii) Sufficient room to assemble and disassemble the crane;
 - (iii) An operating area that is suitable for the crane with respect to levelness, surface conditions, support capability, proximity to power lines, excavations, slopes, underground utilities, subsurface construction, and obstructions to crane operation; and
 - (iv) Traffic control as necessary to restrict unauthorized access to the crane's working area;
 - (f) Ensuring that every assembly, disassembly, or reconfiguration of a crane is supervised by an A/D director as defined in WAC 296-155-52902, and the A/D director is on-site;
 - (g) Ensuring that the assembly/disassembly work zone is adequate, and that access into the zone is controlled;
 - (h) Ensuring that crane/equipment operators meet the requirements of WAC 296-155-53300;

(i) Ensuring that conditions which may adversely affect crane operations are addressed. Such conditions include, but are not limited to:

- (i) Poor soil conditions;
- (ii) Wind velocity or gusting winds;
- (iii) Heavy rain;
- (iv) Fog;
- (v) Extreme cold;
- (vi) Artificial lighting; and
- (vii) Cranes/equipment within the radius of other cranes/equipment;

(j) Allowing crane operation near electric power lines only when the requirements of WAC 296-155-53408 have been met;

(k) Permitting special lifting operations only when equipment and procedures required by this part, the crane manufacturer, or a qualified person, are employed. Such operations include, but are not limited to:

- (i) Multiple crane lifts;
- (ii) Multiple load line lifts;
- (iii) Lifting personnel;
- (iv) Pick and carry operations;
- (v) Mobile/articulating cranes operating on barges; and
- (vi) Utilizing vacuum lifters, close proximity lifting magnets, or material handling grapples;

(l) Ensuring that work performed by the rigging crew is supervised by a qualified rigger. See WAC 296-155-53306;

(m) Ensuring that crane maintenance is performed by a qualified person. See WAC 296-155-53304;

(n) ~~((Notify the department by email at towercranenotify@Lni.wa.gov at least seven working days prior to having a tower crane assembled, disassembled, or reconfigured at the job site. All of the following information shall be included in the email:~~

~~(i) Planned start and end date of the assembly, disassembly, or reconfiguration of the crane;~~

~~(ii) Job site address;~~

~~(iii) Type of work being performed, i.e., assembly, disassembly, or reconfiguration of the tower crane;~~

~~(iv) The names and contact numbers of all employers involved and their role in performing the work; and~~

~~(v) An attestation that all applicable safety orders, crane manufacturer operation instructions and guidelines, written procedures from an RPSE, and recommended practices for all assembly, disassembly, or reconfiguration work will be followed;~~

~~(o))~~ Display the name(s) of the site supervisor, A/D director, lift director(s), rigger(s), signal person(s), and the crane/equipment operator(s) for the job site. The display shall be conspicuously posted on the premises for the entire duration that any crane/equipment is on-site. (This requirement shall not apply to a crane/equipment making a delivery while unloading that delivery);

~~((p))~~ (o) The site supervisor of the construction project must ensure that a qualified technical representative of the distributor or manufacturer, who is knowledgeable of assembly, disassembly, or reconfiguration procedures, will be present during assembly, disassembly, or reconfiguration of a tower crane to assure that such procedures are performed in accordance with manufacturer operation instructions and guidelines.

