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## Rituals Transforming Cultures, Cultures Transforming Rituals: Tea Importers' Headquarters + Interactive Tea Museum

Todd Rubin

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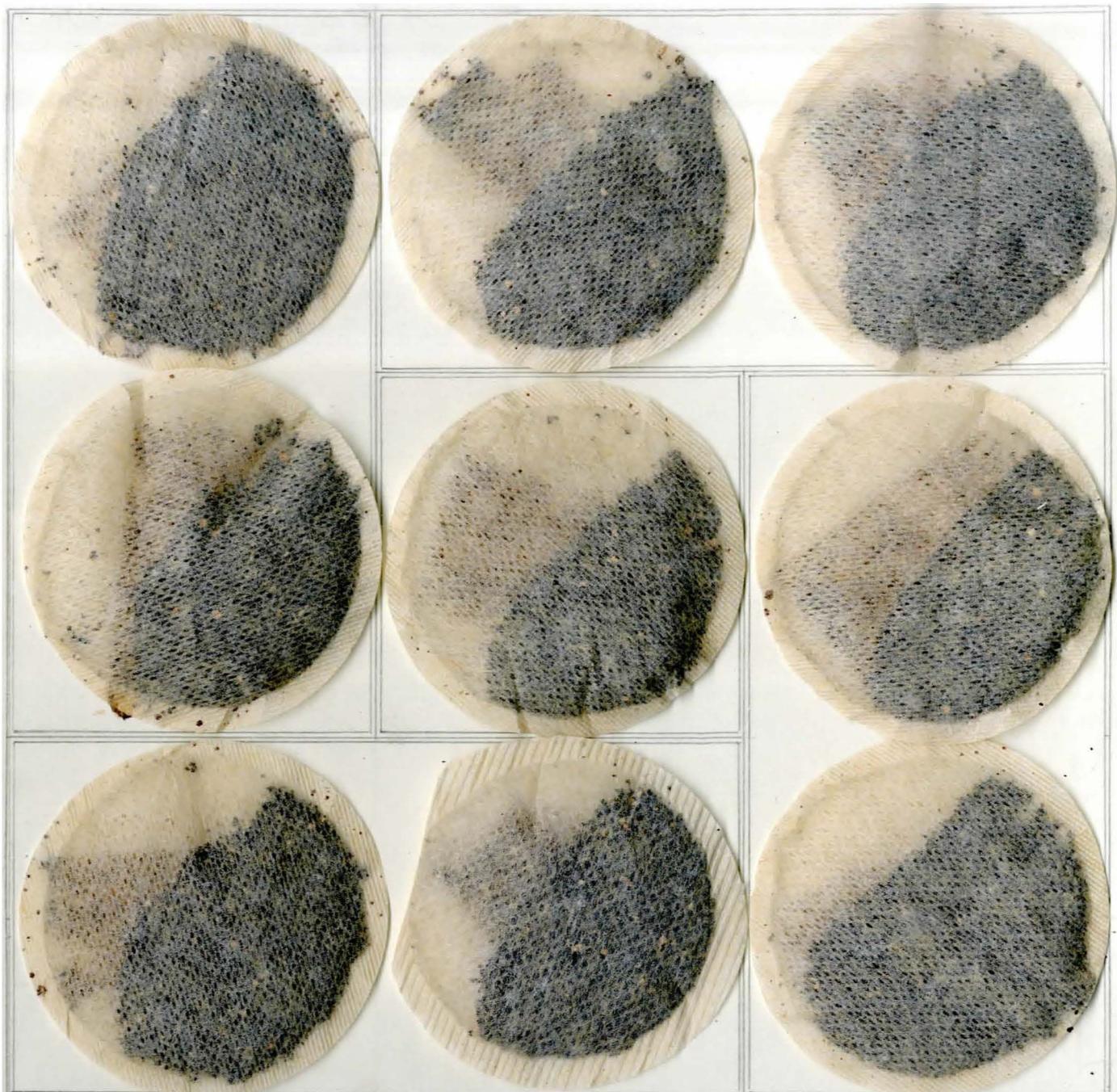
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# ***Rituals Transforming Cultures: Cultures Transforming Rituals***

Tea Importers' Headquarters + Interactive Tea Museum  
Fort Point Channel - Boston, Massachusetts



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When two separate elements are combined together they create something new, but the elements continue to retain their original independent memory. The chemical states of sugar and water allow them to become something new by the sugar dissolving in the water. When one adds an object that will not dissolve such as a tea leaf, the water does not resist it, instead it blends cohesively with the water to create a beverage, tea. The leaf does not dissolve, but the water has become transformed through a process of change of color as well as taste. In order for two entities to work together, they have to have other proponents of support. A ritual is a state or condition characterized by the presence of established procedure or routine. Rituals occur because there is an entity of support to fulfill this concept. Different cultures create rituals to make them unique to their own traditions. Rituals transform over time and by culture, yet in the end, these changes become unique and build upon the original established ritual. I contend that rituals have the ability to activate, to illustrate, and to generate an architecture of place making and an environment that allows the individual to fully understand a history and process through a narrative experience.

The British colonized America, and they transformed land into new settlements and communities. This transformation is most prevalent in the city of Boston, Massachusetts. In colonial America, Boston grew as a port city and a capital where the majority of trade was conducted in the Harbor. This trade became important for the growth of Boston due to influences from England as well as the Far East. Boston grew economically as well as politically. This made the city more vulnerable to impositions from the mother country of England. Due to the political nature of Boston and its taxable impositions from England, it became a center for change that eventually led to the American Revolution. The last string to initiate this Revolution of change was the Boston Tea Party. The Boston Tea Party was an event that enforced the morals of the newly established community over the older established ideals. This cultural transformation provided the colonists to declare their

community as an independent culture from their original founding culture, therefore creating a new established nation, The United States of America.

