Industry and Government Trends in Safety

MODERATOR
RICH STUMP, AIA
VICE PRESIDENT, STANLEY CONSULTANTS
EXCELLENCE IN SAFETY
Industry and Government Trends in Safety

Carole Fried
Corporate Director, Health and Safety, Gilbane

Brian Polis, CSP
General Manager, Lawson & Associates

Issam Khalaf
Region Manager, Program & Construction Management, Jacobs

Majella Stevenson, P.E.
Facilities & Installations Department Head, Navy Information Operations Command Hawaii

LTC Thomas Asbery, USA
Deputy Division Commander, USACE Pacific Ocean Division
PREVENTION THROUGH DESIGN

CAROLE FRIED CIH, CSP
DIRECTOR H&S
GILBANE
Safety Challenges - By Design

How do you wash these windows?

How do you service this HVAC equipment along the roof edge?
Safety Challenges - By Design

Fluorescent light is 16 feet high at the top of a stairwell. How are you going to change the bulb?

Photo by TJ Lyons
Prevention Through Design (PtD)

“Addressing occupational safety and health needs in the design process to prevent or minimize the work-related hazards and risks associated with the construction, manufacture, use, maintenance, and disposal of facilities, materials, and equipment.”

(http://www.cdc.gov/niosh/topics/ptd/)
Potential PtD Solutions

Imbed fall protection anchors into the design process.
Potential PtD Solutions- Fall Prevention

Specify holes in columns at 21” & 42” above the floor slab. Easier to install cable or wire perimeter cables.

No longer need to rely on worker to choose the right ladder.
Jacobs
BeyondZero®
Issam Khalaf
What is BeyondZero?

- It is about an attitude of *choosing* to follow the safety rules and procedures (versus *having* to follow them).

- It is about *speaking up* and expressing your concern when you see something unsafe.
What is BeyondZero?

• It is about **taking responsibility** for your own safety and those that work with you and around you.

• It is about **being proactive** and asking questions such as:
  
  ✓ What dangerous things can happen on this job/task?
  
  ✓ What preventive actions will I take?
Our tipping point on safety - March 23, 2005

- Operator error at BP’s Texas City refinery caused a massive explosion.
  - More than 170 people were injured.
  - 15 people were killed.
  - 11 of those deaths were Jacobs family members.
It changed lives ... and the company

- Our employees were in a planning meeting in an office trailer.
- Their loss impacted us individually and as a company.
- We set out to ensure that this never happened again.
What Leadership Expects

• If it is not safe, do not do it, and do not have your co-worker do it either.

• If you see something that is unsafe, speak up immediately, there and then, to your supervisor, no matter whom - no matter what.

• If you are not sure of something or do not understand something, speak up and ask.
Enforcement of Standards during Construction in Remote/Contingency Environments

Majella Stevenson
Leone Bridge Replacement Project
Crane Accident Fatality: Case Study

LTC Tom Asbery
Deputy Commander
Pacific Ocean Division

8 October 2014
AGENDA

- Project Background
- Site Layout
- Findings and Recommendations
- Questions
PROJECT BACKGROUND

- **Project:** Leone Village Bridge Replacement, Tutuila Island, American Samoa (Design-Build contract)
- **Notice to Proceed:** 09 January 2012
- **Current Contract Amount:** $4,115,609.72
- **Construction Progress:** 61% at time of accident
- **Current Work Stoppage:** 10 July 2013
NORTH VIEW OF PROJECT SITE
SOUTH VIEW OF PROJECT SITE

Cone resting on top of Tribar to be picked up
UPSTREAM NORTH ABUTMENT
VIEW OF SILT BOOM

Target location of Tribar placement to anchor silt boom
View from ground looking up

- 7620 Volt Power
- Neutral Line
- Approximate Distance is 10 ft
- Communications Lines
FINDINGS AND RECOMMENDATIONS

- (Human Error/Operator Error) Crane Operator planned to lower the rigging between energized power lines and drag a tribar away from the lines.
  - ✓ This type of lift is non-routine and should have a critical lift plan
- (Human Error/Operator Error) Working to close to energized power lines.
- (Process Error) The contractors pre-work meeting and Activity Hazard Analysis did not address crane work. Using the crane to move the tri-bar was unplanned and impromptu.
  - ✓ A pre-lift safety meeting must include the spotters, signal person, SSHO, and the crane operator.
- (Process Error) Communication between operator and signalman was not effective.
  - ✓ No standard hand signals were used, nor radios.
QUESTIONS?
EXCELLENCE IN SAFETY
PANEL WRAP-UP / Q & A

• Designing Safety into Construction Projects
• Cultivating a Safety Culture on the Jobsite
• Beyond Zero – An Approach to Safety
• Enforcement of Standards during Construction in Remote/Contingency Environments
• Leone Bridge Case Study / Crane Safety
EXCELLENCE IN SAFETY
COMPLETION OF PRESENTATION

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