

MATERIAL FLUIDITY

SENSE • WILL • FORM

ALEXANDRIA, VIRGINIA MARITIME MUSEUM

"The cosmos is in some way clearly touched by narcissism.
The world wants to see itself."

Gaston Bachelard
Water and Dreams. An Essay on the Imagination of Matter



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ABSTRACT

The goal of my thesis was to produce a building that lives in the spirit of water - a universal substance that senses and responds to the will of the environment around it. Similar to water, the maritime museum adapts its form to external forces while borrowing and redistributing energy throughout an internal cohesive structure. The building serves as an instrument of measurement, etching the pattern of the tides in the night sky and measuring its own shifting form in relation to the moon - its form, constantly reformulates itself, and is analogous to the ebb and flow of progress in history of maritime navigation.

Located on North Union Street in Alexandria, Virginia, the building is anchored to the edge of the Potomac, taking full advantage of the source of endless energy that the river provides. The building's form derives itself from the interaction between structure and water. It borrows from the paradoxical behavior of water: the tendency to alternate between platonic spherical forms which are created through internal forces and the unraveling of the spherical form in response to gravitational external forces applied to it.

The building's circular lighthouse on the northern end serves as a symbolic focal point as well as a central repository for the energy gathered by its two wings. The east wing closest to the water unravels in response to the 4 foot rise and drop of the tides, and borrows that energy to continually recreate an architecture in the image of itself. The west wing of the enclosed portion of the museum serves as a barrier and helps contain the water that is to be released through the lighthouse.

The lighthouse also forms a symbolic focal point for the city where light for navigation towards the waterfront, provides a point for people, boats and water to come together. During low tide, a gush of water is released through the lighthouse's inner vortex, as a waterwheel harnesses the lunar energy it is released as a single beam of a light into the sky with surplus energy stored for future use. The interplay between static form and dynamic form creates a building that is both anchored to earth and free to react to the spirit of the movement of the water.

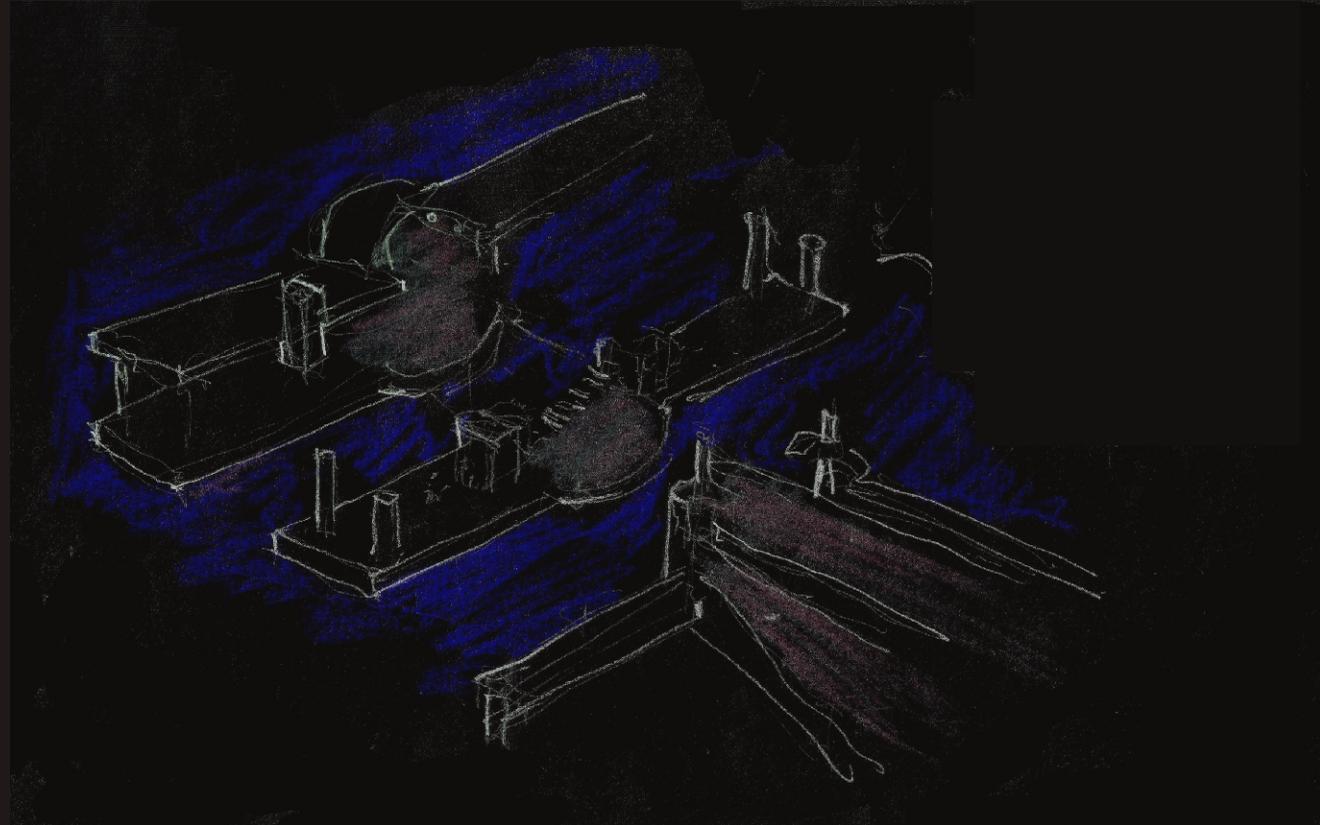


Table of Contents

Site & Meaning	1
Water & Notions of Adaptable Structures	2
Water & Spirit	3
Initial Studies	4-6
Studies of Structure & Movement	7-11
Final Drawings	12-19
Bibliography & Notes	20
Acknowledgements	21
Vita	22