Four thousand, five hundred years prior to this cultural transformation of a newly independent nation, another cultural phenomenon occurred in China. The Second Emperor of China, Shen Nung known as the Divine Healer was sitting under a tree while his servant boiled drinking water. A leaf from the tree dropped into the water and Shen Nung tried the brew. The tree was a wild tea tree. This transformation of two elements spread across Eastern cultures from Japan to India to reach Western cultures, Europe and America, which directly influenced this cultural appeal for an independent nation. The history of tea has been transformed and has been culturally and politically challenged throughout tea's history.

Throughout tea's history, rituals have developed from strictly obeying principle in Japanese tea ceremonies to loosely interpreting principles of tea in drinking a bottle of iced tea in America. Locating a program to explore the historic, cultural, and political connotations of Boston, in its Inner Harbor, tea can be culturally transformed through a process of an interactive museum in conjunction with the headquarters for a tea importing company, which will explore cultural and ritual issues of tea. This exploration will further enhance these transformations of cultures and rituals that exist with the ever changing life of tea.

# Transformation

Transformation is the act of change. Transformations can occur in an infinite range of scale and levels. Some of those scales can include the urban environment as well as human awareness. Transformation is often described in terms of time, speed, and motion. It implies the state of before and after.

## Transformation of the urban environment:

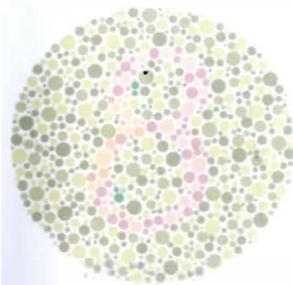
Bilbao, Spain a port and industrial city in the northern Basque country was not in most people's vocabulary until a few years ago when architect Frank Gehry transformed the city. He transformed the city from an industrial port to an architectural Mecca with his Guggenheim Museum. The museum put Bilbao on the map and art and architectural critics flocked to see this museum. Due to the popularity of this museum, the city has transformed with a new subway system designed by Sir Norman Foster as well as a new International Airport designed by Santiago Calatrava. Due to this Bilbao effect, star architects along the river where the Guggenheim is located have built other structures. Some of those projects include a footbridge by Santiago Calatrava, a hotel by Ricardo Legorreta, a commercial center by Robert Stern, and a tower by Cesar Pelli. Architecture can transform its environment at different scales and can positively or negatively affect the existing conditions or even the city as a whole as it did in Bilbao.

## Transformation of human awareness:

Sensory perception is an awareness of change in a person's environment. These changes can be smell, vision, taste, sound, and touch. This transformation affects the individual. Touching a scalding object sends a nerve for a reaction in the brain to respond with a sudden jolt. A change in smell in one's environment can make one comfortable or uncomfortable. One's vision can change through levels of transparency. Sensory perceptions allow individuals to experiencing a space

## Transformation of tea:

Tea is a continuous process of transformation. The tea leaf is a growing plant and when it is plucked it has been transformed. It is then withered and dried in order to transform itself into the beverage. When the tea is thus combined with water, it unfurls and becomes alive again releasing its flavors, aromas, and natural enzymes in water to become the beverage. The transformation of tea into a beverage is a sensory experience. The smell of the leaves from blended to natural as well as the taste of a hot beverage can transform an individual. Tea transforms itself in response to water. Tea is a metaphor for transformation.



Transformation plates are used for anomalous color observers (color blinded individuals), and they are meant to give different responses to normal color observers. The transformation plate above is seen as an 8 by people with normal color vision and as a 3 by those with anomalous red/green color perception.

## Transformation of architecture:

Transformation can be employed in architecture ways to influence the design process. One way is through manipulation of the ground plane. When the ground plane has been transformed the circulation changes as a result. Transforming the ground plane for vertical circulation allows one to experience more of a space rather than the normal horizon view. Moveable walls and panels can transform a space making for flexible space design. The result of this transformation can be the creation of dynamic spaces. Transformations big or small have a kinetic quality. Understanding transformation is important because it recognizes that we are in constant flux, while architecture is generally considered permanent.

## Process

A process is a sequence or a cycle. A cyclical process is a series of events or sequences. Other processes are linear and there is an end, but it can be repeated again in a sequence.

### Cyclical process

The process of wine making is a cyclical process. Wine making happens year after year, season after season all around the world. Cultures have adapted its-step-by-step sequence to produce different variations, but because they are made using comparable processes, all may be designated as wine. Wines differ in taste depending on the grapes, their vinification, their age, and also where the grapes are grown. The winemaker's art owes much to viticultural knowledge and expertise. These skills allow the viticultural strength of an area to create the optimum quality wine at the optimum cost.

### Linear process

The legislative process is a linear process. The way a bill becomes a law is as follows: the bill is introduced, it goes through committee hearings, then to floor debate, and if passed it goes to the other house, and if it is passed it then goes to the President, and if signed, it becomes a law. A linear process has a clear beginning and an end.

### Architectural process

In architecture, process can be through sequence or procession of space. An architectural process can be designed as a path of discovery. Architecture can utilize cyclical or linear processes in its design conception. Process in architecture develops a sequence that the individual encounters and interacts with to solve the problem or solution of experiencing the space.

### Tea process

Understanding tea is a learning and educational process. Having the knowledge of the art of tea will engage the individual in appreciating and respecting the tradition and ritual of tea. In order to understand and respond to this learning process, it is necessary for a clear understanding of what is displayed or taught, which will help enable a visitor with a greater appreciation of tea and its process.

Linear processes are easier to understand or retain, but creating interesting or dynamic ways to learn a process can even help with retention. There are processes that must be adhered to and followed, but there are also processes that can be dynamic and take their own form. These more viable and dynamic processes usually end up having interesting results. These results can form new ideas and encourage a dialogue. Having two processes working side by side, one that is strict and the other dynamic, can engage space. This engagement could blend together both processes to produce a third. This can only happen through the engagement of an individual because it is they who have an influence of controlling the process.



