

**PWD Pensacola
Safety Investigation Board**

**BRAC-CSO Bachelor Housing
Project**

Satterfield and Pontikes Construction Inc.

Prepared for RDML Slates

28 October 2011

Background



- NSA Pensacola is the site of BRAC-CSO Bachelor Housing Project a capital improvements contract that will , initiated on 28 October 2010.
- The new facility will be a 143,000 SF Bachelors Quarters (BQ) that will house personnel for the Air Force Combat System Officer training at NAS Pensacola. The new BQ will contain 202 apartment units, a Heritage room, study lounges, and offices. It will consist of three interconnected buildings, each building is a three story, brick structure with a standing seam metal roof that matches the surrounding buildings.
- Situated on five acres, S&P will construct the three-story dormitory unit as well as the landscaping, fencing, bike shelters, acoustical screening and parking lot.
- The contract was awarded to Satterfield and Pontikes Construction Incorporated on 27 April 2010. The contract completion date is 20 May 2012.
 - Average number employees on site: 120
 - Hours Worked: 76,132
 - Near-Miss Rate: 23:1
 - Current DART: **2.63**

Event Timeline



0600 Construction site opened

Workers commenced daily work

0700 assignments

0700-0830 Steel erectors moved scaffolding components to attic, set-up scaffolding

