materials and imagination
a building of fire and water

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An exploration of the relationship between man and the elements, fire and water, this project further develops these ideas by way of the imagination. Man’s attempt to form further connections with these elements is often seen as an act of humanization. It is, however, these investigations that allow for such intimate relationships between humans and elements.

This project is a fire station that demonstrates the impact fire and water has on man, as well as the impact man has on fire and water. Whether the gentle flame of a candle or the ferocious explosions of a volcano, the clear flowing stream or the passionate throes of the ocean, man finds both companionship and challenge in the elements. Man’s manipulation of both fire and water enable materials to extend the limit of their properties. It is this control over elements that enables architecture.
I would like to give a sincere thank you to my committee members Susan Piedmont-Palladino, Marco Frascari and Paul Emmons. Susan, you have introduced me to an organic side of architecture, a place where both the elements of nature and man come together. It is this relationship between man and nature that I find so worthy of exploration. Marco, your bathtub analogy, and many others like it, have helped me to see how the imagination is integral to the creation of architecture. I hope, as you have imagined, that the fire fighters of my building will have a cowboy hat in one hand and a cigar in the other. Paul, I have gained so much from the collage critiques you have given me. Questions of texture, placement and image manipulation have proven vital in the expression of a thought.

I would also like to thank my extended list of parents, Muriel, Bill, George and Wen Yun, for their constant support and interest. As for Gail, Brendan, Mickey and Claudia, thank you for your ears and your words, for I often needed to be told that there is more to life than fire and water (earth and air?).
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This fire station is located in Old Town Alexandria, Virginia. The site enables direct access to both the Potomac River and Duke Street, maximizing travel efficiency for both fire and water emergencies. Equipped with one engine company and room for three boats, this station is designed to house twelve fire fighters, four at any one time. Adjacent to the fire station is a park that terminates Duke Street. This encourages fire fighters to build relationships with members of the community.
Before and after images of the site can be seen to the left. As seen in the drawing, the fire station is divided into two buildings, each representing one of the two elements, fire and water. Separated by the North axis, the building that sits by the Potomac is the water building, and the building that addresses the city is the fire building.

Model studies, as seen above, allow for materials to express the qualities of the element they are representing. This dialogue between materials and elements allows the imagination to stretch, thus expanding the choice of materials for the fire and water buildings.
The imagination is not, as its etymology suggests, the faculty for forming images of reality; it is the faculty for forming images which go beyond reality, which sing reality.

-Gaston Bachelard (Water and Dreams 16)
By means of collage, the imagination can further investigate and develop the connections that man has to the elements, fire and water. The humanization process of both fire and water becomes evident in the frequent appearance of man when collaging characteristics of the elements. The fold-out collage shown above, investigates ideas of fertility, narcissism and death found in water; and tales of the Phoenix, Prometheus and Empedocles that are born from fire. The history that man and these elements have developed are translated into the design of the building, through material and form.
Collage details of the water building enable the expression of its organic presence. To the right is the development of the windows for the water building. Screens, shutters and sliding glass allow inhabitants to live more comfortably while using less energy. Organic insulation, seen above, also lends more comfort to inhabitants without the fears of hazardous materials.