Recycling is an environmental process known through the logo above as reduce, reuse, and recycle. Recycling is a cyclical process that extracts useful materials from a product to reuse again as in the illustration above recycling cardboard cartons.

## Place Making

Place making is defining a space or setting where one feels most comfortable within an environment that they can make it his or her own space



This is an illustration for the cover of the book, *The Place I Know*. The book is in memory of the September 11th tragedy, and it was compiled to offer hope and comfort to children who witnessed the event firsthand, but also speaks to all people, young and old, who suffer trauma. This book is about one finding their place

### Place making through the home

The place where most people feel safe and comfortable is in their home. Shelter is the most basic form of architecture. The home acts as a shelter. It provides a space for an individual to partake in all of their daily rituals of life that include, eating, sleeping, and living. The home is a protective fortress for individuals. It contains memories as well as the entire life of the individual

### Place making through architecture

Making a place in architecture can be accomplished by recognizing that something is missing and thus creating a space that can be used and appreciated. Place making can be for the individual or for a community, but it is the role of that individual or group to define the place's limits and boundaries. The boundaries can be organized architecturally loosely or strictly. Strict boundaries could be a room with walls where looser boundaries could be a space within the natural environment with no markings or delineations, only the horizon and sky.

## Culture

Culture is a sense of identity in relation to an individual or a group. That individual or group has a pride in their identity, which is established through traditions and history.

Cultures establish ideas and identities as a group of individuals recognizing their unique characteristics and finding ways to learn and teach others about the differences and similarities that exist between them and others. Many cultures exist together, but each group distinguishes themselves from another cultural group. Distinctions can be made through programs or through events that are culture specific, yet always welcoming and inviting others who are not of that culture. A cultural space allows a group to organize, interact and meet socially to discuss issues that affect their culture as well as daily cultural events. These interactions illustrate the pride and tradition and history that each culture has established over time.



This illustration teaches the value and strength of diversity in the world. It depicts people of different cultures, races, genders, religions or creeds to join together as one diverse cultural group.

## Tea Origins

The timeline of tea has been transformed and has been culturally and politically challenged throughout its history. Some challenge the story of Shen Nung, and they call it a myth and understand tea's history differently. Indian and Japanese Buddhists who give a nod to Bodhi Dharma, the devout Buddhist priest who founded Zen Buddhism, made this challenge. They say that during the fifth year of a seven-year sleepless contemplation of Buddha he began to feel drowsy, so he cut off his eyelids to thwart his enemy sleep, and when his eyelids hit the ground, tea plants sprang up in their place. He plucked a few leaves from a nearby bush and chewed them, which dispelled his tiredness. Thus the tea timeline varies throughout each culture but there are major points in its history that transforms the tea when it becomes part of a new culture. Different cultures adapt differently to their uses of tea, and tea's intended uses are transformed to meet the needs of that culture.

## Tea's Historic Timeline

In the year 400, the demand for tea rose steadily. Rather than harvesting leaves from wild trees, farmers began to develop ways to cultivate tea. Tea was commonly made into roasted cakes, which were then pounded into small pieces and placed in a china pot. After adding boiling water, onion, spices, ginger or orange were introduced to produce many regional variations. In the year 618, during the Tang Dynasty in China, powdered tea became the fashion of the time and China's national drink with tea referred to as Ch'a. In 780, the Chinese Poet Lu Yu wrote the first book of tea, making him a living saint, patronized by the Emperor himself. In 960 under the Sung Dynasty, tea was used widely, as well as, beautiful ceramic tea accessories were made during this time.

In 1101, Chinese Emperor Hui Tsung wrote about the ways to make whisked tea. He was a strong patron of the tea industry, and he had tournaments in which members of the court identified different types of tea. Legend has it that he became so obsessed with tea that he hardly noticed the Mongols who overthrew his empire. During his reign, teahouses were built in natural settings, which were important because tea is picked from the fields and hills of China and it is a product that should be enjoyed in its natural setting. In 1191, Eisai Myoan, the monk who brought Zen Buddhism to Japan, returned from a trip to China with tea seeds, which he planted on the grounds of his temple near Kyoto, Japan. Eisai experimented with different ways to brew tea, finally adopting the Chinese whisked tea. Tea was culturally transformed from China to Japan. The Japanese now had tea that they could use, which they developed in their history. This can also be marked as a political change due to the effects of the Japanese adopting the Chinese culture's way of preparing tea for drinking. Instead of coming up with their own brewing methods, they adopted another culture's ways. Japan thus developed their own ways, so their history of tea transforms into a state of independence.



Emperor Hui Tsung and his tournaments of tea

In 1368, during the Ming Dynasty, a new method of preparation was developed, which was steeping whole leaves in water. The white and off white tea-ware produced for this method became the style of the time. The first Yixing pots were made at this time. Thus in 1422, the Japanese adopted their ways of preparing tea. A Zen priest named Murata Shuko, who had devoted his life to tea, created the Japanese tea ceremony. The ceremony was called "Cha No Yu," which means "hot water for tea." Shuko united tea and described the way of tea as the spirit of tea and Zen becoming one. The four aspects of his ceremony were peace, respect, purity, and tranquility. He started the way of tea in Japan and defined tea as not a game or an art, but as a taste that refreshes and purifies and gives enlightenment to the universal law.

In 1515, trade with the Far East was established by the Portuguese opening up sea routes to China. Jesuit priests traveling on the ships brought the tea drinking habit back to Portugal while the sailors encouraged Dutch merchants to enter the trade, and in 1637, the British East India Company reached China establishing themselves in the port of Amoy. As a result, this initiated another transformation. Tea was now exposed to European cultures. Tea began to make its move literally from the Far East to the West. Tea has been noted as the most constant congenial reminder of the West's debt to the East.

