

Situational Awareness

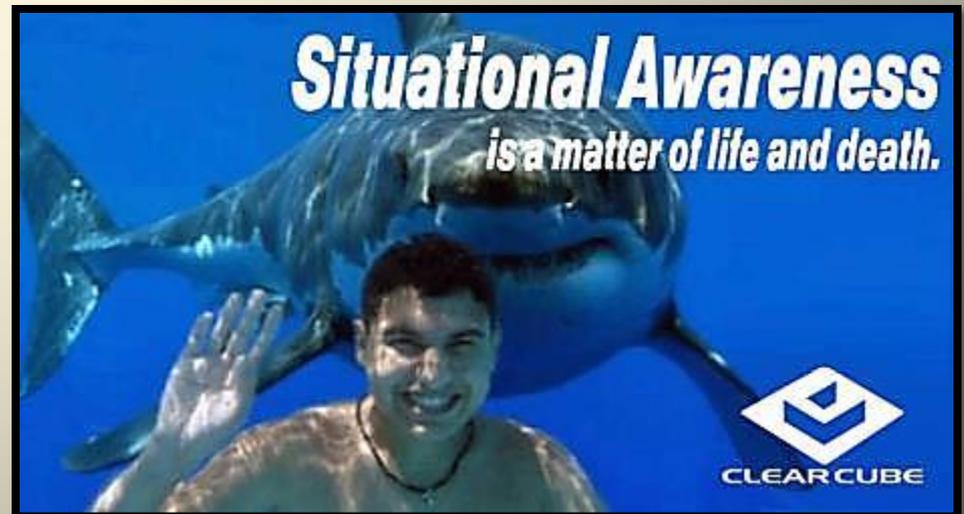
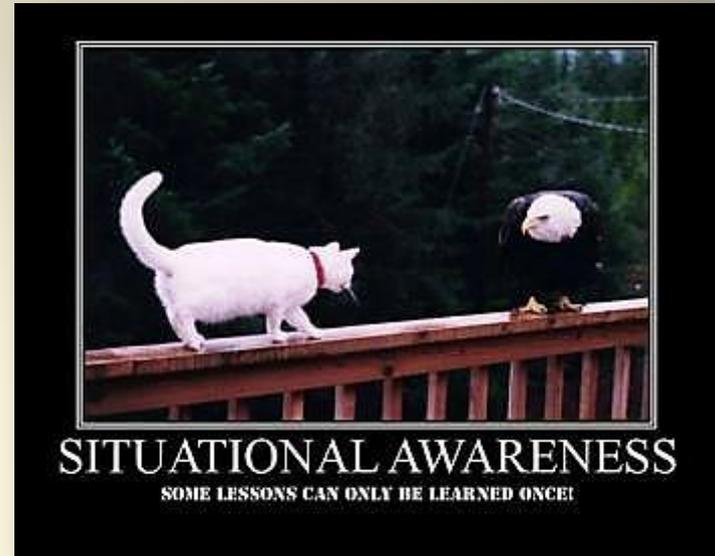
What is Situational Awareness (SA)?

Situational awareness is being aware of what is happening around you in terms of where you are, where you are supposed to be, and whether anyone or anything around you is a threat to your health and safety.



Situational Awareness

Experience and education enables us to understand what is going on around us and helps us to determine if it is safe. This means that everyone's situational awareness is individual and potentially different. We use our situational awareness to make decisions and instruct others.



Situational Awareness

Why is situational awareness important to you?

- Situational awareness is important to everyone – it is important that everyone is aware of their surroundings and the potential hazards they face. It is important that each individual is looking out for his or her own safety as well as looking out for their teammates.
- Even the most experienced people can lack situational awareness – especially when doing tasks that have become routine.



USS Port Royal runs a ground when leaving Pearl Harbor Hawaii



Team meetings and job planning can improve situational awareness

Situational Awareness

Why should you improve it?



- Almost everyone agrees that somewhere between 70-80% of accidents are attributed, at least in part, to human error*
- It is important that you know how many problems you face and how serious they are. The temporary loss or lack of situational awareness is a causal factor in many construction accidents.
- Often there is so much 'going on' in your working environment, or you become so absorbed in your own thoughts, that you fail to spot those things that could pose a serious threat to your health and safety.



Employee was bending the rebar into the upright position instead of cutting it off. Rebar snapped and the employee fell backwards.

Situational Awareness

Where and when should situational awareness techniques be used?

Assessment of your working environment should occur continually, but especially in the following situations:

- When beginning work on a new project/contract.
- When you think the work environment has changed since a hazard analysis or work plan was written.
- When working with new or different teammates.
- Before complacency has set in – it can be a silent killer!



Team meetings and diligent work planning will improve situational awareness



Com-pla-cen-cy:
Self-satisfaction,
especially when
accompanied by
unawareness of actual
dangers or deficiencies.

How to Improve your situational awareness?

The SLAM Technique

• **STOP**

- Stop the task and think. Look at each step. Ask:
- Is this a new task?
- Has the task changed?
- When was the last time I did this task?
- Do I feel comfortable doing this task?
- If not, do I need training?

• **LOOK**

- Look before, during and after completion of the task. Always:
- Inspect the work area for potential hazards, e.g., unsecured ladders, poor extreme housekeeping.
- Identify the hazards for each step of the job/task.
- Evaluate what to do about them; write a JHA or work plan.

• **ASSESS**

- Are workers equipped to perform the task safely? Check they have the correct: knowledge; skills; training; and tools.
- What else do they need to perform the task safely?
- Help? (Workers should be encouraged to ask for help.)
- More training? (Workers should not perform the task until they have been trained.)