0830 Incident occurred

Emergency services called by

0839 Superintendent (452-3333)

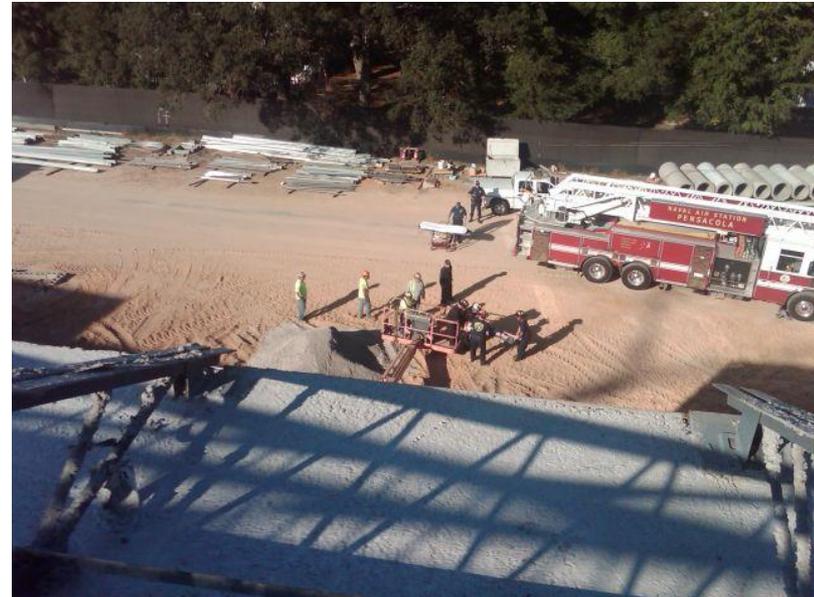
0845 Fire and EMS arrive on site

Injured victim transported to local hospital

0930 via ambulance

0934 SSHO notified PWD Pensacola SSM

1030 PWO, FEAD Director, CM, and SSM arrive on site for mishap investigation



Incident Summary

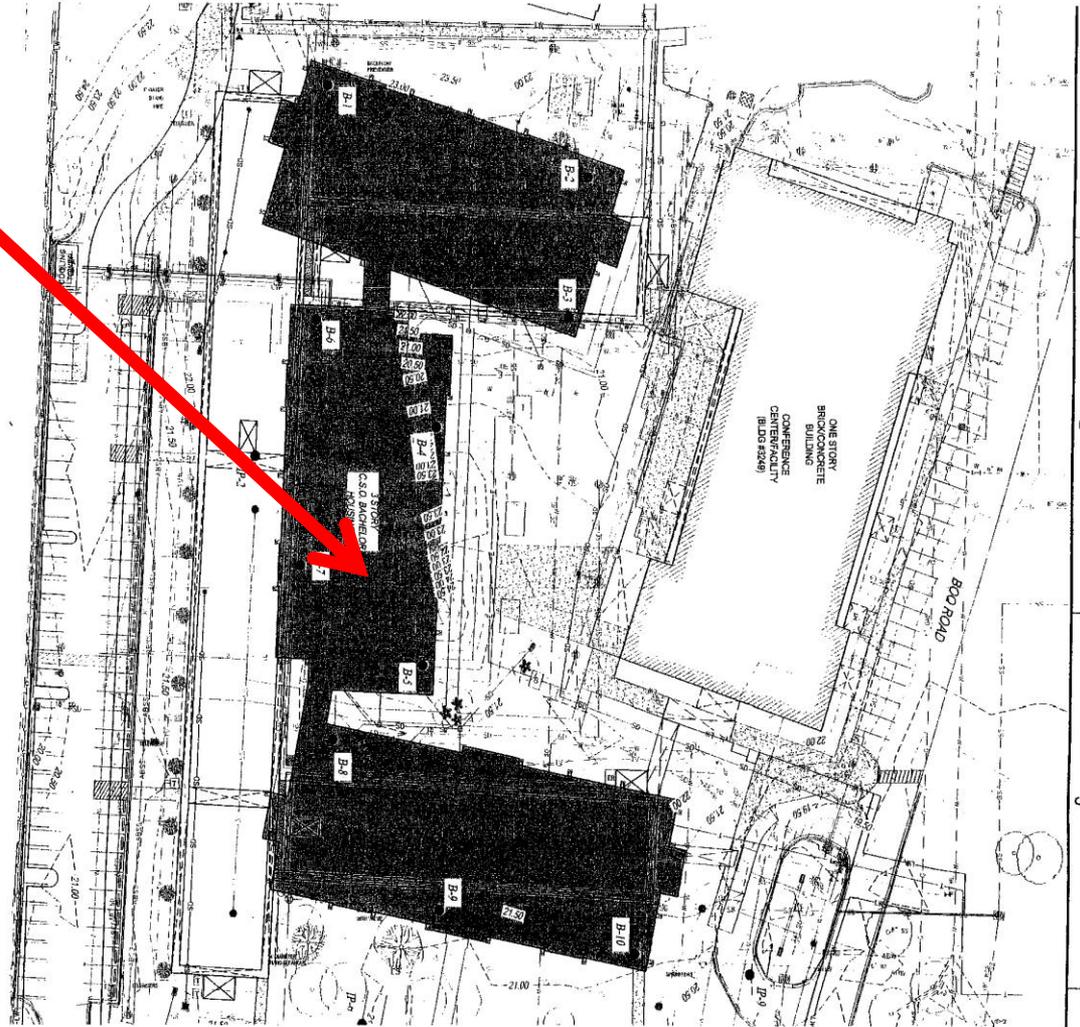
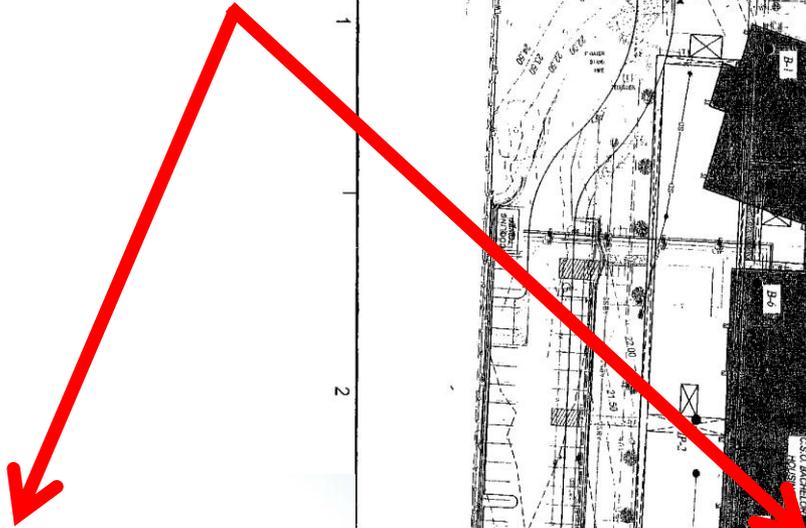


- **CN Construction employees were erecting a Baker's Scaffold to be used in the attic of Building B. Steel erectors were preparing to make adjustments to roof trusses and other structural members.**
- **After installing the top platform, IW climbed onto platform to install a beamer on the overhead structure for fall protection.**
- **While IW was standing, the platform dislodged from bracing and dropped out from underneath IWs feet. IW fell approximately 8'6" to scaffold platform set at 6', landing on his feet and then falling forward onto newly installed cast iron piping.**
- **Emergency services were summoned and employee taken to hospital. Initial assessment was no broken bones, employee received a couple days away from work and possible job restrictions. Employee received a referral to see an orthopedic doctor in reference to possible injuries.**

Mishap Site Drawing (Overhead View)



Location description: Attic of three-story Bachelor's Quarters.



