

## Starwood Tiverton, LLC

### The Villages on Mount Hope Bay

#### Tiverton, Rhode Island

The Villages on Mount Hope Bay Project is a mixed-use redevelopment of a 98-acre waterfront site formerly utilized as a bulk fuel oil storage facility. Project components include 60 residential buildings housing 290 units, a waterfront “village” consisting of an inn and other commercial and retail buildings, dockage facilities for transient commercial and recreational vessels, a mooring area, and a public waterfront park.

The regulatory permitting requirements for this coastal development were extensive. ESS was successful in obtaining the approvals in a timely and sequential manner appropriate to the phased construction of the project. Local approvals were pursued in a phased approach to allow flexibility in the site designs to adjust to market sales of the condominium units. Other critical permits for the project included a “Category B Assent” from the Rhode Island Coastal Resources Management Council (RICRMC) as a result of the proximity to Mount Hope Bay. Additionally, ESS obtained a Letter of Map Revision from the Federal Emergency Management Agency (FEMA) to allow the shoreline topography to be elevated by a 10-foot high, 900-foot long revetment and retaining wall thereby eliminating it from the flood zone. ESS also obtained a permit from the U.S. Army Corps of Engineers (USACE) for the in-water structures, a Water Quality Certificate from the Rhode Island Department of Environmental Management (RIDEM), and a Physical Alteration Permit from the Rhode Island Department of Transportation (RIDOT).

The site’s topography, geology, and former use presented significant engineering design challenges for the project. The 220-foot drop in elevation across the site results in an average slope between 10 and 15 percent. Additionally, the remediation of this former industrial site included the unconsolidated placement of approximately 750,000 cubic yards of remediated site soils over 80 percent of the site. These conditions, in combination with shallow bedrock over much of the site, motivated ESS to develop unique engineering solutions to control stormwater, stabilize soils, and prevent groundwater breakout.

ESS prepared designs to accommodate five separate phases of construction. Total project components include design of over 12,000 linear feet of roadways, commercial and residential parking, and over 12,000 linear feet of water service in a looped system. The sanitary sewer design includes approximately 10,000 linear feet of gravity sewer, a 150-gallon per minute pump station, and 450 linear feet of force main. Stormwater management utilizes Best Management Practices (BMPs) treatment by 11 detention basins and two prefabricated water quality devices to accommodate a 100-year storm flow of approximately 300 cubic feet per second.

The first residential units became occupied in early 2004.



#### Relevant Services Include:

- Civil/Site Engineering
- Roadway Design
- Grading and Drainage Design
- Sanitary Sewer and Pump Station Design
- Water Supply Design
- Stormwater Management Plan Preparation
- Environmental Impact Evaluations and Mitigation Design
- RI CRMC Assent “B” Permitting
- USACE Permitting
- RIDEM Permitting
- RIDOT Physical Alteration Permitting
- Town of Tiverton Permitting
- FEMA Map Revisions