

HAWAII ADMINISTRATIVE RULES

TITLE 12

DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

SUBTITLE 8

HAWAII OCCUPATIONAL SAFETY AND HEALTH DIVISION

PART 3

CONSTRUCTION STANDARDS

CHAPTER 110

GENERAL SAFETY AND HEALTH REQUIREMENTS

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§12-110-1

Historical Note: Chapter 110 of title 12 is based upon chapter 201 of the Hawaii Occupational Safety and Health Standards, Rules and Regulations. [Eff 7/11/74; am 6/7/76; am 12/30/76]

**§12-110-1 Application.** The general requirements of any chapter in part 3 shall not be used when there are more specific requirements in any other chapter in part 3. For the purposes of this part, construction work means work for construction, alteration, demolition, or repair including painting and decorating, erection of new electric transmission and distribution lines and equipment, and the alteration, conversion, and improvement of the existing transmission and distribution lines and equipment. [Eff 7/12/82; am 8/5/88; am 11/2/12; comp 10/27/18] (Auth: HRS §396-4) (Imp: HRS §396-4)

**§12-110-2 Safety and health programs.** (a) Scope and application. This section shall apply to all employers with employees doing business in the State.

- (1) Every employer shall comply with the state laws and standards regarding a safe place of employment and safe practices, and shall do everything reasonable and necessary to protect the life, safety, and health of the employees.
- (2) Employers involved with construction or related activities shall provide safe and healthful work places and practices that protect the employees and the affected general public as well.
- (3) Every employer shall effect safe work places and practices by eliminating, mitigating, or protecting against existing or potential hazards. Elimination by design, process substitution, or other appropriate methods

is preferred because it obviates the need for further employee protection. Modification, using such methods as engineering or administrative controls, isolation, and guarding, shall be used to reduce existing hazards. When this mitigation is feasible, it shall be effected expeditiously, with personal protective equipment required until an acceptable reduction of the hazard in the situation or condition is reached. Whenever it is not feasible to eliminate or reduce hazards to acceptable levels or where hazards continue to exist, personal protective equipment shall be provided and used.

Exception: Employers with less than ten (10) employees and not doing contract work with the State worth in excess of \$100,000 need not comply with subsection (b) (1).

(b) Employer duties and responsibilities. An employer subject to this chapter shall meet the following requirements:

(1) Written safety and health program.

(A) The employer shall institute and maintain an effective safety and health program to identify, evaluate and control workplace hazards. Employer safety and health programs that were developed prior to the promulgation of this standard may be used to satisfy this requirement so long as they meet the criteria for an acceptable program set forth in subparagraph (B).

(B) The program shall at a minimum:

(i) Set forth policies, procedures, and practices that recognize and protect employees from Occupational Safety and Health hazards.

(ii) Establish and communicate a clear goal for the safety and health program and the mechanisms which

- will be utilized in meeting this goal.
- (iii) Provide for visible top management leadership in implementing the program and ensure that all workers at the site, including contract workers, are provided equally high quality safety and health protection, so that all will understand that management's commitment is serious.
  - (iv) Provide for and encourage employee involvement in the structure and operation of the program and in decisions that affect their safety and health, so that they will commit their insight and energy to achieving the safety and health program's goal and objectives. Involvement shall be accomplished through employee collective bargaining units, where appropriate.
  - (v) Assign and communicate responsibilities for all aspects of the safety and loss prevention program to managers, supervisors, and employees so that they all know and understand what is expected of them in the implementation of the program.
  - (vi) Provide a system to hold managers, supervisors, and employees accountable for their
  - (vii) responsibilities under the safety and health program.
  - (viii) Provide a reliable system for employees to notify management personnel or safety and health committee members of conditions that appear hazardous or of noncompliance with the terms of

- the safety and health program without fear of reprisal and provide a mechanism to ensure timely and appropriate responses to correct these conditions.
- (ix) Provide a mechanism to investigate accidents and "near miss" incidents, so that the root cause and means for preventing a recurrence are identified. For the purposes of this chapter, the term "accident" means any unexpected happening that interrupts the work sequence or process and that may result in injury, illness, or property damage.
  - (x) Provide a means to review injury and illness trends over time, so that patterns with common causes can be identified and eliminated.
  - (xi) Establish a mechanism for the employer to conduct ongoing, periodic in-house safety and health inspections so that new or previously missed hazards or failures in controls are identified. Inspections shall be conducted with a frequency necessary to be effective but in no event with less frequency than that established in section 12-110-3.
  - (xii) Address the impact of emergency situations and develop written plans and procedures to insure employee safety during emergencies. For the purpose of this standard, the term "emergency situation" means an unforeseen single event or combination of events that calls for immediate action to prevent, control, or

