

**ROICC MCB Quantico  
Fatality at P-547, Camp Barrett  
occurring 8 Aug 2011**

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**4 Oct 11**

# Agenda



- BLUF
- Project Background
- Incident Summary
- Direct Causes
- Contributing Causes
- Root Causes
- Recommendations and Corrective Actions Taken

# Bottom Line Up Front

The direct causes of this fatality were:

- 1) Failure of the chain system on the JLG Forklift
- 2) Victim standing on feeder scaffold during lift

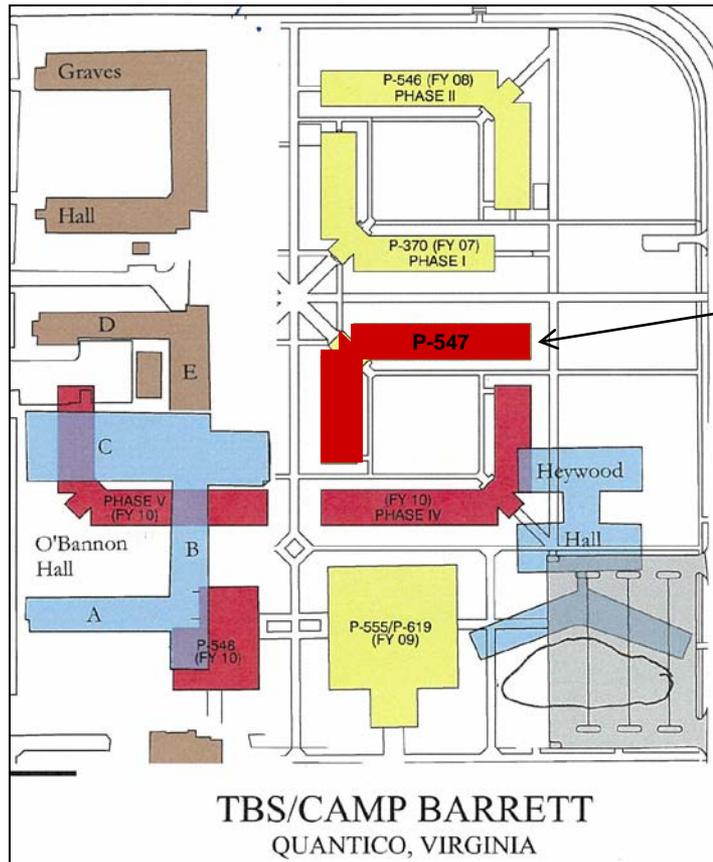


# Project Background



- \$68.5M DB contract awarded in May 2009 to Harkins Builders
- Part of an eight phase plan to recapitalize all SOQs at TBS
- Contract consists of four MILCONs:
  - P-546: Phase II SOQ for 250 students; completed 24 Sep 10
  - P-555/P-619: HQ admin/school house facilities; completed 5 Jul 11
  - P-547: Phase III SOQ for 250 students; completes Spring 2012

