

MATRIX MARINE, LLC

The Official Newsletter of Matrix Marine, LLC



Structural Safety

by Behruz Vahdani. Managing Member

The recent tragedy of the 12 story condominium collapse in Surfside Florida should not be considered as just an unwanted accident. There are warning signs of a building which should alert the building owners to pay attention regardless of the type of construction, number of stories, soil condition, the year built and the location of the structure.

The Structural Engineers usually check the building either by the appearance of warning signs (cracks, settlement, excessive water accumulation in basement, etc.) or by the City and County regulations. This is guided by certification of the buildings or public safety ordinances to ensure they are structurally sound. The regulations provide recommendations to address the various deficiencies per recent building codes either by observation or testing.

**HERE'S WHAT YOU
SHOULD KNOW:**

*Structural Safety
Innovative Design
Approach*





Innovative Design Approach

Matrix Marine, LLC can address all your concerns about different methods of design, inspections, certifications and cost effective construction by utilizing a new design approach to strengthen major structural elements (columns, beams, connection of concrete floor to concrete walls, repairing of foundation and strengthening the retaining walls) by use of patented FRP by QuakeWrap at a fraction of the regular construction cost.

The above picture represent strengthening of concrete column which can be applied around the connections of beams and columns. PileMedic is a branch of QuakeWrap company.

Matrix Marine, LLC can evaluate the structural conditions of your coastal property caused by the ocean or sea in a timely manor .

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The **number one** hesitation to fix the deficiencies which are recommended by the structural engineers either as an individual owner, condominium association or investor is **cost**.

Individual owners can secure a loan to pay for the cost.

The association needs to collect from every individual owner in order to fix the problem. If the cost is too high, some owners may not be able to pay their share and that may cause a delay in timing which may be crucial for building safety.

The investors usually want a second opinion on high priced second or third loans, a return on the investment study and a PLM report (Probability of Maximum Loss) before any actual construction commences.

Due to this Covid period of time, another problem that arises is that with more complex buildings the timing of getting plans permitted, sign offs with Building Officials may take months and even up to a year.

The solution to these issues can be in obtaining valued engineering, using innovative designs and cost effective new quality materials, saving as much as 50% of the standard procedures to solve different aspects of the building problems.