



SAME Hampton Roads Post

Briefing on

NAEC Lakehurst, NJ Hangars 5 and 6

Structural Inspection and Testing



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19 February 2014

Superstorm Sandy 29 October 2012





AMC Contract Timeline

2012

- 29 Oct – Hurricane Sandy hits New Jersey
- 18 Nov – AMC sends RFP to ARA-Arcadis JV for Structural Investigation of Hangars 5 & 6
 - Inspect damaged area of Hangar 5
 - Inspect ## Trusses in Hangars 5 & 6 to include ## Visual and ## NDT
 - Inspect exterior roof surface of Hangars 5 and 6
 - Conduct two concrete core tests on each of the 4 pylons at the Hangars

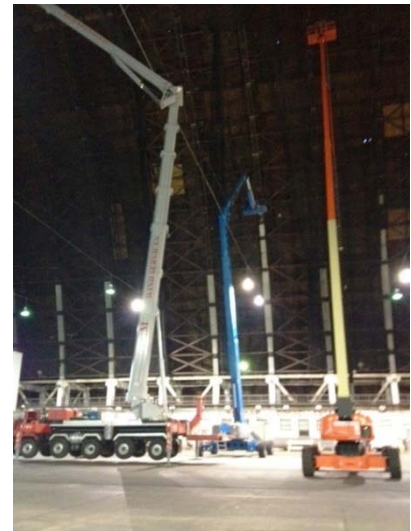
2013

- 18 Jan – ARA-Arcadis JV submits proposal - \$2.043 million
- 29 Apr – TO#002 awarded in amount of \$1,231k
- 1 May – Discrepancies in TO#002 cause delay in NTP
- 30 Jul – Revised Scope of Work issued eliminating the following services:
 - Inspect damaged area of Hangar 5
 - Inspect exterior roof surface of Hangars 5 and 6
 - Conduct one concrete core test at each of the 4 pylons at the Hangars
- 8 Aug – ARA-Arcadis revised proposal – \$850k
- 11 Sep – AMC accepts ARA-Arcadis revised proposal
- 12 Sep – Mod to TO#002 signed reducing award to \$850k and eliminating scope of services
- 23 Oct – Kick-off meeting held at JB Lakehurst, NJ
- Nov – Dec – Inspection and Testing Phase

Inspection and Testing Phase

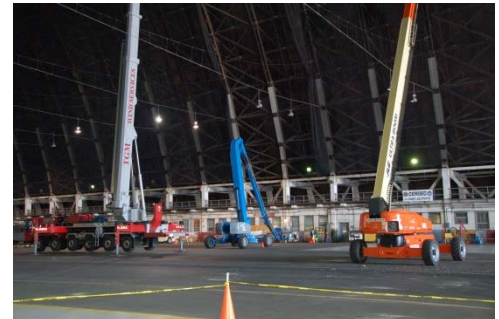
4 to 22 November 2013

- Hangar 5 Truss Inspection and Testing
 - Hangar Occupant – CERDEC - Services Army Black Hawk Helicopters
 - Had to coordinate movements each day to have space to conduct inspections and testing
 - Hangar Door Operations – Push Truck Operation
 - Safety Netting Impacts
 - Required Netting removal prior to arrival of Inspection and Testing crews
 - High Lift Equipment Maintenance and Servicing
 - Refueling, Hydraulic Leaks, Movements
 - 15 Visual and Non-Destructive Tests Truss Inspections – X-Ray and Ultrasound of Joints
 - 10 Visual Only Truss Inspections