Tea reached England in 1657 at Garway's Coffee House in London. Coffee houses were hubs of business and trade news, and patronized entirely by men. As coffee houses were places of sobriety and moderation, they were known as locales for discussions about literature, politics and art. The East India Company operated out of several sites in London, and under the terms of a charter granted by Elizabeth I, The East India Company owned all trading rights and controlled the sale of imported goods back to Britain. By 1669, close to 150 pounds of tea were shipped to England. Until 1669, most of the tea drunk in Britain was bought from the Dutch.

While tea was infiltrating ports in the West, it was beginning to be found in cultures to the North of China. In 1661, tea was drunk in Taiwan and in 1689, traders with three hundred camels traveled 11,000 miles to China and back in order to supply Russia's demand. The trip took sixteen months. In 1680, Madame de la Sabliere, wife of the French poet, introduced France to the custom of drinking tea with milk. The custom was to pour the milk into the cup of hot tea to cool the tea slightly, making it less capable to break the eggshell porcelain teacups used for drinking tea. This again illustrates this change in culture from the use of ceramic teapots and cups to porcelain tea cups used in the Western cultures.

In 1705, the yearly importation of tea to England grew to approximately 800,000 pounds, while five years later; the wealthy American Colonists developed a taste for tea. In the mid 18th century, tea began to be imported into the British colonies in America. As mentioned earlier, England began to impose taxes on imported goods, and tea was one of those goods. The colonists rejected these taxes and showed their animosity towards Britain with the Boston Tea Party in December 1773, which is commonly viewed as a first step towards the Revolutionary War for Independence.

In the early 19th century, The East India Company enjoyed its monopoly for two and a half centuries, and they established experimental tea plantations in Assam, India, and three years later a small amount of Indian tea sent to England was eagerly consumed due to its

novelty. In 1840, America took control of their efforts to import tea by building Clipper ships to speed-up the transport of tea to America from Europe. Some ships could make the trip from Hong Kong to London in ninety-five days. The pace of importing tea paralleled the pace of planting and cultivating the tea in India. The tea trade was becoming a fiercely competitive and powerful industry. In 1856, tea was planted in many areas of Darjeeling and tea plantations were started in Ceylon. In 1869, the Suez Canal opened, making the trip to China shorter and more economical by steamship.

Tea became more commercially available through the establishment of tea companies in Britain by the late nineteenth century that blended, branded, and packaged tea giving the public a wide variety of choices. Tea began to make its Western mark in America by the creation of iced tea at the 1904 St. Louis World Fair. Also at the same time Dr. Charles Shepard was experimentally growing tea in South Carolina. In 1908, the tea bag was invented by Thomas Sullivan, who sent tea to clients in silk bags, which they began to mistakenly steep without opening.

The shift of tea's importance from the East to the West moved southward to Africa in 1910, where tea was grown in Kenya and other parts of Africa. Fifteen years after the introduction of tea to Africa, the country passed the million-pound mark in tea shipments. Tea was almost an infection spreading rapidly throughout the world. The host was China, but it spread to four continents initiating the process of tea from cultivation to consumption in a period of 1900 years. Therefore, tea had an importance in the history of trade and the world as well as an effect of political and cultural transformations and engagements of different countries. The major players in this are the countries of Asia, China and Japan, England, and the United States. This cultural dialogue has always been present, but the issue of tea and its organic nature has strengthened and influenced this exchange.



The players involved in the world tea trade that began in 2737 BC. The red line illustrates the path tea took from China to America.

## Ritual + Tea

*Lu Yu, an ancient tea master insists the importance of ritual when one drinks tea.*

*“Ritual is decisively important. It’s another way of celebrating another act of living. Water must be boiled so it goes through stages, tea must be tested and tasted before it is selected for steeping. There are 9 stages through which tea must pass during manufacture and 7 during brewing. There are 24 implements and each must be used each time. When tea is plucked, where water is chosen, who is invited to share the tea are of enormous importance. It is unthinkable that a guest should fail to appear, and if missing, the quality of tea must atone.”*

“Rituals denote a particular classes of formal solemn and repetitious events, but can be viewed as physical behaviors that integrate a cultures' higher order of cognitive models with the daily lives of its members” (Anderson, 10). Individuals or groups practice rituals to confirm or to transform their perceptions of universal order and this has important implications for understating tea ritual. During the performance of a tea ceremony it is enhanced through an awareness of interweaving of personalities, artifacts, and ideas in the way of tea. The Chinese practiced three different kinds of tea ritual: secular, offertory, and communal rites. The Japanese used tea ritual as a cultural system of symbols. According to Anderson, the Japanese were concerned with transforming, temporally or permanently, some 'significant ill' that is seen to be part of the cosmological order of human life.

Murata Shuko, a priest, created the first truly original tea ritual, an inspired synthesis of Chinese temples, tea, and Zen. He taught four values that were central to tea practice: *kin*, reverence, *kei*, respect, *sei*, purity, and *jaku*, tranquility. *Kin* is a type of reverence that has aspects of sincerity and modesty to it. *Kei* is said to have been inspired by Zen monks that were encouraged to feel for their food. *Sei*, a Japanese idea described as a physical and spiritual purity appropriate for those who approach sacred precincts, and *jaku*, a Buddhist term, an inner tranquility that transcends individual desires. Shuko also developed the four and one-half tatami mat teahouse and the hanging of Zen calligraphy as major elements to a tea ceremony.

When people practice ritual, they participate in a special dialogue concerned with abstract, higher order concepts, such as time, space, and human values. A distinctive feature of this practice is its quality of being set aside from everyday life. A ritual never occurs completely spontaneously. There is always some precedent to be considered. “The more the complexity of the ritual, the less frequently it is conducted; the broader its sphere of action, the more difficult it is to understand and a greater need for expert assistance in learning an interpretation” (Anderson, 90). The need for human choices becomes critical when an aspect of the ritual's environment changes. If a ritual form is to survive the challenges of cultural transformations, one must be capable with sufficient authority and knowledge of the ritual to actively supervise the adaptation process. The tea ceremony thus acts as a cultural and ritual transformation in Japan's history of tea.