# Site Orientation

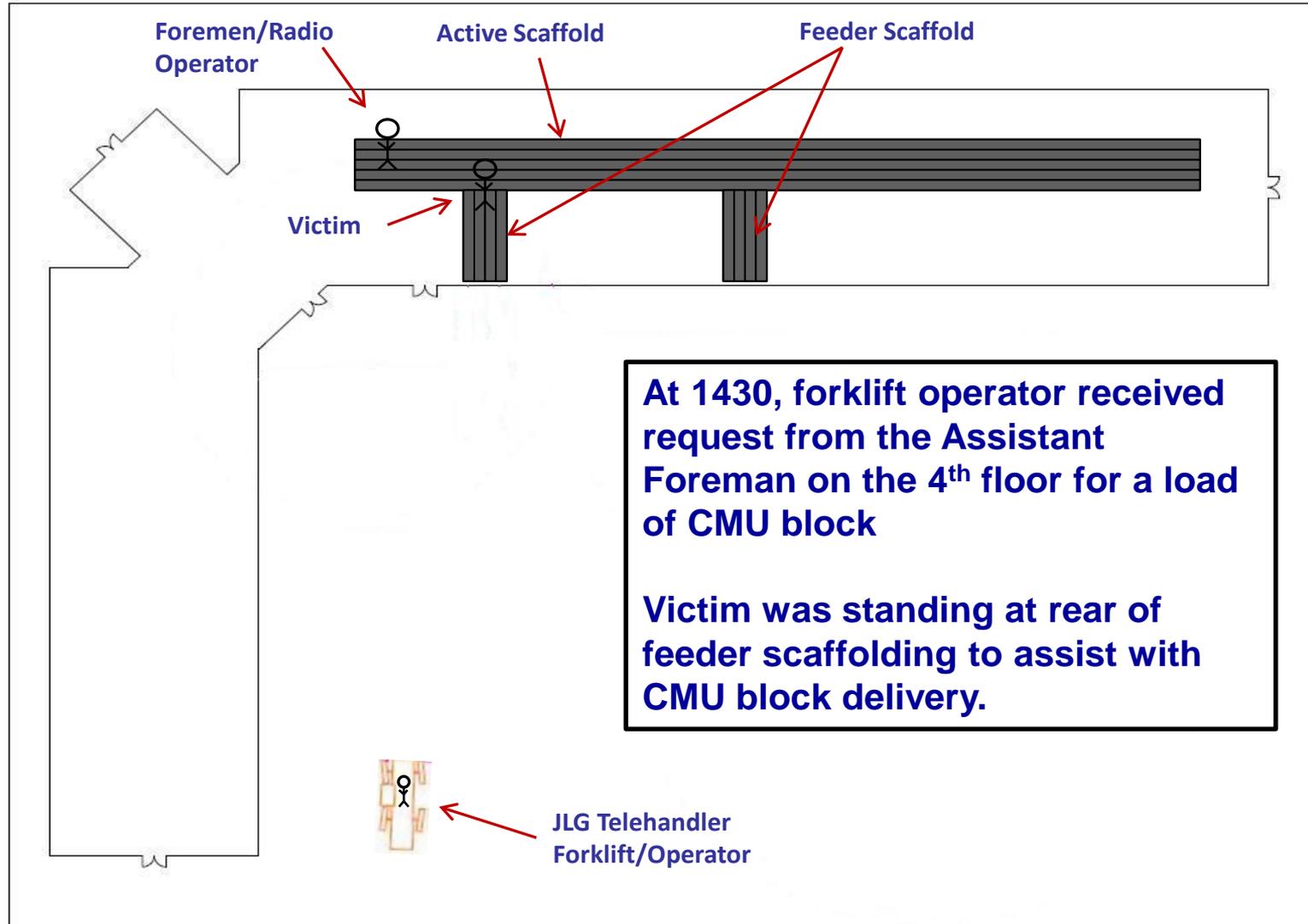


- P-546 Phase II SOQ
- P-555 Admin/Instruction
- P-619 Admin/Instruction
- P-547 Phase III SOQ