Mishap Site Drawing (Ground View)



Scaffold platform



Height = 14' 6"

Piping where
employee landed

Findings



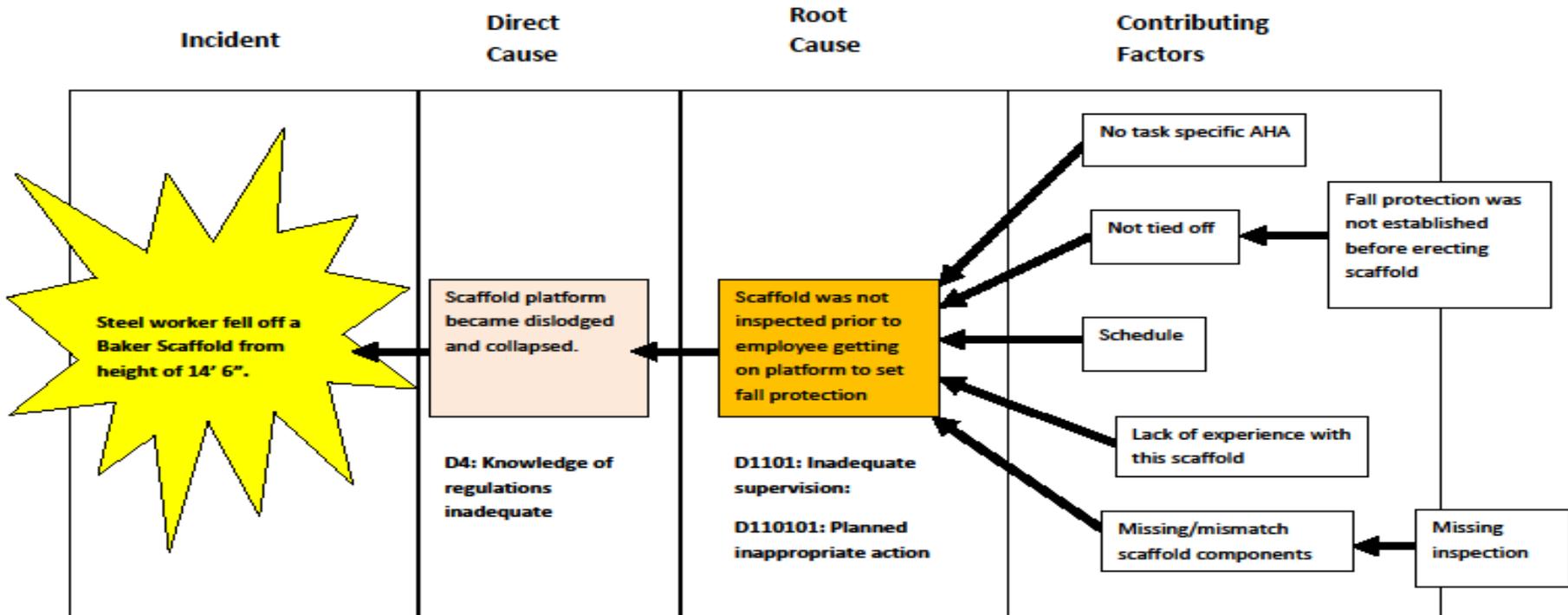
- Steel workers had erected scaffold under supervision of Competent Person
- Scaffolding components from at least two manufacturer's
- **AHA for specific task did not cover use of scaffold**
- Injured worker was one of two erectors on the job
- **Platform dislodged upon IW standing up on platform.**
 - Panel dropped away like a “Trap Door”.
 - No retaining clamps holding platform
- Scaffold exceeded 3:1 height limitations (22.C.06.e)
 - No outriggers

Findings

- Worker on the scaffold was equipped with the following PPE:
 - Personal Fall Arrest harness lanyard and beamer
 - Hard hat, safety shoes, glasses, gloves, safety vest, and hearing protection
- **No fall protection used while erecting scaffolding**
- Scaffolding competent person is CN Construction Supervisor
- **CP failed to inspect/sign off on scaffold prior to employee climbing on platform**



Incident Analysis



Direct Cause of Incident



- Scaffold platform became dislodged and collapsed
 - Scaffold platform designed to set into channels on each side brace
 - Platform clips should be rotated to prevent platform from becoming dislodged
- **WARNING:** *Recheck platform to be sure it is properly seated within side brace channel and the platform clips are fully engaged before accessing.*
(Ref: Safety Rules and Instructions for UST Multipurpose Scaffold)