(6) **The lift director's duties include the following:**

- (a) Being present at the job site and overseeing the lifting operations;
- (b) Stopping crane operations if alerted to an unsafe condition affecting those operations;
- (c) Ensuring that the preparation of the area needed to support crane operations has been completed before crane operations commence;
- (d) Ensuring necessary traffic controls are in place to restrict unauthorized access to the crane's work area;
- (e) Ensuring that personnel involved in crane operations understand and are correctly performing their assigned duties, and understand the associated hazards;
- (f) Addressing safety concerns raised by the operator or other personnel, and deciding if it is necessary to overrule those concerns and direct crane operations to continue. In all cases, the manufacturer's criteria for safe operation and the requirements of this chapter and any other applicable safety and health standards must be adhered to;
- (g) Assigning qualified signal person(s) and conveying that information to the crane operator;
- (h) Ensuring that signal persons assigned meet the qualification requirements located in WAC 296-155-53302;
- (i) Allowing crane operation near electric power lines only when the requirements of WAC 296-155-53408, and any additional requirements determined by the site supervisor, have been met;
- (j) Ensuring precautions are implemented when hazards associated with special lifting operations are present. Such operations include, but are not limited to:
 - (i) Multiple crane lifts;
 - (ii) Multiple load line lifts;
 - (iii) Lifting personnel;
 - (iv) Pick and carry operations;
 - (v) Mobile/articulating cranes operating on barges; and
 - (vi) Utilizing vacuum lifters, close proximity lifting magnets, or material handling grapples;
- (k) Ensuring that the applicable requirements of WAC 296-155-547 through 296-155-55405 are met when lifting personnel;
- (l) Informing the crane operator of the weight of loads to be lifted, as well as the lifting, moving, and placing locations for these loads;
- (m) Obtaining the crane operator's verification that this weight does not exceed the crane's rated capacity;
- (n) Ensuring that a crane's load rigging is performed by a qualified rigger as defined in WAC 296-155-53306;
- (o) Prohibiting cranes/equipment from hoisting when the wind speed exceeds the crane's/equipment's maximum wind speed limitation. A wind speed direction indicator shall be used;
- (p) Taking the effects of dynamic loading into consideration prior to using the crane/equipment for a hoisting activity.
- (7) **The crane/equipment operator's duties include the following:**
 - (a) Reviewing the requirements for the crane with the lift director before operations;
 - (b) Knowing what types of site conditions could adversely affect the operation of the crane, and consulting with the lift director concerning the possible presence of those conditions;
 - (c) Understanding and applying the information contained in the crane manufacturer's operating manual;

- (d) Understanding the crane functions and limitations, as well as its particular operating characteristics;
- (e) Using the crane's load/capacity chart(s) and diagrams, and applying all notes and warnings related to the charts, to confirm the correct crane configuration to suit the load, site, and lift conditions. Load rating chart(s) may be temporarily removed from the crane for lift planning or other purposes, provided the charts are replaced in the manufacturer's designated location before operating the crane;
- (f) Refusing to operate the crane when any portion of the load or crane would enter the prohibited zone of energized power lines, except as defined in WAC 296-155-53408;
- (g) Performing a daily inspection as specified in WAC 296-155-53405;
- (h) Promptly reporting the need for any adjustments or repairs to the appropriate person;
- (i) Following applicable lockout/tagout procedures. See WAC 296-155-53400(67);
- (j) Not operating the crane when physically or mentally unfit;
- (k) Ensuring that all controls are in the off or neutral position, and that all personnel are in the clear before energizing the crane or starting the engine;
- (l) Not engaging in any practice or activity that diverts their attention while actually engaged in operating the crane/equipment, such as the use of cellular phones;
- (m) Testing the crane function controls that will be used and operating the crane only if those function controls respond properly;
- (n) Operating the crane's functions, under normal operating conditions, in a smooth and controlled manner, and maintaining smooth control of the load;
- (o) Knowing and following the procedures specified in WAC 296-155-53402, for assembly, disassembly, or reconfiguration, setting up, and reeving the crane;
- (p) Knowing how to travel the crane;
- (q) Observing each outrigger during extension, setting, and retraction, or using another worker to observe each outrigger during extension, setting, or retraction;
- (r) Ensuring that the load and rigging weight(s) have been provided;
- (s) Calculating or determining the net capacity for all configurations that will be used and verifying, using the load/capacity chart(s), that the crane has sufficient net capacity for the proposed lift;
- (t) Considering all factors known that might affect the crane capacity, and informing the lift director of the need to make appropriate adjustments;
- (u) Knowing the standard and special signals as specified in WAC 296-155-53406, and responding to such signals from the person who is directing the lift or a qualified signal person;
- (v) If power fails during operations:
 - (i) Setting all brakes and locking devices;
 - (ii) Moving all clutches or other power controls to the off or neutral position; and
 - (iii) Landing any load suspended below the hook under brake control if practical;
- (w) Before leaving the crane unattended:
 - (i) Landing any load suspended below the hook, unless the requirements of WAC 296-155-53400(51) are met;

- (ii) Disengaging the master clutch;
- (iii) Setting travel, swing, boom brakes, and other locking devices;
- (iv) Putting controls in the off or neutral position;
- (v) Stopping the engine. An exception to this may exist when crane operation is frequently interrupted during a shift and the operator must leave the crane. Under these circumstances, the engine may remain running and (w)(i) and (iv) of this subsection must apply. The operator must be situated where any entry to the crane can be observed; and
- (vi) Considering the recommendations of the manufacturer for securing the crane, when a local weather storm warning exists.