- contain injury or illness to person or damage to property.
    - (xiii) Establish procedures for transmitting and enforcing safe work practices in the workplace through training, positive reinforcement, such as a reward system, public recognition, etc., correction of unsafe performance, and, if necessary, reinforcement of work practices through a clearly defined and communicated disciplinary system.
  - (C) The program shall be made available to the employees or their collective bargaining agent or both, upon request.
- (2) Safe work practices.
  - (A) The employer shall eliminate or control all existing and potential hazards within the workplace in a timely manner, using one or more of the following:
    - (i) Engineering and work practice controls designed to control employee exposures to safety and health hazards by modifying the source to reduce exposure.
    - (ii) Administrative controls designed to control employee exposure to safety and health hazards.
    - (iii) Requirements for the distribution and proper use of personal protective equipment.
    - (iv) A program of medical examinations or evaluations conducted by a qualified physician or health practitioner when required by a standard.
  - (B) The employer shall ensure that practices are understood by all employees and are underscored through training, positive reinforcement,

- correction of unsafe performance, and, if necessary, through a clearly defined and communicated disciplinary system.
- (3) Periodic inspections. The employer shall conduct periodic in-house safety and health inspections so that new or previously missed hazards or failures in engineering, work practice, and administrative controls are identified. The in-house inspections will be conducted by individuals who are trained to recognize hazardous conditions, as members of the safety and health committee or a person designated and trained by the employer for the facility's safety and health program.
  - (4) Safety and health training.
    - (A) The employer shall develop and institute a safety and health-training program for all employees so they have an understanding of the hazards to which they may be exposed, and the procedures or practices needed to protect them from these hazards.
    - (B) In addition, supervisors and managers shall be trained in the elements of the employer's safety and health program and in the specific responsibilities assigned to them under the program.
    - (C) The employer shall ensure that the supervisors and managers understand their responsibilities under the safety and health program and their importance to the safety and health of the workplace. In particular, the training for managers and supervisors shall enable them to:
      - (i) Recognize potential hazards;
      - (ii) Maintain safety and health protection in the work area; and
      - (iii) Reinforce employee training on the nature of the potential hazards and required protective measures.

(c) The use of any machinery, tool, material, or equipment that is not in compliance with any applicable requirement of the standards of part 3 of this subtitle is prohibited. The machine, tool, material, or equipment shall either be:

- (1) Identified as unsafe by tagging or locking the controls to render it inoperable; or
- (2) Removed from its place of operation.

(d) The employer shall permit only those employees qualified by training or experience to operate equipment and machinery.

(e) Accidents shall be reported in accordance with chapter 12-52.1.

(f) Prime contractor and subcontractor responsibilities.

- (1) By contracting for full performance of a contract, the prime contractor assumes all obligations prescribed as employer responsibilities under the law, whether or not any part of the work is subcontracted.

(A) Where one contractor is selected to execute the work of a project, that contractor shall ensure compliance with the requirements of the standards of part 3 of this subtitle from the contractor's own employees as well as from all subcontractor employees on the project.

(B) Where the owner-builder, acting as the general contractor, selects another person or persons to perform the work of a project, the owner-builder shall be responsible, or shall designate one person to be responsible, for providing the general safeguarding as well as gaining compliance with the requirements of the standards of part 3 of this subtitle from all other persons engaged in the operation of the project.

- (2) Independent of any prime contractor's responsibilities, the subcontractor has



responsibility for occupational safety and health for the subcontractor's operation. That is, the subcontractor accepts responsibility for the subcontractor's portion of the work while the prime contractor assumes the entire responsibility for the project.

- (3) Where joint responsibility exists, both the prime and subcontractors are subject to the enforcement provisions of the law; therefore, because of possible overlapping responsibilities, both may be cited for violations.

(g) All safety devices and safeguards in use shall be kept sound and operable.