## Place Making + Tea

The environment in which tea is celebrated and enjoyed is essential. In order to appreciate tea to its fullest, the Japanese designed a special room to celebrate this ritual. This tea hut made the ritual even more special because it had its own place. The tea hut is a small space organized around four and half tatami mats. Tatami mats are the organizing principle for the room. The mat is three feet by six feet and creates a square where the center is half a mat. This central square is cut out for a hearth to boil the water for the tea. To enter the room, one uses the *nijirigushi* a very small sliding door, supposedly inspired by the hatch on a river boat. The materials of the tea room employed rough-textured walls and ceramics, and used a considerable amount of bamboo to enhance the intimate atmosphere of the tearoom. Skylights allow light to infuse the tea gatherings giving a feeling of tranquility.

The tea room consists of an anteroom (*midsuya*) where tea utensils are washed and arranged before being brought to a portico (*machiai*) where the guests wait until they receive summons to enter the tea room and a garden path (*roji*), connects the *machiai* with the tea-room. A tea room is small but its materials used in its construction are intended to give the suggestion of refined poverty. A tea room is made for a tea master rather than a tea master made for the tea room. Tea schools and learning the art of tea and process of becoming a tea-master is a long and strenuous process. A tea master might learn and practice the art of tea for ten years before becoming a certified tea master. The tea room was simply built to suit an individual as a place to enjoy the taste of tea.

## Culture and Transformation + Tea

As tea has transformed over time, its original issues have been culturally transformed. These transformations are due to the culture that it is developed or used in. The five cultures that will be analyzed are: China, Japan, Korea, England, and America. These cultures have accepted tea, but have taken their own stance on the beverage and the way it responds to rituals as well as to the environment of the culture. These transformations of tea have changed contrary from its original uses. Its original uses were respected and practiced in ceremonies. These ceremonies were ritualistic as well as cultural. As tea was exposed to other cultures, they adapted their own rituals of tea and have made it less important from its original rituals. The cultural view of tea in Japan is of putting it on a pedestal and respecting the beverage and the process. Tea is an integral part of Japanese culture. Tea is a cultural identity that distinguishes Japan from the West. The American cultural view of tea is an easy-ready-to-drink beverage that forgets the process or respect of tradition. Americans classify tea as a similar beverage to carbonated sodas and juices. Tea to Americans is a flavored, colored water. The whole process of cultivating the leaves and then respecting them and bowing to the tea has been lost through these cultural transformations. What has been lost is tea as a continuous process of transformation. The tea leaf is a growing plant and when it is plucked it has been transformed. It is then withered and dried in order to transform itself into the beverage. When the tea is combined with water, it unfurls and becomes a living organism again letting out its flavor and natural enzymes in water to become the beverage. It has a rejuvenation or rebirth.

The Far East cultures developed ceremonies through the use of tea. The ritual of the ceremony is similar; but different for each culture. The Japanese have the most strict rituals with tea where Korea is more about being part of nature and one with tea rather than tea controlling situations as in Japan. Thus, the cultural transformations of the ritual of tea will be observed and understood by the way each culture uses tea through their own adapted ceremony.

## China

The Chinese are the founders of tea. In regions where teas are enjoyed in a traditional manner, customized teapots and cups are used. This applies not only for oolong tea, but also for all Chinese teas. The following is the typical Chinese tea ceremony.

Step 1: Before tea leaves are placed within a pot, pour hot water over the pot and cups so that they are warmed in a hot bath.

Step 2: Or, alternatively, fill the teapot with hot water then pour more hot water into teacups to warm.

Step 3: Use more tea leaves than you would for Japanese tea. Pour the hot water to the top of the pot. It is important to remove bubbles from the surface of the tea with the cover of the pot. Covering the pot will also prevent loss of aroma.

Step 4: Again, pour hot water over the teapot to maintain the proper temperature.

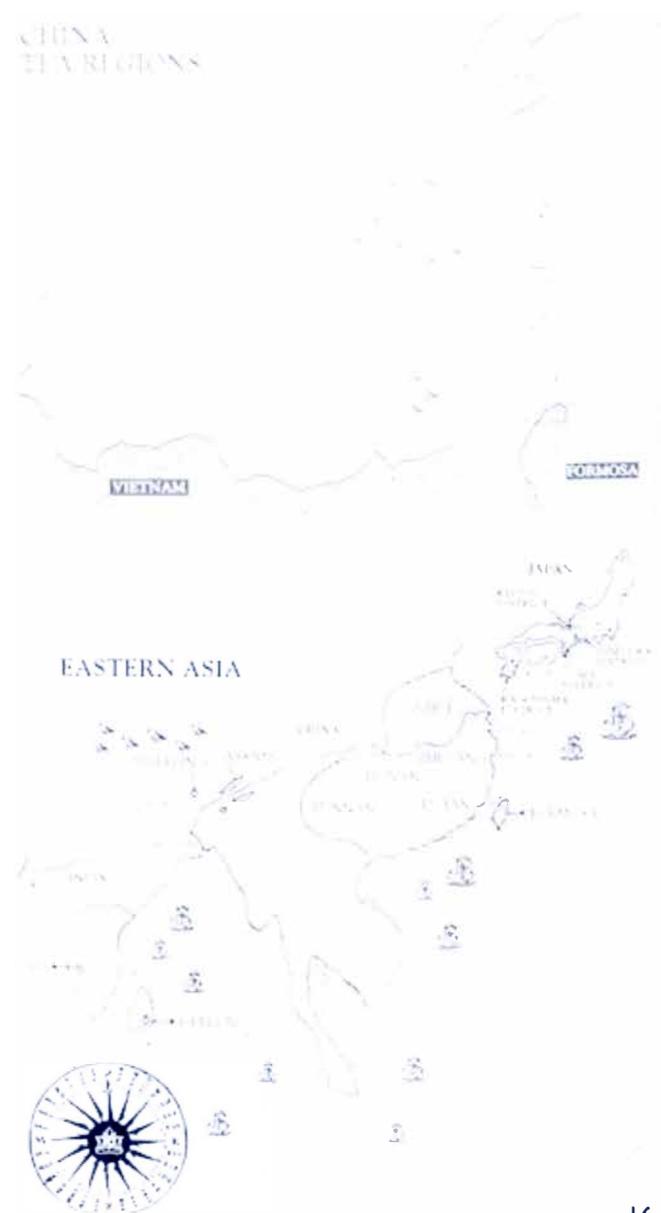
Step 5: When the surface of the teapot is dry, the tea will be ready to drink. Discard water from the teacups then pour tea equally (quantity and strength) amongst the cups.