Note: The operator shall not be responsible for hazards or conditions that are not under the operator's direct control and that adversely affect the lift operations. Whenever the crane operator has doubt or concerns as to the safety of crane operations, the operator must stop the crane's functions in a controlled manner. Lift operations can only resume after safety concerns have been resolved, or the continuation of crane operations is directed by the lift director as outlined in subsection (6) of this section.

(8) The rigger(s) assigned to load handling activity duties include the following:

- (a) Ensuring the weight of the load and its approximate center of gravity have been obtained;
- (b) Selecting the proper rigging equipment, inspecting it, and complying with the applicable ASME B30 Volume (i.e., B30.9, B30.10, B30.20, B30.23, or B30.26) and applicable chapter 296-155 WAC, Part L, requirements;
- (c) Ensuring the rated load of the rigging equipment as selected and configured is sufficient for the load to be handled, based on the number of legs, hitch configuration, and effects of angles;
- (d) Properly attaching the rigging equipment to the hook, shackle, or other load-handling device;
- (e) Ensuring that rigging equipment is adequately protected from abrasion, cutting, or other damage during load handling activities;
- (f) Rigging the load in a manner to ensure balance and stability during the load handling activity;
- (g) Knowing and understanding the applicable signal for equipment in use;
- (h) Installing and using a tag line(s) when additional load control is required;
- (i) Ensuring that the load is properly rigged and balanced before it is lifted more than a few inches;
- (j) Ensuring that the load is properly stabilized and balanced before the weight is removed from the crane/equipment; and
- (k) Ensuring all loads are attached to the hook by means of suitable slings and other suitable devices of sufficient lifting capacity.

(9) The A/D director duties include the following:

- (a) Having the authority, and ensuring prompt corrective measures are taken, to eliminate hazards associated with the assembly, disassembly, or reconfiguration work;
- (b) Ensuring that WAC 296-155-53402 is followed;
- (c) Providing direct on-site supervision of all assembly, disassembly, or reconfiguration work;
- (d) Understanding and following the applicable assembly, disassembly, or reconfiguration procedures;
- (e) Creating a site-specific assembly, disassembly, or reconfiguration plan. This plan shall be in written or digital format, and remain on-site for the entire duration that the crane is on-site. The plan shall include at least the following:
 - (i) Date of meeting;

(ii) Names and signatures of all personnel, their role, and their responsibilities;

(iii) A sequence of operation detailing the assembly, disassembly, or reconfiguration, along with the components, the rigging, and capacity to be used in such operations;

(iv) A weight list and configuration of all assemblies and components proposed to be lifted;

(v) List of all assist cranes and their gross rated capacity;

(vi) The location and voltage information of all energized line(s) in the vicinity. (WAC 296-155-53408 shall also be followed);

(vii) The location and proposed timeline of the assembly, disassembly work zone;

(viii) Relevant weather warnings, and how to address them;

(ix) A summary of disassembly issues or concerns found, and how to remedy them; and

(x) The requirements of the manufacturer's manual must be used to tailor the assembly, disassembly, or reconfiguration plan;

(f) Immediately prior to the assembly, disassembly, or reconfiguration of a tower crane, and prior to beginning each shift, the A/D director shall conduct an assembly/disassembly plan review meeting with all employees that will be directly involved with the work;

(g) 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;

(h) Documentation of this inspection must remain at the job site while the crane/equipment is in use;

(i) Prior to beginning the assembly, disassembly, or reconfiguration operations, and when a crew member takes on a different task, or when adding new personnel to the operations, ensure that the crew members understand the following:

(i) Their tasks;

(ii) The hazards associated with their tasks; and

(iii) The hazardous positions/locations that they need to avoid;