(h) Any employee having knowledge of the existence of any unsafe device, practice, operation, safeguard, equipment, or condition shall promptly report it to the supervisor or person in charge. A supervisor or person in charge to whose attention the existence of any unsafe device, practice, operation, safeguard, equipment, or condition is called shall take immediate steps to correct the unsafe condition or practice. [Eff 7/12/82; am 9/27/84; am 8/5/88; am 9/21/96; am and comp 10/27/18] (Auth: HRS §396-4) (Imp: HRS §396-4)

**§12-110-3 Safety and health inspections. (a)**

The general contractor of every construction or demolition project on which employees are engaged shall arrange to have inspections made during the period of the project for the purpose of assuring compliance with the Hawaii Occupational Safety and Health Law. Where there is no general contractor, the owner shall be responsible or shall designate one particular contractor to be responsible to perform the necessary safety inspections.

(b) Inspections shall be conducted with sufficient quality, frequency, and scope to identify recognized hazards and ensure their correction in

order to prevent workplace injuries, illnesses and fatalities. At minimum, inspections shall be in accordance with this schedule:

- (1) Projects employing one (1) to ninety-nine (99) persons, at any single moment in the work day, shall have an employee assigned to make at least one inspection each workday;
- (2) Projects employing one hundred (100) to one hundred ninety-nine (199) persons shall have two employees assigned, each to make at least one inspection each work day; and
- (3) Projects employing two hundred (200) or more persons shall have one additional designated employee for each three hundred (300) persons above one hundred ninety-nine (199) each to make at least one inspection each workday.

Exception: Projects employing less than three (3) persons, need not comply with subsection (c).

(c) Written records of the daily safety and health inspections shall be kept on the project site for review by the director for the duration of the project. Inspection records shall include, at minimum, the following:

- (1) The date and start time of the inspection;
- (2) The name of the employee conducting the inspection;
- (3) The scope (project areas) of the inspection, including the names of all contractors and subcontractors covered by the scope of the inspection;
- (4) A brief description of all potential and actual hazards noted during the inspection;
- (5) Name and title of the person responsible for correcting the identified hazards noted during the inspection;
- (6) Information regarding how the hazard was eliminated, corrected, or abated including the inspector's recommendations for preventing the recurrence of the hazards.

(d) Warning signs shall be posted prohibiting unauthorized persons from operating potentially

hazardous machines or equipment. [Eff 7/12/82; am 9/27/84; am 11/2/12; am and comp 10/27/18] (Auth: HRS §396-4) (Imp: HRS §396-4)

**§12-110-4 Employee responsibilities.** The employee shall not knowingly perform work in an unsafe manner or in an unsafe environment without the safeguards prescribed by the standards in part 3 of this subtitle. The employee shall not tamper with or render ineffective any safety device or safeguard and shall use the safety devices provided for personal protection. [Eff 7/12/82; am 9/27/84; am and comp 10/27/18] (Auth: HRS §396-4) (Imp: HRS §396-4)

**§12-110-5 Removal of safety devices.** No person shall remove, displace, damage, destroy, or carry off any safety device, safeguard, notice, or warning furnished for use in any employment or place of employment. [Eff 7/12/82; am 9/27/84; comp 10/27/18] (Auth: HRS §396-4) (Imp: HRS §396-4)

**§12-110-6 Use of intoxicants or drugs.** No person shall be permitted to work under the influence of intoxicants or drugs and shall be removed from the work premises if found under the influence of intoxicants or drugs. [Eff 7/12/82; am 9/27/84; comp 10/27/18] (Auth: HRS §396-4) (Imp: HRS §396-4)

**§12-110-7 Requirements of competence.** When work is to be performed by or under the supervision of a designated person, that person shall have the degree of competence necessary to perform or direct the work in a safe manner. [Eff 7/12/82; comp 10/27/18] (Auth: HRS §396-4) (Imp: HRS §396-4)

§12-110-8

**§12-110-8 Requirement of quality.** Materials, devices, structures, and methods and procedures of operation which are required in part 3 of this subtitle and which are described by general descriptive terms such as adequate, proper, and sufficient, shall be of such kind and quality as a reasonable and prudent person experienced in the work, as appropriate, would require in order to affect a safe operation. [Eff 7/12/82; am 9/27/84; am and comp 10/27/18] (Auth: HRS §396-4) (Imp: HRS §396-4)

**§§12-110-9 to 12-110-49 Reserved.**

**§12-110-50 Standards.** (a) Incorporation of federal standard. Title 29, Part 1926 of the Code of Federal Regulations, 2017 Edition published as of July 1, 2017, by the U.S. Government Printing Office, U.S. Superintendent of Documents, Washington, DC 20402-0001, is made a part of this chapter except as provided in subsections (b) through (e).

