

Cal/OSHA

POCKET GUIDE for the CONSTRUCTION INDUSTRY

April 2007 – Update

This update summarizes selected changes to the *California Code of Regulation, Title 8*, and is meant to serve as a quick field reference.

It is not meant to be either a substitute for or a legal interpretation of the occupational safety and health regulations. Readers should refer directly to Title 8 of the California Code of Regulations for detailed information regarding The regulation's scope, specifications, and exceptions and for other requirements that may be applicable to their operations.

Permits - Excavations, Trenches, Construction, Demolition, and Underground Use of Diesel Engines in Work in Mines and Tunnels

Section 341, Permit Requirements, (Page 13): A Project Permit is required for each project that includes: Use of diesel engines in any mine or tunnel, demolition or dismantling a structure more than 36 feet high, and for erecting/raising/lowering or dismantling a fixed tower crane. On a structure over 36 feet high when completed, the Project Administrator must have a Project Permit and all other employers must hold an Annual Permit when engaging in the following activities: Erection and placement of structural steel or structural members other than steel, installation of curtain walls/precast panels or fascia, installation of metal or other decking, forming or placement of concrete structures/decks on steel structures, installation of structural framing (including roof framing) or panelized roof systems. Activities that require *either* an Annual or a Project Permit include: construction of trenches or excavations 5 feet or deeper into which a person is required to enter, erection and placement of scaffolding, vertical shoring, or falsework more than 36 feet high. Refer to Section 341.1 for information on the permit process.

<http://www.dir.ca.gov/title8/341.html>

Construction Safety Orders - General

Section 1518(d), Protection from Electric Shock (other than excavations), (Page 49): Protective equipment or devices must be used to protect employees if a recognized hazard exists. Barricades must be used in lieu of other protective equipment. The employer must identify exposed or concealed energized electric power circuits if any person, machine, or tool might come into contact with the circuit. Legible markings or warning signs must indicate the presence of energized electrical circuits. Employees must be advised of the location of energized circuits, the hazards, and protective measures.

<http://www.dir.ca.gov/Title8/1518.html>

Excavations

Section 1541, General Requirements, (Page 64): Excavators (employers): Must identify subsurface installations prior to opening an excavation and ensure they are marked, must receive a positive response from all known owners/operators of subsurface installations, must meet with owners/operators of high priority (*such as high pressure pipelines, natural gas/petroleum pipelines, electrical lines greater than 60,000 volts etc.*) subsurface installations, that are located within 10 feet of the proposed excavation, before opening the excavation. Only qualified persons (persons that

meet training and competency requirements) can perform subsurface installation locating activities. All exposed employees must be trained in excavator notification/excavation activities. Excavators must immediately notify the subsurface installation owner/operator of any damage discovered during or caused by excavating activities. If the damage or escaping material endangers life or property, immediately notify 911. <http://www.dir.ca.gov/Title8/1541.html>

Vehicles, Traffic Control, Flaggers, Barricades, and Warning Signs Traffic Control for Streets and Highways

Section 1598, (Page 157) and Section 1599, (page 85): Worksite traffic controls and placement of warning signs must now conform to the requirements of the "California Manual on Uniform Traffic Control Devices for Streets and Highways, September 26, 2006", published by the State Department of Transportation. <http://www.dir.ca.gov/Title8/1598.html>
<http://www.dir.ca.gov/Title8/1599.html>

Temporary Floors

Section 1635, Erection and Construction (Steel Erection), (Page 59): Temporary removal of floor planks now includes metal decking. Prior to removal of planking or metal decking, all employees must be instructed in the proper sequence and safety. The working area must be in the exclusive control of steel erection personnel and openings must be covered, barricaded, and marked, as required by Section 1632 (page 94) and have not less than 12" of bearing on the surrounding structure. Covers must be checked by a qualified person prior to each shift and following strong winds. Covers shall never be removed by walking forward where the walking surface cannot be seen. <http://www.dir.ca.gov/Title8/1635.html>

Scaffolds

Section 1637, General Requirements, (Page 131): Manufactured hook-on ladders shall be securely attached to the scaffold, must be designed for the type of scaffold used, have a minimum rung length of 11-1/2 inches, and be uniformly spaced with maximum spacing between rungs of 16-3/4 inches. <http://www.dir.ca.gov/Title8/1637.html>

Section 1644, Metal Scaffolds: "X" bracing is acceptable as a midrail if the intersection of the "X" falls between 20 and 30 inches (reduced from 36 inches) from the work platform. <http://www.dir.ca.gov/Title8/1644.html>

Fall Protection

Section 1670, Personal Fall Arrest Systems, Personal Fall Restraint Systems and Positioning Devices, (Page 77): Paragraph (b)(11)(B) now allows personal fall arrest systems to be rigged so that an employee cannot free fall more than 6 feet. <http://www.dir.ca.gov/Title8/1670.html>

Erection and Construction

Section 1710, Structural Steel Erection, (Page 60): Paragraph (f)(1)(A) provides an exception to the 4 anchor bolt requirement if the columns are braced or guyed to resist eccentric loads meeting the minimum requirements of paragraph (f)(1)(B). <http://www.dir.ca.gov/Title8/1710.html>

Section 1720, Placement of Concrete (Page 28): New requirements for truck-mounted concrete boom pumps, trailer mounted concrete pumps and separate concrete placing booms. Concrete pumping equipment and placing booms shall be set-up and operated in accordance with the manufacturer's operation and safety manuals, and the Title 8 Safety Orders. The manufacturer's operation manual shall be maintained in legible condition and shall be available to the operator during set-up and operation of the equipment. Controls shall have their function clearly marked. Controls

shall be safeguarded against unintentional operation. Each machine shall be equipped with an emergency stop system. Operation of concrete placing booms in proximity of overhead high-voltage lines shall be in accordance with Article 37 of the High-Voltage Electrical Safety Orders. A qualified operator must conduct an inspection of the machine's controls and functional mechanisms for maladjustment, damage or deterioration prior to daily use. Inspection must be documented.

