

# letters to the editor

## Safety First



I received my copy of the July issue and found the articles entertaining and informative. However, when I went back to the cover page something disturbing caught my eye. The gentleman with his hand on the suspended steel load in the foreground of the photo is committing three obvious safety violations. First, he is traversing uneven ground while handling a suspended load with no obvious hand rails or attention to his footing or body positioning to prevent a fall. Second, his hard hat has numerous stickers on it; placing numerous stickers on hard hats has known to degrade the plastic over time due to the chemicals in the adhesives, and most manufacturers do not warranty the material if numerous stickers are applied. The

third and most egregious offense is that his foot is underneath a suspended load. Anyone who has worked with or around suspended loads knows that one of the most fundamental safety rules is that in no case should anyone or any part of a person's body be located underneath a suspended load. I only ask that the staff keep safety in mind when choosing the photos to place on the cover or inside the publication. Disregard for the fundamentals of safety in construction sends a poor message to the readers and tarnishes the image of the publication.

—*Joshua S. Obotto, P.E.*  
*Xcel Energy*  
*Monticello, Minn.*

*Tom Schlaefly, AISC director of research, responds and gives a look into MSC's safety policy for photos:*

Thank you for your observation of safety issues in the cover photo of the July *MSC*. AISC does have a goal of promoting safe work and in pursuit of that goal, we do review photos in *MSC* for safety violations. Our policy is to not include photographs showing clear safety violations. When we see an image that may or may not indicate a violation, we give the subject in the image the benefit of the doubt. Occasionally we use an image that we judge to be of enough value to the article and the message we are trying to convey that it overrides the negative impact of a violation. In this case we did not determine that the photo showed clear violations.

In response to your observations we

agree that personal protective equipment is not to be modified in a fashion that impairs its function. Stickers are common and in many projects they are used to indicate the wearer has passed project safety training. There are adhesives that may be detrimental to hats but there are many that are not. Too many stickers can also impair inspection of the hat. But stickers are not regarded as a safety violation by many safety professionals, and we did not recognize the stickers on the cover as such.

A reason we chose this photograph was that the connection to the girder and the tag line indicated that a lift was planned. The ground was not clear as is often the case. The surface does not seem to be uneven enough to violate written rules requiring handrail or other protection. (Whether the walking surface is usable is subject to some judgment.) It is not a clear walking working surface but it is flat in front of and behind the man, and he does have the ability to move to either side. The condition is not optimal but we do not think it was enough to reject the photograph.

Determination of the man's position in relation to the girder is hindered by the perspective of the photograph. We agree his foot should not be under the load but it is possible that, given the perspective of the photograph and the orientation of the girder, it is not under the load.

We do appreciate your attention to safety and the opportunity it gives us to describe our goals and thoughts on these observations.

## More Cars, Bigger Bridge

Several of your bridge articles—e.g., the one on the I-90 Innerbelt Bridge in the June issue (“Going Big in Ohio”)—touch upon the practice of replacing a bridge in response to population and traffic growth. As bridge engineers in the Bay Area, we’ve long recognized the need for an additional crossing over San Francisco Bay. By 1990, daily bridge traffic over the San Francisco—Oakland Bay Bridge reached nearly 280,000 vehicles, creating heavy congestion at commute hours. After the 1989 Loma Prieta earthquake damaged a section of the bridge, replacement of the eastern span was deemed necessary. This year, after 12 years of construction, this new replacement span will be operational; the full costs of the improvements to the Bay Bridge are over \$7 billion.

There remains, however, a significant problem: The resulting bridge will not add a single additional lane of traffic capacity, and the increase in Bay Area population is only making congestion worse. We believe there is only one immediately viable solution to this vexing congestion problem: to build a second crossing. Ideally, this second crossing should be in harmony with the current suspension bridge, with similar spans. The same is possible also for the truss-framed eastern span. However, for this part, it would be far more efficient to retrofit and relocate the soon-to-be demolished, historic structures onto new foundations on piles near the bridge’s current alignment, somewhat parallel to the existing bridge.

This reuse of an historic bridge is a rare opportunity to create a second

trans-Bay crossing, and our feasibility study proves that this concept is perfectly achievable. In addition to using most of the current bridge superstructure for the eastern span (Oakland to Yerba Buena Island), the western portion of the bridge (Yerba Buena Island to San Francisco) could be a double-decker suspension or cable-stayed bridge.

The main achievement of the second crossing would be a significant increase in traffic capacity between San Francisco and Oakland. Four new lanes in each direction would increase the current capacity by 80%. A second crossing would also have other major benefits:

- Reusing portions of the historic span could save more than 54,000 tons of steel structure—over a third of the estimated 152,000 tons needed for a new crossing. This is a significant savings in materials, overall cost and the environment.
- This project can be designed and built in less than five years, even with

a design competition—and much more economically than the current project.

- Also possible is the addition of a pedestrian/bicycle lane that could link Oakland and San Francisco (the new span will only allow bikes to go from East Bay to Yerba Buena Island).

The biggest challenge is to persuade the federal and state transportation authorities to start work immediately on the planning and design of this new crossing. We hope others will be interested in lending their enthusiasm and influence to this idea, but it is critical that this idea be moved forward immediately—before the existing span is demolished. (For more information go to [www.savethebaybridge.com](http://www.savethebaybridge.com).)

—Ronald F. Middlebrook, S.E.

*Middlebrook + Louie (retired)*

*San Francisco*

—Roumen V. Mladjov, S.E.

*Louie International*

*San Francisco*

