

Cal-OSHA Consultation
ATTN: Eric Berg
Acting Principle Safety Engineer

Mr. Berg,

I am respectfully requesting a formal written response on a Cal-OSHA letterhead regarding the following:

Sub-4. CSO - Article 29. Erection and Construction - §1712. Reinforcing Steel and Other Similar Projections section (c) Protection from Reinforcing Steel and Other Similar Projections.

(1) Employees working at grade or at the same surface as exposed protruding reinforcing steel or other similar projections, shall be protected against the hazard of impalement by guarding all exposed ends that extend up to 6 feet above grade or other work surface, with protective covers, or troughs.

Scenario:

Rodbusters are installing vertical rebar reinforcement that protrudes upward alongside walking working surfaces (rebar mat, subgrade or any other areas) as well as other worksite areas ranging from 4 inches up to 6 feet above grade on a Multi-Employer Worksite. Carpenters, Form-Setters, Laborers and other project craftsperson's are also working alongside and or in near proximity to these operations. Wooden plywood walkways are also routinely placed alongside these areas (within a few feet) where vertical rebars are installed to provide a stable walking working surface while working atop of rebar slab mats. The work areas are predominantly open area and are not flagged off nor barricaded leaving access to any worker.

MEP crafts are also installing rigid conduit and other rigid projections in similar areas alongside active walkways as well as other areas in the project footprint ranging from 4 inches up to 6 feet above grade on the Multi-Employer Worksite.

Questions:

- 1) At what time does a work in progress end (the installation of reinforcement rebar or other similar projections) and the need to protect begin for these types of operations on a Multi-Employer Worksite?
- 2) Is it compliant for other workers on the work site (non-installers of exposed protruding reinforcing steel or other similar projections) to be allowed nearby non protected vertical protruding reinforcement or other similar projections prior to protecting with an approved trough or protective cover?

- 3) On vertical rebar; Is it compliant to just install rebar couplers without placing approved covers or troughs atop of vertical rebars that protrude less than 6 feet above grade?
- 4) Is it compliant to just tie wiring a horizontal rebar or 2X4 alongside the top of vertical rebars that extend up to 6 feet above grade or other work surface as an approved form of impalement protection, and can this be considered an approved trough or cover?
- 5) Is there a vertical threshold as to when vertical projections need to be protected?
- 6) Are any of the questions above citable by CAL-OSHA for non-compliance and if yes, what type of violation(s) would be issued to the Contractor?



Missing impalement protection on vertical rebars. Contractor had stated that a top horizontal bar was considered adequate protection. Is this condition considered a work in progress?



Unprotected vertical rebar next to an active temporary walkway



Another location where impalement protection is not provided. Concrete Masons were exposed to unprotected vertical rebar during the casting of this section of slab.



A 2X4 is tied alongside the tails of these rebars as a form of impalement protection. Is this compliant?



An inactive work area and rebars were left unprotected. Is this considered a work in progress if the area is not barricaded off and work will not resume due to lack of materials due to deliveries?

Is this area in compliance with regulations?



Installers worked out of this area and the rebars were not protected leaving impalement exposures to others that access from this area. Is this considered a work in progress and protection not required.



Workers are only partially protecting vertical rebars in the active work area.



Carpenter crew did not install impalement protection and are considering the top horizontal bar a compliant means of protecting from impalement.



The center wall vertical rebars have couplers installed and the Contractor stated that impalement protection is not required. Is this a compliant condition?



Another work area on the project where impalement protection has not been installed next to a temporary walkway.



The worker in the photo is exposed to unprotected vertical rebars



The underground electrical crew is exposed to impalement during the installation of underground electrical system.