(b) State specific standards. The following standards are in effect in addition to subsection (a). Where standards on a particular item exist for both subsection (a) and this subsection, the standards contained in this subsection supersede the standards in subsection (a).

(1) 29 C.F.R. §1926.32 is amended by adding the following definitions:

"Barricades" means an obstruction to deter the passage of persons or vehicles.

"Dwelling" means any building that contains one or two dwelling units used, intended, or designed to be built, used, rented, leased, let or hired out to be occupied, or that are occupied for living purposes.

"Dwelling unit" means a single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.

"Infeasible" means that it is impossible to perform the work using all available means and methods or that it is technologically impossible to use safety equipment or safe practices.

"Residential construction" means construction work on detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height.

"Signals" are moving signs, provided by workers, such as flaggers, or by devices, such as flashing lights, to warn of possible or existing hazards.

"Signs" are the warnings of hazard, temporarily or permanently affixed or placed, at locations where hazards exist.

"Tags" are temporary signs, usually attached to a piece of equipment or part of a structure, to warn of existing or immediate hazards.

"Townhouse" means a single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof.

(2) 29 C.F.R. §1926.200(g)(2) is amended to read as follows:

All traffic control signs or devices used for protection of construction workers shall conform to Part VI of the Manual of Uniform Traffic Control Devices (AMUTCD), Part VI of the Manual on Uniform Traffic Control Devices, Millennium Edition, December 2000, FHWA, which is incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 C.F.R. part 51. You may obtain a copy of the Millennium Edition from the following organizations: American Traffic Safety Services Association, 15 Riverside Parkway, Suite 100, Fredericksburg, VA 22406-1022;

Telephone: 1-800-231-3475; FAX: (540) 368-1722; [www.atssa.com](http://www.atssa.com); Institute of Transportation Engineers, 1099 14th Street, NW., Suite 300 West, Washington, DC 20005-3438; FAX: (202) 289-7722; [www.ite.org](http://www.ite.org); and American Association of State Highway and Transportation Officials; [www.aashto.org](http://www.aashto.org); Telephone: 1-800-231-3475; FAX: 1-800-525-5562. Electronic copies of the MUTCD 2000 are available for downloading at <http://mutcd.fhwa.dot.gov/knomillennium>. The document is available for inspection at the OSHA Docket Office, Room N2625, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210 or at the Office of the Federal Register, 800 North

Capitol Street, NW., Suite 700, Washington, DC.

- (3) The following requirements are added to 29 C.F.R., Part 1926, Subpart R:
- (A) Personnel employed in steel erection shall always wear hard hats while on the job site.
  - (B) Protective footwear as defined in ANSI Z41-1999, shall always be worn while on the job site.
  - (C) Gloves, special protective clothing, respirators, and any other personal protective equipment shall be worn as necessary.
  - (D) There shall be maintained at the site a record of the identity of the Structural Engineer of Record (SER), all qualified persons and their area of expertise, and all competent persons for the steel erection activity.
  - (E) All approvals, certifications, authorizations, drawings, and plans required by this chapter shall be

maintained onsite until all steel erection activity is completed.

- (4) The following definitions in 29 C.F.R. §1926.751 are amended to read as follows:

"Hole" means a gap or void more than two (2) inches (5.1 cm) in its least dimension in a floor, roof, or other walking/working surface. Pre-engineered holes in cellular decking (for wires, cables, etc.) are not included in this definition. "Opening" means a gap or void five (5) inches (12.7 cm) or more in its least dimension in a floor, roof, or other walking/working surface. For the purposes of this subpart, skylights and smoke domes that do not meet the strength requirements of 29 C.F.R. §1926.754(e)(3) shall be regarded as openings.

