## MATRIX MARINE, LLC

The Official Newsletter of Matrix Marine, LLC



Photo: QuakeWrap.com

## Sea Walls

by Behruz Vahdani. Managing Member

Climate change is a hot topic with adverse effects on the environment all around the globe. One significant consequence of its effect is the rise in sea levels. A rise in sea level causes an increase demand in waves and tides which necessitates the demand for installation/maintenance of sea walls to shield various shorelines in all coastal areas. During extreme weather events such as super storm mixed with sea level rise, the current seawall heights may be unable to resist these natural forces and buckle or collapse.

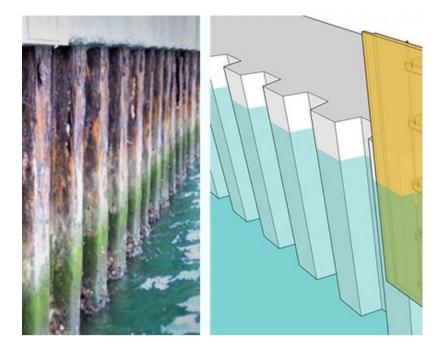
Although there are different types of sea walls all over the coastal areas, they should have two things in common. They should be able to relieve the water pressure buildup and resist the forces created by these natural elements. Three types of ...

## HERE'S WHAT YOU SHOULD KNOW:

 Sea Walls
 Innovative Design Approach



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## Innovative Design Approach

Matrix Marine, LLC can address all your concerns about different methods of design by utilizing a new design approach to strengthen your property sea wall.

The above picture represents the innovative design approach for the repair of sea walls with the 60% cost of the conventional methods by QuakeWrap's patented Material.

Matrix Marine, LLC & Matrix Seismic Group Corp. can evaluate the structural conditions of your Non-Ductile, UMB, Soft Story buildings in a timely manor.

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sea walls are: Vertical, Curved & Mound.

Vertical seawalls are built in particularly exposed situations. These reflect wave energy. Curved or stepped seawalls are designed to enable waves to break to dissipate wave energy and to repel waves back to the sea. Mound type seawalls are used in less demanding situations.

Various types of sea walls are concrete barriers, brick or block walls, rubble mound structures, or steel sheet pile walls.

A concrete seawall lasts 30 to 50 years on average. A wood seawall lasts 10 to 30 years on average depending on the quality and location. A poorly installed or unmaintained seawall often needs repairs after 10 to 15 years.

Neglecting sea wall problems can lead to serious consequences such as sea wall damage or sea wall failure

The conventional method of repair and maintenance of sea walls can be costly from \$600 to \$2,000 per linear foot depending on location, wall height, waterway depth, method of design, type of structure and availability of special contractors dealing with these types of projects.