

Homeport Ashore Housing

Willis Manor

The Navy has been rolling out their Homeport Ashore initiative to resolve what is considered a strategic issue – the quality of life of its sailors. This initiative was created to improve the quality of life among ship-based sailors by moving them off ships and into unaccompanied housing on shore while their ships were docked in their homeport. The Navy started with upgrading and renovating their housing, as well as privatized housing. The most recent project in support of the Homeport Ashore initiative within the Hampton Roads area is Willis Manor Bachelor Quarters (BQ), named for the WWII Medal of Honor winner.



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With today's economy, Homeport Ashore requirements come at a cost. To reduce costs, the Navy is incorporating the requirement that projects be evaluated for Total Ownership Cost (TOC). TOC is a strategy of analyzing trade-off of first cost saving versus long-term energy costs over a 40 year life cycle. Low impact design (LID) is a key component of sustainable design and has been implemented in the design of the project to provide lower TOC. The Navy is not only interested in reducing cost but also in reducing the building's environmental footprint. The Willis Manor BQ is certified by the U.S. Green Building Council as LEED (Leadership in Energy and Environmental Design) Silver.

The facility's design incorporates a holistic approach to reducing its environmental foot print.

- Reduced energy usage through the use of a highly efficient insulated envelope including an air barrier system, high performance windows, and state of the art energy efficiency systems such as a Hybrid Ground Source Heat Pump. The fully integrated solution takes advantage of the east-west building orientation exposing only half of the building to sunlight at a time, which optimizes the heating and cooling of the building year-round, and technology to produce optimum performance, minimum energy usage, minimum maintenance, and lowest TOC.
- Use of high efficiency plumbing fixtures that use 45% less potable water.
- The use of drought-tolerant plant species reduces demand for potable water.
- Recycled materials and locally manufactured materials and products were used to the extent practicable within the construction of the building.

Through the Best Management Practices (BMP's) and LID components, the requirements of Virginia Stormwater Management Program, LEED, and Energy Independence and Security Act Section 438 were achieved through infiltration, filtration, storage, evaporation, and runoff detention. Some of the environmental features of the design are listed below.



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floor elevation raised 3 feet above surrounding grade and is at least one foot above the 100-year flood elevation of 11.5 feet to allow for the incorporation of the permeable paver sections within the courtyard as a BMP and take in to consideration potential impacts from rising sea level.

- Extensive vegetated open space to reduce heat island effect and improve hydrology.

Homeport Ashore initiatives like Willis Manor BQ will continue to increase the quality of life of our sailors while protecting our environment at the same time.