- (5) C.F.R. §1926.752(a) is amended to read as follows:

Approval to begin steel erection. Before authorizing the commencement of steel erection, the controlling contractor shall ensure that there are steel erection drawings that are structure specific and a site-specific erection plan as required. In addition, the steel erector is to be provided with the following written notifications, including the documentation supporting the determinations:

- (A) The concrete in the footings, piers, and walls and the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either seventy-five (75) percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

- (B) Any repairs, replacements, and modifications to the anchor bolts were conducted in accordance with 29 C.F.R. §1926.755(b).
- (6) 29 C.F.R. §1926.752(b) is amended to read as follows:

Commencement of steel erection. A steel erection contractor shall not erect steel unless it has received written notification and documentation supporting the determination that the concrete in the footings, piers, and walls or the mortar in the masonry piers and walls has attained, based on an appropriate ASTM standard test method of field-cured samples, either seventy-five (75) percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

- (7) 29 C.F.R. §1926.752(d) is amended to read as follows:

Pre-planning of overhead hoisting operations. All hoisting operations in steel erection shall be pre-planned by the controlling contractor to ensure that the requirements of 29 C.F.R. §1926.753(d) are met.

- (8) 29 C.F.R. §1926.752(e) is amended to read as follows:

Site specific erection plan. Where employers elect, due to conditions specific to the site, to develop alternate means and methods that provide employee protection in accordance with 29 C.F.R. §1926.753(c)(5), §1926.754(b)(1) and (2), §1926.756(a)(1), §1926.756(b), §1926.757(a)(2), §1926.757(a)(4), §1926.757(e)(4), or 12-110-50(c), a site specific erection plan that includes structure specific erection plans



and drawings where applicable shall be developed by a qualified person and be available at the work site until all steel erection activity is completed. Guidelines for establishing a site specific erection plan are contained in 29 C.F.R. 1926 Subpart R Appendix A.

- (9) 29 C.F.R. §1926.753(c)(1)(i) is amended to read as follows:

Cranes being used in steel erection activities shall be visually inspected prior to each shift by a competent person; the inspection shall include observation for potential deficiencies that may occur during operation. At a minimum this inspection shall include the following:

- (A) All control mechanisms for maladjustments;
- (B) Control and drive mechanism for excessive wear of components and contamination by lubricants, water, or other foreign matter;
- (C) Safety devices, including but not limited to boom angle indicators, boom stops, boom kick out devices, anti-two block devices, and load moment indicators where required;
- (D) Air, hydraulic, and other pressurized lines for deterioration or leakage, particularly those that flex in normal operation;
- (E) Hooks and latches for deformation, chemical damage, cracks, or wear;
- (F) Wire rope reeving for compliance with hoisting equipment manufacturer's specifications;
- (G) Electrical apparatus for malfunctioning, signs of excessive deterioration, dirt, or moisture accumulation;

- (H) Hydraulic system for proper fluid level;
  - (I) Tires for proper inflation and condition;
  - (J) Ground conditions around the hoisting equipment for proper support, including ground settling under and around outriggers, ground water accumulation, or similar conditions;
  - (K) The hoisting equipment for level position; and
  - (L) The hoisting equipment for level position after each move and setup.
- (10) 29 C.F.R. §1926.753(c)(1)(iv) is amended to read as follows:

The operator shall be responsible for those operations under the operator's direct control. Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle loads, in accordance with section 12-57-7(b), until safety has been assured.

- (11) 29 C.F.R. §1926.753(c)(5)(i) is amended to read as follows:

During the hoisting and placing of purlins and single joists when the rigger, who shall be a qualified rigger, has determined that safety latched on hooks are a greater hazard, or

- (12) 29 C.F.R. §1926.753(d)(1) is amended to read as follows:

Routes for suspended loads shall be pre-planned by the controlling contractor to ensure that no employee is required to work directly below a suspended load except for:

- (A) Employees engaged in the initial connection of the steel; or
- (B) Employees necessary for the hooking or unhooking of the load.

- (13) 29 C.F.R. §1926.753(e)(2) is amended to read as follows:

Components of the multiple lift rigging assembly shall be specifically designed and assembled with a maximum capacity for total assembly and for each individual attachment point. This capacity, certified by the manufacturer or a qualified rigger, shall be based on the manufacturer's specifications with a five (5) to one (1) safety factor for all components. The written certification of the components of the multiple rigging assembly by the manufacturer or qualified rigger along with the documentation supporting the certification shall be made available at the site.

- (14) 29 C.F.R. §1926.753(e)(4)(i) is amended to read as follows:

The multiple lift rigging assembly shall be rigged with members:  
Attached at their center of gravity and maintained level such as by the use of tag lines.