• **MANAGE**

- Managers should take appropriate action to eliminate or minimize any hazards on site by:
- Ensuring the proper equipment is used and is well maintained.
- Thinking about the task just completed and ask, “What went well? What did not go well?”
- Asking - Did anything unexpected happened?
- Asking - How can I be better prepared and plan for this in future?



Kiewit work planning tools will help you SLAM safety!



RED DIAMOND Alert

◆ Inside ◇ Outside the Diamond Equipment Incident

Date and Time:
1:00 PM 9/24/14

Company Name: Vulcan Materials

Project Name: Dulles Corridor Metrorail Project
Phase 2, Package A

Description (What happened?)

Pre-Incident

A cap form was being poured in the FedEx lot. Multiple concrete trucks were pulled in and staged and waited to be spotted back into the pump truck. While the cap form was being poured, a surveyor was shooting a transit to ensure that the cap form was not moving or settling.

Incident

A concrete truck driver, staged in the area directly behind the surveyor, was asked by a second concrete truck driver to back up to the pump truck. The driver proceeded to back up without a spotter when he struck a surveyor who was looking into the sight glass. The result was the truck striking the back of the surveyor's leg with the bumper and knocking over the survey equipment.

Post-Incident

The truck was stopped and the surveyor was uninjured. It was noted the truck had an operational backup alarm. The site supervisor and superintendent were contacted. The safety team was notified, once on scene they conducted an incident investigation. The supervisor of the concrete company was also contacted and asked to hold a stand down with the drivers.

Contributing Factors (Why did the incident happen?)

1. The truck driver failed to use a spotter or perform a walk around.
2. The truck proceeded to move, without being directed or spotted by a designated person.
3. The truck driver and the surveyor failed to communicate.
4. The surveyors lacked barriers around their work area.
5. Failure to pre-plan staging area and survey points (communication) to eliminate hazard.
6. Lack of situational awareness.

Corrective Measures (How can the incident be prevented in the future?)

1. Vulcan stand down with drivers and plants- Next shift.
2. Barricade / signify survey points.
3. Complete a thorough PSM detailing site work and hazards.
4. Communicate with trucks at testing area, before sending to pumping area (task overview and safety concerns).
5. Pre-plan simultaneous operations (staging, travel way and survey points).
6. Have surveyor and truck driver speak at mass safety meeting.



Incident Alert

Red Diamond Case

<input checked="" type="checkbox"/> Inside	<input type="checkbox"/> Outside the Missile	
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Date and Time: 9-11-14 (10:30 a.m.)

District Name: TIC Marine & Heavy Civil

Description (What happened?)

Project Name: CB-2&3 Bulkhead Renovation

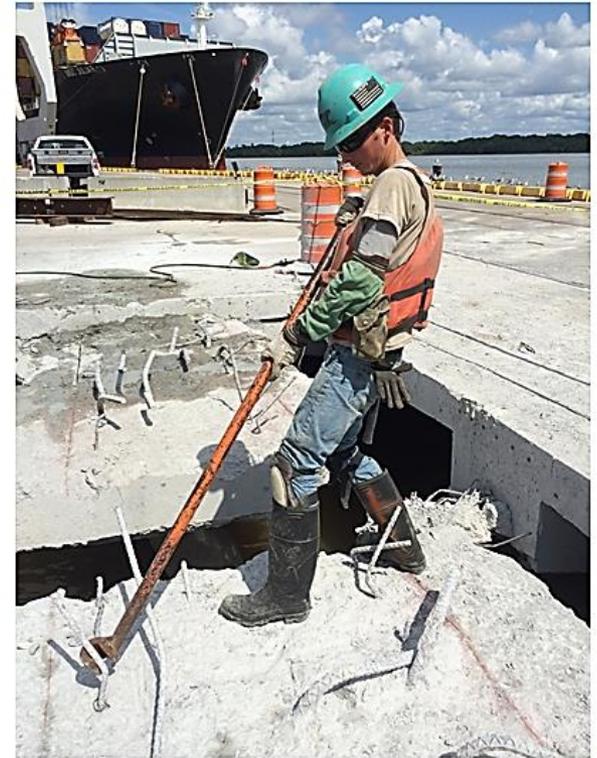
While assisting a sawcutting subcontractor performing partial demolition of existing caps, several reinforcing bars were noticed to be protruding in the way of the sawcutting line. In an attempt by a TIC employee to bend the #5 rebar protruding from the cap out of the way using a hickey bar, the rebar suddenly snapped and the employee fell backward off of the cap and into the water. The employee struck an adjacent cap during the uncontrolled fall, which was approximately 5'-6" to the water. The employee suffered a laceration next to the right eye, multiple bruises, and sprained his neck during the fall. The employee was wearing a life jacket during the operation.

Contributing Factors (Why did the incident happen?)

- The employee did not recognize the stored energy or the potential for the old, brittle rebar to snap.
- The employee used poor body positioning when using the hickey bar.
- The activity was discussed during the pre-shift meeting, but was not properly planned or identified specifically on the JSA. Bending the rebar was never part of the plan. The plan was to cut rebar with a torch.
- There was a miscommunication about which rebar needed to remain intact, and which could be cut-off. The bars the employee was bending should have been cut-off instead of bent out of the way.

Corrective Measures (How can the incident be prevented in the future?)

- Educate on and re-emphasize the hazards associated with poor body positioning and stored energy.
- All work activities must be identified, planned and discussed thoroughly prior to work commencing so as to avoid any unidentified hazards and any miscommunications at all levels.
- Safety stand down was held with entire project



Employee was bending the rebar into the upright position instead of cutting it off.