(j) Prior to the disassembling of a crane, the A/D director must first review and express any assembly or reconfiguration issues or concerns found to the disassembly crew;

(k) The A/D director supervising the assembly, disassembly, or reconfiguration operation, must address the hazards associated with the operation, which include:

(i) Site and ground bearing conditions. Site and ground conditions must be adequate for safe assembly, disassembly, or reconfiguration operations, and to support the crane/equipment during assembly/disassembly (see WAC 296-155-53400 (35) through (37) for ground condition requirements);

(ii) Blocking material. The size, amount, condition, and method of stacking blocking must be sufficient to sustain the loads and maintain stability;

(iii) Proper location of blocking. When used to support lattice booms or components, blocking must be appropriately placed to:

(A) Protect the structural integrity of the crane/equipment; and

(B) Prevent movement and collapse;

(iv) 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;

(v) Boom and jib pick points. The point(s) of attachment of rigging to a boom (or boom sections, or jib or jib sections) must be suitable for preventing structural damage and facilitating safe handling of these components;

(vi) Center of gravity;

(vii) The center of gravity of the load must be identified if it is necessary for the method used for maintaining stability;

(viii) Where there is insufficient information to accurately identify the center of gravity, measures designed to prevent unintended dangerous movement resulting from an inaccurate identification of the center of gravity must be used. (See WAC 296-155-56430, Assembly, disassembly, or reconfiguration - Working under the boom, jib or other components - Sample procedures for minimizing the risk of unintended dangerous boom movement.);

(ix) Stability upon pin (or similar devices) removal. The boom sections, boom suspension systems (such as gantry A-frames and jib struts), and components must be rigged or supported to maintain stability upon the removal of the pins;

(x) Snagging. Suspension ropes and pendants must not be allowed to catch on the boom or jib connection pins or cotter pins (including keepers and locking pins);

(xi) Struck by counterweights. The potential for unexpected movement from inadequately supported counterweights and from hoisting counterweights;

(xii) Boom hoist brake failure. Each time reliance is to be placed on the boom hoist brake to prevent boom movement during assembly, disassembly, or reconfiguration, the brake must be tested prior to such reliance to determine if it is sufficient to prevent boom movement. If it is not sufficient, a boom hoist pawl, other locking device/back-up braking device, or another method of preventing dangerous movement of the boom (such as blocking or using an assist crane) from a boom hoist brake failure must be used;

(xiii) Loss of backward stability. Backward stability before swinging the upperworks, travel, and when attaching or removing crane/equipment components;

(xiv) The effect of wind velocity and weather on the crane/equipment must be considered. The maximum wind speed for the crane/equipment must not be exceeded; and

(xv) When disassembling a tower crane, ensuring only the component that is being lowered at the time shall have its pins, bolts, and connectors released after the component has been fully supported by the assist crane;

(1) Post-assembly inspection. Upon completion of assembly or reconfiguration, the crane/equipment must be inspected by the A/D director. For tower cranes, this inspection must be performed by an accredited crane certifier. Ensure compliance of this subsection as follows:

(i) The selection of components and configuration of the crane/equipment that affect the capacity or safe operation of this equipment must be in accordance with:

(A) Manufacturer's instructions, prohibitions, limitations, and specifications. Where these are unavailable, a RPE familiar with the type of crane/equipment involved must approve, in writing, the selection and configuration of components; or

(B) Approved modifications that meet the requirements of WAC 296-155-53400 (57) and (58) (crane/equipment modifications);

(ii) Where manufacturer's criteria is unavailable, a qualified person must determine if a RPE familiar with the type of crane/equipment involved is needed to develop criteria for the configuration:

(A) If an RPE is not needed, the criteria must be developed by a qualified person;

(B) If an RPE is needed, the criteria must be developed by an RPE;

(iii) Notes of any assembly or reconfiguration issues or concerns found must be placed in a written report, and shall remain with the crane until it is disassembled;

(iv) Crane/equipment must not be used until an inspection demonstrates that it is configured in accordance with the applicable criteria; and

(v) Documentation of this inspection must remain at the job site while the crane/equipment is on-site.

REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 296-155-53910 Tower crane notifications and inspections.