- (15) 29 C.F.R. §1926.754(b) is amended to read as follows:

The following additional requirements shall apply for multistory structures:

- (A) The permanent floors shall be installed as the erection of structural members progresses, and there shall be not more than eight stories between the erection floor and the upper-most permanent floor, except where the structural integrity is maintained as a result of the design and is included in the site-specific erection plan.
- (B) At no time shall there be more than four (4) floors or forty-eight (48) feet (14.6 m), whichever is less,

of unfinished bolting or welding above the foundation or uppermost permanently secured floor, except where the structural integrity is maintained as a result of the design and is included in the site-specific erection plan.

- (C) A fully planked or decked floor or nets shall be maintained within two stories or thirty (30) feet (9.1 m), whichever is less, directly under any erection work being performed.

- (16) 29 C.F.R. §1926.756(a)(1) is amended to read as follows:

During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with at least two (2) bolts per connection, of the same size and strength as shown in the erection drawings, drawn up wrench-tight or the equivalent as specified by the project structural engineer of record and contained in the site specific erection plan, except as specified in 29 C.F.R. §1926.756(b).

- (17) 29 C.F.R. §1926.756(b) is amended to read as follows:

Diagonal bracing. Solid web structural members used as diagonal bracing shall be secured by at least one (1) bolt per connection drawn up wrench-tight or the equivalent as specified by the project structural engineer of record and contained in the site specific erection plan.

- (18) The following requirement is added to 29 C.F.R. §1926.756(c):

If a seat or equivalent device is used, its use and the connection method shall be specified in the site-specific erection plan.

- (19) 29 C.F.R. §1926.757(a)(2)(i)(D) is amended to read as follows:  
Be included in the structure specific erection drawings and site-specific erection plans.
- (20) 29 C.F.R. §1926.757(a)(7) is amended to read as follows:

No modification that affects the strength of a steel joist or steel joist girder shall be made without the written approval of the project structural engineer of record.

- (21) 29 C.F.R. §1926.757(d)(6)(i) is amended to read as follows:

The bridging shall be indicated on the structure specific erection drawing;

- (22) 29 C.F.R. §1926.760 is amended to read as follows:

- (A) General requirements.
- (i) Each employee including connectors, engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge ten (10) feet (3.1 m) or more above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.
  - (ii) Perimeter safety cables. On multi-story structures, perimeter safety cables shall be installed at the final interior and exterior perimeters of the floors as soon as the metal decking has been installed. Perimeter safety cables shall meet the criteria for guardrail systems in 29 C.F.R. 1926 Subpart R Appendix G.

- (iii) Employees performing leading edge work in controlled decking zones shall be protected from fall hazards as provided in subparagraph (B).
- (B) Controlled Decking Zone (CDZ). A controlled decking zone may be established where fall protection systems as described in subparagraph (A)(i) have been determined to be infeasible. The burden of proving infeasibility is that of the employer. For each CDZ, the following shall apply:
  - (i) Leading edge work is being performed at heights of ten (10) feet (3.1 m) or more and up to thirty (30) feet (9 m) above the next lower level.
  - (ii) The boundaries of a CDZ shall be designated and clearly marked by control lines or the equivalent.
  - (iii) Control lines provide a visible, tangible reference and constant reminder to employees working in a CDZ.
  - (iv) A control line for a CDZ shall be erected not less than six (6) feet (1.8 m) nor more than ninety (90) feet (27.4 m) from the leading edge.
  - (v) A control line for a CDZ shall not be more than ninety (90) feet (37.4 m) wide.
  - (vi) Control lines shall extend along the entire length on the unprotected or leading edge and are approximately parallel to the unprotected or leading edge.
  - (vii) Control lines consist of ropes, wires, tapes, or equivalent

- materials, and supporting structures such as guardrail system, wall, stanchion, or other suitable anchorage.
- (viii) Each line shall have a minimum breaking strength of two hundred (200) pounds [ninety (90) kilograms].
  - (ix) Each line shall be rigged and supported in such a way that its lowest point (including sag) is not less than thirty-nine (39) inches (1.0 m) from the walking/working surface and its highest point is not more than forty-five (45) inches (1.3 m) from the walking/working surface.
  - (x) A painted line on the walking/working surface is not equivalent to control lines and may not be used to demonstrate, define, or mark the boundary of a CDZ.
  - (xi) A sign or other warning indicator positioned at the entrance to a CDZ is not an equivalent to control lines and may not be used in lieu of control lines or its equivalent.
  - (xii) Each employee working in a CDZ shall have completed CDZ training in accordance with C.F.R. §1926.761.
  - (xiii) Each employee working in a CDZ shall have completed CDZ training in accordance with 29 C.F.R. §1926.761.
  - (xiv) Unsecured decking in a CDZ shall not exceed 3,000 square feet (914.4 m<sup>2</sup>).
  - (xv) Safety deck attachments (see definitions) shall be performed in