## Japan

The Japanese adopted the use of tea, but made their ceremonies strict. They incorporated architecture with the ceremony that takes place in a tea hut. The following is the way a Japanese tea ceremony occurs:

The tea cups and pot must be cured before they are used. Allowing them to soak in the tea does this. The oils from the tea leaves will seal tiny pores in the clay wares. Always be prompt for the ceremony. Upon arrival, the host will accommodate their guests with slippers or clean socks, and on the way to the chashitsu (tea room), the guests will find a tsukubai (stone wash basin) where they must purify their hands and mouths.

To enter the chashitsu, the guests must humble themselves by crouching to enter the thirty-six inch high door. This represents equality of man despite social position. The guests must observe





The guests are seated directly across from the host



The first guest bows as he receives the tray of sweets.



The guest comes to the host for a bowl of tea.



He thanks the host while the second guest drinks.

and compliment the host on the kakemono (scroll painting), which contains Buddhist scripture called bokuseki (ink traces). Guests should also view the simple flower arrangements as well as the host's display of utensils.

The host will first offer sweets to their guests by saying "Okashi wo douzo otorimawashi kudasai" ("Please take the sweet"). At this point, the guests pass around the bowl of sweets, or kashiki, to the remainder of the party. The host will then serve the guests their tea, and each guest will personally thank the host as their cup is filled. Guests should slightly turn their teacup in order to avoid drinking from the front of the cup. Guests should always empty their tea cup and clear the plate if a meal is being served. The optional meal consists of three courses.

The first course, called hashirai (rinsing the chopsticks), is cooked white rice with a miso soup and either fish or vegetables. The second course is nimono (food simmered in broth), served in covered lacquer dishes. Yakimono (grilled foods) are the third course. They are served in individual portions on ceramic plates. The palate is cleared with kosuimono (clear broth) so that the guests are able to taste the tea.

Just before departure, the host prepares usa cha (thin tea). This symbolizes a return to the physical world after a spiritual ceremony. Smoking articles are offered to the guests, but smoking is generally prohibited in the tearoom. After a few days, the guests should send a note of thanks to the host. This is called the korei or "thanking afterwards." This in-depth process illustrates the special ceremony of tea that is performed in the Japanese culture.

## Korea

The Korean have adopted a different tea ceremony. They use the ideas of the Japanese and Chinese but their ceremony is more individual. They set up a list of preparations before performing the ceremony so the individual or group are in the mindset for the ceremony. Those preparations are

1. Keep surrounding area neat and clean at all times
2. Prepare a calm and peaceful mind and spirit
3. Silence is essential
4. Slowly burn a lightly scented incense to create a peaceful atmosphere

After these preparations are made, then the step-by-step process of the tea ceremony occurs:

Step 1: Open lid and put approximately one teaspoon or 2-3 grams of tea leaves into the strainer. Pour 3/4 cup of hot water into the teacup and cover the lid. Gently twirl teacup and discard initial tea water.

Step 2: Take strainer out of teacup and pour a 1/2 cup of hot water into the teacup. Cool down hot water to proper temperature.

Step 3: Put strainer with tea leaves into cup and pour additional hot water to fill 3/4 of cup. Cover lid and steep for one minute.

Step 4: Open the lid and allow the tea water to drip naturally into teacup by gently moving the strainer side to side (never shake the strainer).

Step 5: Take in the fragrance of the tea while drinking slowly.

Step 6: Repeat steps 2 through 5 four more times. Steeping time should vary: steeping time for second cup should be 30 seconds; third cup should be one minute, and fourth and fifth cups should be one and a half minutes each.



Step 1



Step 2



Step 3



Step 4



Step 5



Step 6



1. Teacups - Three to five.
2. Teapot - Used to make green tea, but not served from.
3. Lipped small bowl - Used to cool down hot water and for serving tea.
4. Large bowl - To discard water used for warming pot and cups.
5. Wooden coasters
6. Bamboo scoop
7. Small tea towel
8. Tea mat - Placed under teaset.

## England

As tea moved to the West, the entire tea ceremony idea transformed. Instead of having the opportunity to be one with tea, it developed into a social process that did not consider ceremony. Tea became a commercial event.

The English had their step-by-step process to brew tea, but tea was mainly served in the afternoon in a formal way with silver platters and porcelain cups. The entire one with nature was left in the East, and the new methods of "tea time" were developed in England and spread eventually to the United States. The following is the British step-by-step way "to make the perfect pot of tea."

Step 1: Always use good quality tea.

Step 2: Always use freshly drawn water. Note: Water that has already boiled will have lost oxygen and will produce a flat or lifeless brew.

Step 3: Warm the pot with a little of the hot water.

Step 4: Use one teaspoon of tea per person and one for the pot or if using bags just one tea bag per person and not for the pot. Note: Always separate the bags so they have room to infuse the water. If you like stronger or weaker tea add more or less to taste rather than "steeping" the tea for longer.

Step 5: Pour boiling water into the teapot and leave for two to six minutes to draw out all the flavor of the tea.