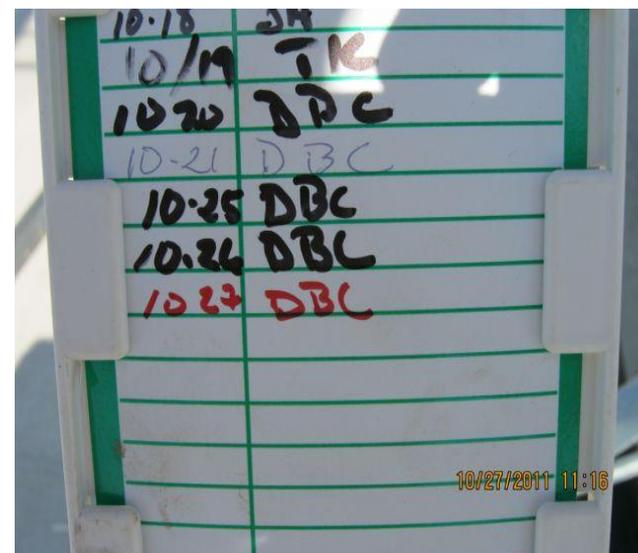
Root Cause of Incident



- Event/condition that, if corrected or eliminated, would prevent reoccurrence of this mishap:

Scaffold was not inspected prior to employee getting on platform to set fall protection

- Tags applied to scaffold were invalidated when the scaffold was dismantled and relocated
- Competent person did not inspect scaffold after it was erected at new location
- Scaffold tags indicated scaffold was ready for use
- When scaffolding is used by another contractor tags should be removed

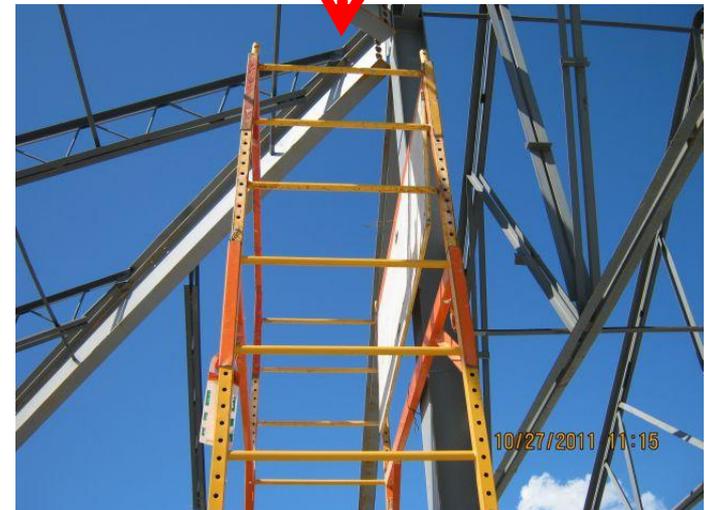


Contributing Factors



- No task specific AHA
- Exceeded 3:1 Height/Base requirement. Workers on scaffold at 14' 6" not tied off
- Decision to use scaffold to install fall protection
- Rework activity (Steel erection progressed to Building A)
- Had not previously used this scaffold
- Components from multiple manufacturers
- Scaffold inspection tag left on from previous location

Employee attempting to put beam clamp on horizontal member.



Opinions



- **Borrowed Baker Scaffold from another subcontractor**
- **Scaffold not used in a designed/authorized manner (Too high)**
- **No outriggers**
- **Fall protection not considered for scaffolding**
- **Absence of proper task planning**
- **Time on job may have contributed. Employee on job site since 3 Oct 11; Steel erectors been on site since 6 Jun 11**
- **Lack of training on specific scaffold system**

Contractor's Corrective Actions



- **Safety Stand-down was held on 10/28 to cover scaffold safety**
- **All scaffolding was removed and inspected prior to being allowed back on site**
- **Steel connections will be performed from ladders while utilizing proper fall protection devices and techniques**

Recommendations



- **Fall protection devices should have been erected prior to erecting scaffold.**
 - Use of extension ladder would have allowed employee to connect a retractable device to overhead structure.
- **No one should access a scaffold until CP had inspected and signed off on tag system.**
 - CP must be from the company using the scaffold or designated to provide service.
- **Properly evaluate site-specific hazards to determine engineering controls and correct equipment for the task**
- **Properly plan all phases of work (include updating AHAs), especially when conditions change**
- **Ensure On-the-job training or weekly training provided by competent/qualified persons incorporated into scheduled training**

