Modification of existing Davit Arm system to enhance risk control management for maintenance staff

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Introduction
• The roof planter at Level 5 Integrated Building needs to be accessed for maintenance and landscape works weekly.
• Permit to work and PPE (safety harness) risk control is used for every access.

Objectives
• To eliminate risk from Work at Height
• To streamline process of gaining access to roof planter area for maintenance purposes
• To maintain exquisite landscape and lovely environment for patients and staff

Methodology
• Existing area is also used for davit arm and gondola set up for building façade maintenance.
• Space and site constraint to ensure no blockage to the existing Davit arm system is a challenge.
• Plan, Do, Check & Act methodology was adopted to brainstorm possible methods and value engineering introduced.
• The project makes use of the existing Davit arm structure with new detectable railings to enhance safe work environment.
• No installation of new railing structure is required.
• The existing structure of Davit arm is already certified by the Professional Engineer and hence, the design calculations of the railing structure can be omitted.
• The new integrated Davit arm system allows flexibility in the use of Davit arm system and at the same time securing the area from work at height

Results
• The implementation increased the effectiveness of risk controls from the administrative controls and PPE to Engineering control.

Activities | Man-hours saved | Est. cost avoidance (per annual)
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Site preparation | 30mins each access (26 hours per annual) | $ 442
Administrative work (Applying for PTW, certification & documentation) | 30mins each access (26 hours per annual) | $ 442
Engaging WAH accessors, Supervisor & Manager for necessary site checks | 2 hours each access (104 hours per annual) | $ 2600
Total | 3 hours each access (156 hours per annual) | $ 3464

Conclusion
• Increase risk controls and safer work environment
• Streamline work process and reduce of time spent on site preparation such as harness checks and frequent professional personal to review and approval of permit etc
• Achieving a more efficient and productive maintenance work process