Research and Design

Sampling and testing of SHORELOC® Hand-placed block is performed in accordance with ASTM C140 standard methods of sampling and testing concrete masonry units. Units meet these requirements at the time of delivery to the job site. Durability is proven by field performance.

SHORELOC® is easy to install and environmentally friendly. SHORELOC® is often used as an alternative to cast-in-place concrete bulkheads, slope paving, gabions, soil cement or rock (rip-rap). SHORELOC® has excellent resistance to hydraulic shear and overtopping conditions.

One of the environmental benefits of SHORELOC® is that vertical cores and spaces can be incorporated in the blocks throughout the system that allow vegetation to grow. Properly selected plant species can almost completely cover the entire hard surface to blend in with the natural look of the project. During peak storm events, the SHORELOC® layer beneath the vegetation will protect the soil from erosion. The ability to support the ecosystem’s habitat is a major advantage of SHORELOC®.

SHORELOC® HAND-PLACED DESIGN ADVANTAGES

- Each block has an open area of 10-20% to allow for superior hydrostatic pressure relief and ecologically pleasing vegetation cover.
- One block style mixes up the complete system.
- Interlocking block allows greater flexibility through the uses of articulation — conforms better to ground contours and settlement.
- Tests have shown that the force needed to remove a block from a revegetated cover layer may be equal to 20 times the weight of the block.

Specifications

Small construction crews with a modest amount of equipment can install SHORELOC® Hand-placed concrete blocks. The visibility of key system performance aspects is easy to monitor during installation, as opposed to cast-in-place concrete thickness, thickness and gradation of rip-rap. SHORELOC® is installed on top of a layer of geotextile fabric. The fabric acts as a filter to hold the protected soil in place while allowing water penetration. After the SHORELOC® installation is complete, the open cell voids or closed cell joints can be filled with granular material or soil. Unit to unit vertical offset should be limited to the value utilized in the design (typically one-half inch). If vegetation is required, hydraulic seeding or mulching provides a low cost and highly effective method of establishing commonly used grasses and plants. In applications subject to continually flowing water, solid units can be used in the normal waterline or the voids of hollow units should be filled with gravel.

Features & Benefits

DURABILITY

SHORELOC® will not suffer loss of function due to chemical degradation, UV degradation, biological degradation, vandalism or aging throughout its design life.

AFFORDABILITY

The SHORELOC® system is engineered to ensure comprehensive project design and high quality components at 20-30% lower than alternative erosion control methods.

ACCEPTABILITY

SHORELOC® becomes part of the landscape and the local ecosystem. Its construction is free of hazardous procedures that offering opportunities for recreation as native grasses are quick to germinate in the self-filled cells.

STABILITY

SHORELOC® has the necessary strength characteristics to resist displacement due to imposed traction forces and wave loads and the necessary strength to resist both lateral displacement and vertical uplift.