



## Tailgate Topic Review

[PP 07/21/2019 - 08/03/2019]

### Reinforcing Steel Protection

#### Protection Cap Failure - Impalement Test Video

<https://www.youtube.com/watch?v=5znpX-6XSus>

Dummy worker body dropped 4 feet on top of “mushroom caps”.



Caps failed



Dummy worker had major internal injuries.





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### Rebar Safety

Rebar is used on almost every jobsite. All protruding rebar is hazardous. Employees can fall on protruding rebar, creating major and even life-threatening injuries.

### Rebar Hazards

Utilizing rebar on the job can cause the following tripping/impalement hazards when the following occurs:

- Concrete formwork pins are protruding at low levels
- Concrete footing rebar are protruding into walking spaces
- Rebar is protruding from concrete foundation work
- Rebar scraps are left lying about the jobsite

### Personal Protective Equipment

- Always wear gloves and eye protection when handling and tying rebar
- Rebar is rusty. Flush cuts with water or peroxide, cover and see a physician
- Tuck in shoestrings and pant legs to prevent hang-ups when walking through flatwork

### Best Practices

- All jobsite employees should be trained to recognize when rebar becomes a hazard.
- Routinely pick up scrap rebar to prevent trip hazards.
- When caps are not available, bend rebar over or cap with a 2x4 "L" to protect employees from injury.
- When rebar is being hoisted "stay clear". Rebar can easily slip out of mats and cages.
- Cover exposed rebar with the correct protective cap.
- Cap all rebar that someone could fall on.

If a cap can be fitted on the exposed rebar, then cap it. If you can fall on the rebar, then cap it. If it fits in a cap, then cap it. (i.e. steel grade stakes)



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### **HANDLING REBAR**

The handling of cut and bent reinforcement carries the risk of serious injury if safe working practices are not adopted. Key hazards are persons falling from vehicles while preparing loads for lifting, i.e. attaching lifting slings.

#### **Also loads falling due to:**

1. Loss of bundle integrity i.e. settling of bars during transportation.
2. Unsafe lifting equipment i.e. crane of insufficient lifting capacity, lift truck with inadequate fork span or length.
3. Defective slings etc.
4. Unsafe lifting methods.
5. Being struck by a swinging load, site transport / lift truck etc.

#### **Other potential hazards could be:**

1. Puncture wounds from bundle wire ends.
2. The examples detailed above are hazards but the underlying cause of accidents often lies with inadequate training and poorly planned lifting operations and not the hazard itself.

### **§1712. Requirements for Impalement Protection.**

#### **(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.

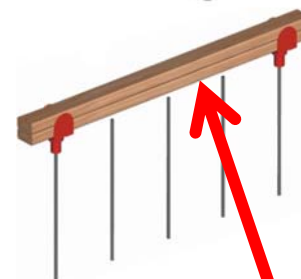
(2) Employees working above grade or any surface and exposed to protruding reinforcing steel or other similar projections shall be protected against the hazard of impalement. Protection shall be provided by:

- (A) The use of guardrails, or
- (B) Approved fall protection systems meeting the design requirements of Article 24, or
- (C) Protective covers as specified in subsection (d).

(3) Protective covers shall not be used to protect against impalement where the maximum height of fall exposure, to the top of the protective cover, exceeds 7 1/2 feet, unless the protective covers meet the requirement of subsection (d)(4)(D).



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### REBAR CAPS



Carnie Caps are designed to hold a 2x4 at 8 ft. on

When workers are above two 2x4's at 4 ft. on center are required by Cal-OSHA

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California regulations require that manufactured caps be at least 4" side or diameter of 4.5 inches. Damaged caps of support system must be replaced immediately. Smaller "mushroom" caps may be used horizontal rebar to prevent abrasions, cuts and minor injuries and to increase visibility. Maintaining supplies of caps and/or supports throughout the site encourages their immediate use. Rebar may also be bent over so that it no longer presents an impalement hazard.