

# STANTON ENGINEERING SERVICES, LLC

## PROJECT DESIGN / CONSULTATION SERVICES

- Fire Suppression Systems
- Fire Alarm and Mass Notification
- Building and Life Safety Code Consultation
- Development of Life Safety Drawings and Codes Analysis
- Development of Statement of Conditions Documents



## FORT BELVOIR COMMUNITY HOSPITAL

Stanton Engineering Services (SES) is the fire protection design engineer of record for the new 1.2 million square foot military hospital. As a sub-consultant to the HDR / Dewberry design team, SES provided comprehensive fire and life safety design and consultation services. The Hospital consists of a large, central healthcare facility, bookended by two outpatient care facilities. Two new, multi-story parking garages and a new central utility plant connect to the hospital structure. The fire protection design objectives were to remain as visually unobtrusive as possible within the occupied portions of the facility while still complying with the UFC and NFPA design standards and to utilize a redundant design mechanism for all critical system components to ensure the hospital safety systems are always functional.

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### *Project Information*

- New 1.27 million square foot Military Medical Facility
- New 37 thousand square foot Central Utility Plant
- Two new multi-level parking structures
- \$757 million construction
- Multiple Occupancies; prominently Healthcare

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## FIRE PROTECTION DESIGN

Stanton Engineering provided all fire alarm, mass notification, and fire suppression design services, fire water supply analysis, and life safety/building code analysis. During construction, SES design engineers maintained a presence on the construction site, ensuring that the design intent was maintained through to the opening day of this new award winning facility.

Key innovative features of the fire protection system design included working with HDR architects on a day-to-day basis for over two years to enable an “open” design feel that culminated in the Hospital achieving a LEED gold certification, while still maintaining the objectives of the life safety and building codes.

SES also designed and implemented one of the first mass notification systems developed for a new modern military hospital during a time when the spot light of the country was on efficient emergency response and effective occupant notification. SES consulted with many prominent leaders in the fire alarm industry as well as acoustical experts such as BOSE to provide an intelligible design.

When designing the fire suppression systems, Stanton Engineering was tasked with providing a design that was reliable such that no one event would incapacitate the building fire protection systems. To this end, SES developed an interconnected water supply design that ensured no single break would leave any large portion of the hospital without fire protection. Finally, the fire protection systems were one of the first to implement corrosion protection components in a modern military hospital that are designed to mitigate the effects of water that could potentially corrode the fire protection systems. This design increases the systems’ life span and allows the owner and maintenance staff to remain confident that the systems will function as designed.