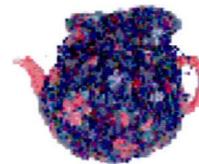
Step 6: Stir the pot and pour, remembering to use a strainer for loose teas. Add milk or lemon and sugar to taste.



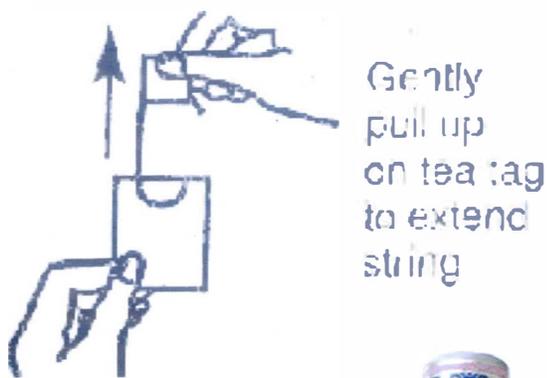
Porcelain tea set used in English Afternoon tea. This modern tea set includes two tea cups with saucers, a creamer and sugar container and the tea pot.



A silver tea set used in English Afternoon tea for more formal teas. This set also has a creamer and sugar container. Notice the change in shape of the teapot from China to England.



A tea cozy used to keep the teapot warm and insulated. Made of fabric they come in different patterns as well as colors.



Gently  
pull up  
on tea bag  
to extend  
string



The transformation over time of tea. Americans use the tea bag with the string attached to brew their hot tea. More Americans prefer iced tea which can come in colorful bottles and are usually artificially sweetened.

## America

It is unfortunate, but as tea moved further west, the entire ideas and concepts of the tea ceremony and brewing process was forgotten. Americans turned the tea from a symbolic object into a pop culture product. Tea in America is mostly consumed from bottled beverages or as iced tea. There are Americans who enjoy tea, but Lipton, the largest American tea company which refer to themselves as "the experts" have their own suggestions and steps for brewing tea or having the American-style tea ceremony:

1. For the best brew, brew by the clock, not by the color. Three to five minutes is recommended for most tea.
2. Quick! Cover the cup. Whenever possible, use the saucer to retain the heat. You'll taste the difference.
3. What's in your water? Since water is so important to making tea, the type of water you use makes a big difference. Using purified or bottled water could improve the flavor of your tea.
4. Should you squeeze? Absolutely! Tea leaves will absorb up to seven times their weight in water. So give a gentle squeeze to your tea bag to get every drop of flavor.
5. Tea won't improve with age, but it does have a long shelf life. For best results, store teabags and loose leaf tea in an airtight container.
6. Most experts recommend using milk instead of cream in your tea because cream hides the full flavor.

Thus tea has seen its cultural transformation. It has become such a cultural phenomenon from its inception. It is an important beverage throughout the world, but it is disheartening to see how cultures transform the role of tea from its original conception.



Tea grown in the hills of Sri Lanka.

## Process + Tea

Tea as a process is important. The process of pouring boiling water over tea leaves ends the complex tedious process of tea cultivation and manufacture. The tea plant called *Camellia Sinesis* is a flowering evergreen shrub. It is most prolific in a humid climate and must be grown at an elevation of 5,000 ft above sea level, where the extremity of the climate is traded for extremity of altitude. The coolness of the elevation allows the plant to grow more slowly, producing a richer, more complex leaf. Pruning of the tea plant is important, because if it is left to grow it can grow to a height of thirty feet. Tea bushes are kept at a height of one-tenth their natural height. The leaves are elliptical in shape with a dark green color and smooth leathery texture and are one to twelve inches in length. The best tea is from the tiny unopened buds.

All tea comes from the same plant, but the conditions in which it is grown is what creates the different types of tea. Those conditions range from the country in which it grows in to when and how it is plucked. Once tea is plucked, it moves into the stage of manufacturing. This stage is what creates the three tea classifications – black, or fermented tea, green, or unfermented tea, and oolong, or semi-fermented tea. These three types are created through differences in exposing the tea leaves to varying degrees of evaporation, twisting, oxidation, and heat.

### Cultivation

The harvest of tea is when the unopened buds from the tea bush are plucked. Plucking is a skilled and intricate task that has been traditionally done by women. An even pluck is important and the tea leaves must be the same size so that when they are manufactured they dry uniformly. There are three types of plucks: normal, fine, and coarse depending on the number of leaves taken from the bush and how long the flush is permitted to grow between rounds of plucking. Normal plucking consists of two leaves producing an average tea, fine plucking consists of fewer leaves than normal are plucked producing superior quality tea. Coarse plucking includes an extra leaf and produces poor tea. Plucking time varies from country to country according to flushing periods. In warmer climates, near the equator, tea is plucked every seven to eight days. South India produces the finest tea in December and January. In Sri Lanka (Ceylon), tea comes from the February, March, August, and September pluckings. In North India, China, Japan, and Taiwan, the growing season is from April to late autumn and there are only four to five flushes. The quality of tea decreases with each successive flush.



A woman plucking the tea with the typical basket supported by her head to throw the leaves into.



Rows of women cultivating the tea in the hills of Sri Lanka.



Sacks of the plucked tea brought to the plantation for transportation to the tea factories.



A truck filled with the tea in sacks ready to unload at the factory where the tea undergoes the physical and chemical changes to produce black, green, or oolong teas.

## Manufacturing

The tea of commerce has to be transformed. Once the tea is plucked it is transported to a factory by oxen, donkey, truck, or the heads of laborers. The processes of tea manufacture that includes inducing physical and chemical changes in the leaf produce the three types of tea. These three types of tea undergo the fermentation process, which oxidizes the leaves and changes their chemistry. In green tea, fermentation is prevented so that the constituents of the natural leaf are conserved. In oolong tea, partial fermentation results in the development of an essential oil. Black tea, which is fully fermented, has the highest concentration of essential oil and least resembles the natural leaf. Once the tea passes this stage, it is dried in order to preserve the character of the leaf. Drying is done by "withering" and "rolling" and "firing" depending on the type of tea being made. Rolling imparts the characteristic twist to each type of tea. This twist is the rate at which tea will infuse once it is brewed. The manufacturing process establishes the character of the tea and shapes the leaf and provides a code for the attributes of that type of tea whether black, green, or oolong.

