NAVAL FACILITY ENGINEERING COMMAND BUILDS IN FALL PROTECTION

Architects and engineers have the technical education and skills to design functional, economical, and aesthetic buildings and other structures. However, they frequently overlook opportunities for incorporating safety factors, such as the elimination of fall hazards, into their designs. One reason for this omission may be that architects and engineers are not usually trained to consider, or asked to include, factors that enhance the safety of maintenance workers after a structure has been completed and turned over to its owner.

Rooftop ventilation system was designed without fall protection systems for safe access

The U. S. Navy is committed to safeguarding its people. The Naval Facilities Engineering Command (NAVFAC) is the arm of the Navy that manages the design and construction of new and remodeled Navy buildings and other structures. NAVFAC recognized that falls from elevated work locations injured 1,159 Navy workers over a span of five years, Fiscal Years 1995 through 1999. These injuries accounted for 38,194 lost workdays at a cost of $21 Million. Since it is much more cost-effective and time-efficient to incorporate fall prevention measures into the initial design of a facility than to fix the problem after construction has been completed, NAVFAC decided to solve this problem by educating its architects and engineers.

Architects discuss plans for design of rooftop fall protection system

Mr. Basil Tominna, PE, the Fall Protection Engineer at NAVFAC, addressed the need to educate architects and engineers about how essential it is to include fall protection in the design and construction phases of Navy buildings.

Mr. Tominna found that the commercially available fall protection training focused only on safeguarding construction and maintenance workers. He determined that fall protection training did not exist for architects and engineers. To fill this gap, Mr. Tominna developed his own training course - the first training course specifically tailored to assist architects and engineers to plan and design safer structures.

***Fall Protection & Prevention Training* includes examples of unsafe designs like this Oil Water Separator System accessed only by steep ladders**

The Fall Protection and Prevention Training module for architects and engineers includes planning and design considerations during construction and maintenance phases, identification of fall hazards, assessment and control of risk factors, and familiarization with applicable regulations, standards, and statistics. The training illustrates how to design and build structures that eliminate the risk of falling from elevated work areas in the completed structure. Fall Protection and Prevention training also emphasizes the hierarchy, or preferred order, of control measures by eliminating, substituting, or isolating the identified hazards by applying engineering and administrative controls and a commitment to seek out and eliminate fall hazards during the design phase.

Costly redesign to provide catwalk platforms around Oil Water Separator Systems allows operators and mechanics safe access to equipment

Mr. Tominna uses real-life examples of unsafe designs, including the cost of reworking the unsafe designs and an actual case study of a recently completed $14 Million Navy project. The case study points out design flaws that created fall hazards. The design flaws in the case study project cost the Navy approximately $250,000 to correct in order to protect Navy maintenance workers from falling more than 20 feet from various structures and equipment.

Mr. Tominna provides the Fall Protection and Prevention Training to numerous NAVFAC Engineering Field Divisions and Engineering Field activities. Eventually, Fall Protection and Prevention Training will be available to the architects and engineers who plan and design Navy facilities worldwide.

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