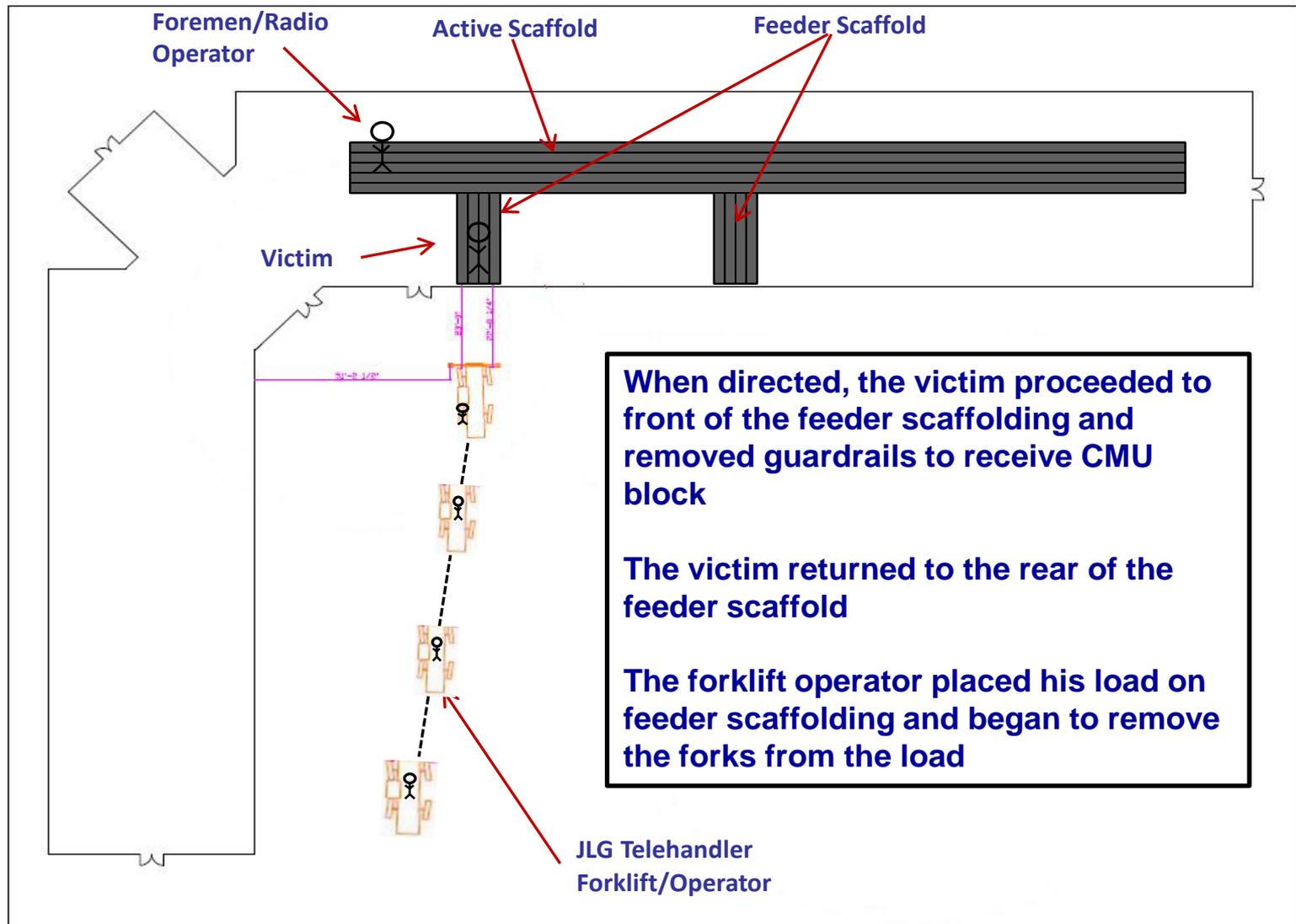
## • Key

-  Completed facilities
-  Planned/In progress
-  Existing/Demo awarded
-  Existing/Future demo

# Incident Summary



# Incident Summary





# Incident Summary



# Direct Cause

The immediate events or conditions that caused the mishap:

- Direct Cause #1: Chain System on JLG Forklift failed
- Direct Cause #2: Victim was standing on the feeder scaffold when forklift retracted



# Contributing Causes



## Nine contributing factors were examined

### Accepted contributing factors:

- Proper maintenance was not performed on the JLG Forklift
- Forklift pre-operational daily inspections were not conducted IAW the Manufacturer's Operator and Safety Manuals
- The feeder scaffold was not properly used by the workers

# Contributing Causes



Nine contributing factors were examined

Rejected contributing factors:

- Feeder scaffolding was not properly setup
- Communication/language barrier between workers
- Project was behind schedule and contractor was rushing
- Incorrect mechanized equipment selection
- Site conditions not conducive to work being performed
- NAVFAC ROICC Quantico oversight inadequate

# Root Cause



Root Cause: Prime to Subcontractor management and oversight was inadequate

- Supported evidence shows Prime's failure to ensure:
  - Maintenance and inspections were performed on JLG Forklift
  - Proper pre-operational daily inspections
  - Fall protection systems in place
  - Fall protection and prevention plan contained all the requirements
  - APP contained all safe work procedures
  - Properly documented training records were maintained
  - Proper indoctrination and training for all workers on the project

# Recommendations



## Recommendation #1:

- Review all mechanized equipment maintenance records to ensure they are kept IAW manufacturer's service manuals
- Develop a plan of action to ensure mechanized equipment on site is inspected and maintained IAW EM-385, OSHA, and manufacturer's recommendations
  - Deadline: 15 Oct 2011
  - **Action taken:** HB removed all mechanized equipment and only allowed equipment with proper maintenance records to return
- NAVFAC CI5 issue a onetime data call to contractors to verify mechanized equipment inspection and maintenance records
  - Deadline: 30 Nov 11

# Recommendations



## Recommendation #2:

- Ensure revision to all National Forklift Sales' maintenance records for mechanized equipment
  - Deadline: 15 Oct 2011
  - **Action taken:** National no longer provides any mechanized equipment for this site.

## Recommendation #3:

- Review and update daily/weekly operator checklists for mechanized equipment to ensure compliance with manufacturer's recommendations
  - Deadline: 15 Oct 2011
  - **Action taken:** New daily pre-operational checklist in use.
- NAVFAC CI5 issue a onetime data call to contractors to verify the daily/weekly operator checklists for mechanized equipment are in compliance with manufacturer's recommendations
  - Deadline: 30 Nov 11

# Recommendations



## Recommendation #4:

- Survey the P-547 project site for all existing/potential fall hazards and to provide 100% fall protection.
  - Deadline: 15 Oct 2011
  - **Action taken:** All active scaffolding was recertified. HB resubmitted Site Specific Fall Protection & Prevention Plan for masonry work.

## Recommendation #5:

- Prime shall revise Site Specific Fall Protection & Prevention Plan.
  - Deadline: 15 Oct 2011
  - **Action taken:** HB resubmitted Site Specific Fall Protection & Prevention Plan for masonry work

# Recommendations



## Recommendation #6:

- Prime shall revise the Site-Specific Activity Prevention Plan.
  - Deadline: 15 Oct 2011
  - **Action taken:** Completed for masonry work.

## Recommendation #7:

- Prime should present records of tests and inspections of all mechanized equipment
  - Deadline: 15 Oct 2011
  - **Action taken:** Contractor has mechanized equipment maintenance records and is presenting to ET for review.

# Recommendations



## Recommendation #8:

- Written record of training for fall protection and scaffold training. Prime shall provide verification to KO detailing their compliance with the standards.
  - Deadline: 15 Oct 2011

## Recommendation #9:

- Written record of training for indoc training including job hazards. Prime shall provide verification to KO detailing their compliance with the standards.
  - Deadline: 15 Oct 2011

# Recommendations



## Recommendation #10:

- NAVFAC share lessons learned with MCAA, MHIA, ASSE
  - Deadline: 30 Oct 2011

## Recommendation #11:

- NAVFAC HQ Safety evaluate if feeder scaffolding should be structurally attached to active scaffolding.

*Questions?*