<http://www.dir.ca.gov/Title8/1720.html>

Roofing Operations and Equipment

Section 1731, Roof Hazards – New Production-Type Residential Construction, (Page 125):

This section only applies to new production type residential construction and does not apply to custom built homes, re-roofing, roofing replacements or additions on existing residential dwellings (see section 1730). This standard lowered the requirement for fall protection from (an eve height) of 20 feet down to 15 feet. On slopes greater than 7:12, employees must be protected regardless of height. Requires documented employee training that includes: work on or near gable ends, slipping, holes and openings, skylights, work on ladders and scaffolds, roof access, placement and location of materials on roofs, impalement hazards, and care and use of fall protection systems.

<http://www.dir.ca.gov/Title8/sb4a30.html>

Personal Safety Devices and Safeguards

Section 3395, Heat Illness Prevention in Outdoor Places of Employment, (Page 97): This standard adds specific actions related to the provision of water, access to shade, training, a plan of action, and emergency response procedures. All employers, having employees exposed in outdoor places of employment, must have company and site specific plans.

<http://www.dir.ca.gov/Title8/3395.html>

Elevating Work Platforms and Aerial Devices

3637, Definitions, (Page 54): Added Mast-Climbing Work Platform: A powered elevating work platform or platforms, supported on one or more vertical masts, for the purpose of positioning personnel, along with necessary tools and materials, to perform their work.

<http://www.dir.ca.gov/Title8/3637.html>

3638, General Requirements, (Page 54): Maintenance and operations manuals must be stored in a weather resistant location on the work platform or aerial device. Aerial devices and elevating work platforms must be assembled by a qualified person. If the manufacturer is no longer in business and instructions are no longer available, assembly and erection must be done by a qualified individual under the direction of a registered engineer with appropriate experience. Work performed from these devices near energized high voltage lines will be done IAW Article 37 of the High Voltage Electrical Safety Orders (Title 8, Low Voltage Safety Orders for work below 600 volts).

<http://www.dir.ca.gov/Title8/3638.html>

3640, Inspection, Maintenance and Repairs, (Page 54): Additional requirements:

Inspection/maintenance/repairs will be done by a qualified person under the direction of a registered engineer if manufacturer's instructions are not available. Inspection/maintenance records shall be maintained for 3 years. Inspection records must include the date of the inspection, deficiencies found, corrective actions, and the name of the person(s) performing the inspection.

Maintenance/repair records must include the date of the repair, a description of the work, and identity of the person/company doing the work.

<http://www.dir.ca.gov/Title8/3640.html>

3642, Platform Equipment, (Page 54): Additional requirements for Mast-Climbing Work Platforms: When used by glaziers, bricklayers and stonemasons, the inboard guardrail may be removed if the platform is not more than 7 inches from the face of the structure or fall protection is used. For all

other uses, the inboard guardrail may be removed if the inboard edge of the platform is no more than 12 inches from the face of the structure or fall protection is used. Controls will only be located on the platform and one-3A40BC fire extinguisher must be located not closer than 5 feet from the control panel. When fuel-powered equipment is used, the equipment fuel supply is limited to no more than that required for a single shift.

<http://www.dir.ca.gov/Title8/3642.html>

3646, Operating Instructions (Elevating Work Platforms), (Page 54): All employees who erect, disassemble, move, operate, use, repair, maintain, or inspect elevating work platforms must be trained by a qualified person in the following: Correct procedures for their assigned duties, nature of hazards (including electrical/fall/falling object hazards) and the procedures to deal with those hazards, safe operation and use of the elevating work platform including proper handling of materials on the platform, and the maximum load capacity based on the platforms installed configuration. Employees must not stand, sit or climb on guardrails, or use ladders or planks to gain extra height. Mast-climbing work platforms are to be used for the positioning of personnel and their equipment, to perform their work. Mast climbers are not intended to be used as construction personnel hoists.

<http://www.dir.ca.gov/Title8/3646.html>

Tower Cranes

4968, Safety Devices, (Page 42): A warning light must activate at a percentage of the rated load not to exceed 95% of the rated load if direct reading electronic instrumentation is not provided. An audible signal must activate at a level not to exceed 100 percent of the rated load. These devices must be set to avoid simultaneous activation and operate with a difference of at least 5% of the rated load to ensure independent warning. An automatic stop must operate at a percentage of the rated load not to exceed 105%. If the crane manufacturer specifies lower activation points, follow the manufacturer's specifications.

<http://www.dir.ca.gov/Title8/4968.html>

Cranes and Other Hoisting Equipment

5022.1, Test Weights, (Page 37): Test weights must be marked to indicate their weight. Lifting attachments must be inspected prior to each use and defective or damaged weights will not be used. Embedded wire rope or rebar will not be used as lifting attachments.