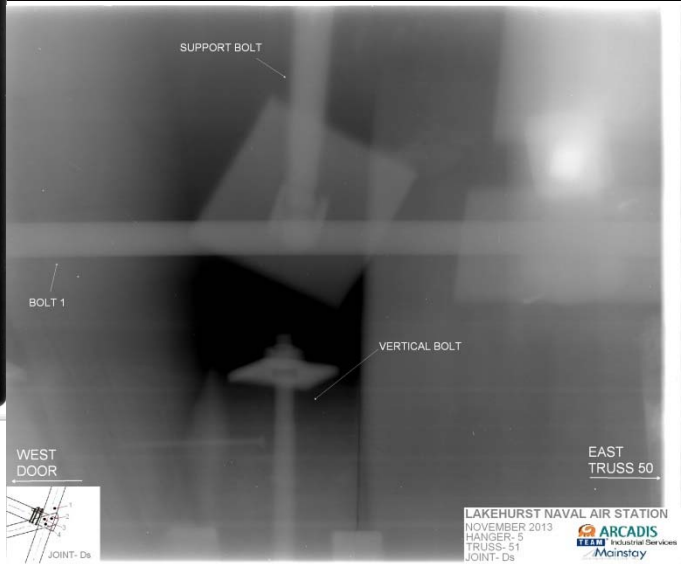
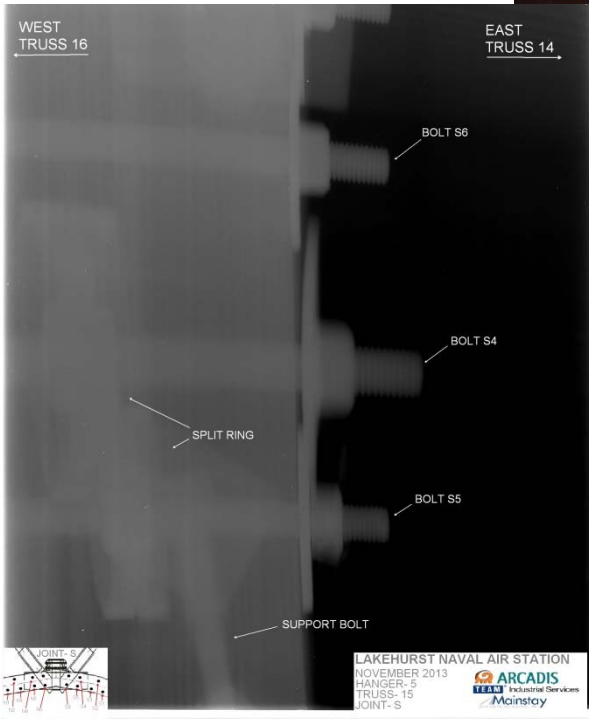


2 through 13 December 2013

- Hangar 6 Truss Inspection and Testing
 - Hangar Occupants:
 - NAVAIR – Supplies Fleet Carriers - Enormous amount of equipment to relocate to allow inspection and testing
 - CERDEC – Stores Backlogged Blackhawk Helicopters
 - No Safety Netting Impacts
 - High Lift Scheduling – Able to eliminate lifts as work progressed
 - 4 Visual and Partial Non-Destructive Tests Truss Inspections – X-Ray and Ultrasound of Joints
 - 20 Visual Only Truss Inspections



Specific Truss Observations





Contract Deliverables



Report Phases

- 18 Feb 2014 - 15% Outline Report
- 23 Apr 2014 – 90% Submittal
- 26 May 2014 – Final Report

Report Contents

- ARA-Arcadis JV Executive Summary
- Pylon Concrete Core Testing – Underwood Engineering
- Truss Inspection and Testing – Mainstay Engineering Group & TEAM Industrial Services
 - Appendix A – Historical Data
 - Appendix B – Hangar Truss Joint Nomenclature
 - Appendix C – Site Inspection Documentation
 - Appendix D – Non-Destructive Testing Documentation
 - Appendix E – Structural Engineering Criteria
 - Appendix F – Structural Engineering Model
 - Appendix G – Reference Documentation
- Investment Options:
 - Repairs – Structural, **Electrical, Fire Protection**, Climate Control, Hazardous Material Abatement – Multi-year program
 - Replacement – MILCON Project Programming, Budgeting and Execution – 5+ years
 - Relocate – Move Occupants to Other Facilities at JB MDL or Other DoD Activities



Remaining Challenges

Structural Model Variables

- Original Design - 1942
- As-Built Conditions – 1944 to 46
- Improvements since Original Construction
- Changes in Building Codes Since Original Design and Construction
- Tens of Thousands of Connections

Wooden Truss Hangar Historical Perspective

- Many Hangars have burned down due to lightning, electrical shortages
- Not adequately designed for seismic or wind pressures
- Tremendous Covered Open Space Capabilities





Comments and Questions



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