- the CDZ from the leading edge back to the control line and shall have at least two attachments for each metal decking panel.
- (xvi) Final deck attachments and installation of shear connectors shall not be performed in the CDZ.
- (xvii) A current and accurate list of employees who are authorized to work in the CDZ shall be maintained at the site. Authorized employees shall further be separately identified such that non-authorized access to the CDZ can be immediately noted and promptly addressed. Employees not authorized to work in the CDZ shall not be permitted to enter the CDZ.
- (C) Criteria for fall protection equipment.
  - (i) Guardrail systems, safety net systems, personal fall arrest systems, positioning device systems, and their components shall conform to the criteria in 29 C.F.R. §1926.502 (see 29 C.F.R. 1926 Subpart R Appendix G).
  - (ii) Fall arrest system components shall be used in fall restraint systems and shall conform to the criteria in 29 C.F.R. §1926.502 (see 29 C.F.R. 1926 Subpart R Appendix G), except that the anchorages for a fall restraint system shall be capable of supporting at least 3,000 lbs (4.5 kN) per employee attached. Either body belts or body harnesses shall be used in fall restraint systems.
  - (iii) Perimeter safety cables shall meet the criteria for guardrail systems in 29 C.F.R. §1926.502 (see 29



C.F.R. 1926 Subpart R Appendix G).

- (D) Custody of fall protection. Fall protection and fall protection components provided by the steel erector shall not remain in the area where steel erection activity has been completed, unless responsibility has been assumed by the controlling contractor or its authorized representative:
    - (i) Has directed the steel erector to leave the fall protection in place; and
    - (ii) Has inspected and accepted control and responsibility of the fall protection prior to authorizing persons other than steel erectors to work in the area.
- (23) 29 C.F.R. §1926.761 is amended to read as follows:

The following provisions are supplemental to the requirements regarding the hazards addressed in this chapter.

- (A) Training personnel. Training required by this section shall be provided by a qualified person(s).
- (B) Fall hazard training. The employer shall train each employee exposed to a fall hazard in accordance with the requirements of this section. The employer shall institute a training program and ensure employee participation in the program.
  - (i) The recognition and identification of fall hazards in the work area;
  - (ii) The use and operation of the fall protection systems to be used by the employer and in the systems that may be encountered on the jobsite; e.g., guardrail systems

- (including perimeter safety cable systems), personal fall arrest systems, positioning device systems, fall restraint systems, safety net systems, and other protection to be used;
  - (iii) The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
  - (iv) The procedures to be followed to prevent falls to lower levels and through or into holes and openings in walking/working surfaces and walls; and
  - (v) The fall protection requirements of this chapter.
- (C) Falling object or falling or flying load hazard training. The employer shall provide a training program for all employees exposed to falling object or falling or flying load hazards or both. The program shall include training and instruction in the following areas:
- (i) How to recognize falling/flying objects hazards in the work area;
  - (ii) The consequences, including the likely injuries, from being hit or struck by falling/flying objects or loads;
  - (iii) What means, methods, or protective systems or combination will be used to provide protection from falling/flying objects or loads;
  - (iv) The employees' specific responsibilities with respect to identifying hazards, identifying when protective systems have been compromised, and what actions to

take to assist in their own and other employees' safety.

- (D) Reliance on a third party provider of training. The employer may not rely on a third party or former employer of current employees unless the employer has determined through testing and evaluation of employees that the past training has met the requirements of this chapter. Generic training must be supplemented with site-specific information and an opportunity to practice using the equipment that is specific to the jobsite.
- (E) Retraining. When the employer has reason to believe that any affected employee has already been trained does not have the understanding and skill required by this chapter, the employer shall retrain or provide retraining or additional training. Circumstances where retraining or additional training is required include, but are not limited to, situations where:
  - (i) Changes in the workplace render previous training obsolete;
  - (ii) Changes in the types of fall protection systems or equipment to be used render previous training obsolete; or
  - (iii) Inadequacies in an affected employees knowledge or use of fall protection systems, hazard controls, or equipment to be used indicate that the employee had not retained the requisite understanding or skill.
- (F) Special training programs. In addition to the training required in paragraphs (1) and (2), the employer shall provide

special training to employees engaged in the following activities.

- (i) Multiple lift rigging procedure. The employer shall ensure that each employee who performs multiple lift rigging has been provided training in the nature of the hazards associated with multiple lifts, and the proper procedures and equipment to perform multiple lifts required by 29 C.F.R. §1926.753(c).
- (ii) Connector procedures. The employer shall ensure that each connector has been provided training in the nature of hazards associated with connecting as well as the establishment, access, proper connecting techniques, and work practices required by 29 C.F.R. §1926.756(c) and 12-110-50(p).
- (iii) Controlled Decking Zone Procedures. Where CDZs are being used, the employer shall assure that each employee has been
- (iv) provided training in the nature of the hazards of working within a controlled decking zone as well as the establishment, access,
- (v) proper installation techniques, and work practices required by 29 C.F.R. §1926.754(c) and §1926.760.
- (G) Certification of training.
  - (i) The employer shall certify that each affected employee has been trained or evaluated and determined to be trained as required by this section.
  - (ii) The written certification record shall contain the name or other

unique identity of the employee trained, the date(s) of the training or the evaluation of prior training, and the signature of the person who conducted the training or the signature of the employer.

- (iii) The latest training certification shall be maintained and made readily available to employees, employee representatives and the director.

- (24) 29 C.F.R. §1926, Subpart R Appendix A, subsection (a) is amended to read as follows:

General. This appendix serves as a guideline to assist employers who elect to develop a site specific erection plan in accordance with 29 C.F.R. §1926.752(c) with alternate means and methods to provide employee protection in accordance with 29 C.F.R. §1926.752(e), §1926.753(c)(5), §1926.754(b)(1)&(2), §1926.756(a)(1), §1926.756(b), §1926.757(a)(2), §1926.757(a)(4), §1926.757(e)(4) and 12-110-50(b)(16).

- (25) 29 C.F.R. §1926.1427(a)(4) is amended to read as follows:

Whenever operator qualification or certification is required under 29 C.F.R. §1926.1427, the employer must provide the qualification or certification at no cost to operators who are employed by the employer on November 8, 2011.

- (26) 29 C.F.R. §1926.1427 is amended by the deletion of paragraphs (b), (c), and (d). Operators in Hawaii are required to be certified under the requirements of chapter 12-48, Hawaii Administrative Rules.

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- (27) 29 C.F.R. §1926.1427(f) is amended to read as follows with 29 C.F.R. §1926.1427(f)(4)(i), (ii), and (iii) deleted:

Continuous monitoring. The operator-in-training must be monitored by the operator's trainer at all times.

- (28) 29 C.F.R. §1926.1427(k)(1) is amended to read as follows:

The provisions of this section are applicable November 8, 2011. Operators who were not required to be certified under chapter 48, Hawaii Administrative Rules, as of May 18, 2011 must comply with subsection (f) beginning November 9, 2012.

- (29) 29 C.F.R. §1926.1427(k) is amended by the deletion of subparagraph (k)(2).  
(30) 29 C.F.R. §1926.1430 (c)(2) is amended to read as follows:

Transitional Period. During the one year phase in period for operator certification or qualification, as provided in 29 C.F.R. §1926.1427(k), employers must train each operator which has not yet been certified or qualified in the areas addressed in 29 C.F.R. §1926.1427(j)." [Eff 2/13/12; am 11/2/12; am and comp 10/27/18] (Auth HRS §396-4) (Imp: HRS §396-4)

Historical Note: Section §12-110-50 is based substantially upon Part 3. [Eff 2/26/93, am 11/5/93, am 7/25/94, am 8/10/95, am 1/26/96, am 9/21/96, am 11/16/96, am 2/8/97, am 10/23/97, am 7/6/98, am 3/29/99, am 12/29/00, am 1/10/03, am 5/21/04, am 5/5/05, am 9/1/05, am 3/31/06, am 12/21/06, am 4/19/07, am 8/26/07, am 5/2/08, am 7/27/09; R 2/13/12]