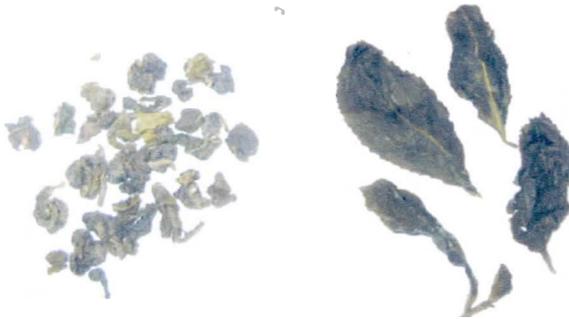
The manufacturing of tea has been a cultural process that had an established ritual by early tea masters. The entire manufacturing process was done by hand, but this process has transformed with the emergence of electronic equipment.



Black tea in its dry state (left) and then wet state after being brewed in hot water.



Green tea Jasmine pearls in its dry state (left) and then wet state after being brewed in hot water. The transformation from spherical to the two leaves and small bud is fascinating.



Oolong tea in its dry state (left) and then wet state after being brewed in hot water. This type of oolong is one of the largest tea leaves.

## Black Tea

Black tea comes predominately from China and India. The world's most popular black teas come from Assam, the region of northeastern India. The steps in black tea manufacture are withering, rolling, roll breaking, fermentation, and firing. During the withering process much of the moisture content of the tea leaves evaporates. The leaves are spread thinly and evenly on racks of stretched cloth or wire mesh where they remain for eighteen to twenty-four hours. Rolling is bruising and crushing the tea leaves in order to break up the plant's cells and release the enzymes inside that provide the tea's flavor. The rolling process takes from one to three hours. The tea is put onto a brass table that rotates the tea under pressure. During this process oxidation occurs and the essential oil of the tea is created along with the characteristic twist. Fermentation is the next process where the leaves develop their chemistry of the finished tea. Spreading the tea on a cement, glass, or tile floor for several hours until they turn a bright copper color does this. The oxidation during this process is responsible for the flavor, strength, body, and color of the black tea. After this step, the tea is fired, exposed to a blast of hot, dry air stopping the oxidation process. Once all the leaves move through the drier, they are mixed together and then classified by their grade. This thus is the black tea process.

## Green Tea

Green tea is mainly produced in China and Japan. Green tea is unfermented so it is not withered so instead it undergoes three processes to prevent it from fermenting like black tea. Those processes that preserve and concentrate the brew are: steaming, rolling, and firing. The leaves are steamed to aid in rolling and to prevent fermentation by inactivating enzymes. The leaves are rolled and then dried through the firing process until they are crisp. This repetition of rolling helps hold in the juices, which gives the flavor to the green tea. After the firing the leaves retain their green color and then they are graded according to the age and style of the leaf.

## Oolong Tea

Oolong tea is the combination of the two processes of manufacture of the black and green tea due to the partial fermentation. It is slightly withered, fermented, fired, rolled, and then re-fired, and then packaged. Most oolong tea comes from Taiwan and China.

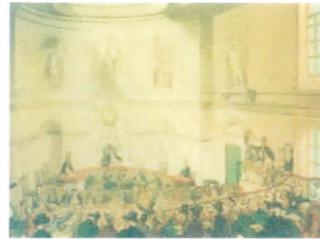
## Packing and Shipping

The final step of the tea process is packing and shipping. Tea is packed in tea chests. These chests hold up to 80-130 pounds of tea. The chests are made of plywood and lined with aluminum foil to keep moisture out. Tea chests move by rail or truck to the port where they are shipped by boat. World tea production totals to 2.1 billion pounds annually. India and Sri Lanka produce about half of this total. The rest of the tea comes from China, Indonesia, East Africa, Taiwan, Japan, and smaller amounts from Turkey, Argentina, and Brazil.

The tea is then shipped from tea-shipping centers in the producing countries. At these centers there are public auctions where buyers have to be familiar with the districts where each tea comes from, manufacturing techniques used, characteristics of each tea, how they will relate to other teas when blended, and the exact price they are willing to pay. These buyers bid and are able to test for purity and quality. There are also public auctions in three European cities: Hamburg, Amsterdam, and London. Due to the high rate of consumption of tea in Great Britain, they set the world price of tea. Tea coming into the non-producing tea countries such as the United States, Canada, South Africa, and Australia purchase directly from the producing country or at an auction. Tea is thus then marketed in each country and bought by the consumer and then brewed. The process is an interesting transformation of leaf to brew as well as transformation of time. This product has been a cultural phenomenon for over 4,000 years and continues to revolutionize and change the way cultures appreciate it.



A typical tea chest that holds 5kg of tea (left). The chest is constructed of an interior wooden frame. An interior shot of the tea chest. Notice the aluminum foil lining at the opening as well as the tea at the bottom.



An image of the London Tea Auction. The auctions were held weekly with standing-room only in the cavernous amphitheater on Mincing Lane, known as the Street of Tea. The London auctions would take up two or three days.



A typical port city where tea would be loaded into the containers and then shipped around the world. Large ports include Hamburg, Germany; Rotterdam, The Netherlands; London, and New York.

## Colonial America

In 1603, The Virginia Company, a joint-stock enterprise under the royal charter, founded Jamestown and 27 years later, Puritan settlers of the Massachusetts Bay Company arrived in 1630, led by Governor John Winthrop founding a small community on a small peninsula across the Charles River, Boston. Other settlement groups had been trying to setup colonies on the harsh Atlantic coast for one or two generations. The Dutch were not organized to setup a well-administered settlement, even though trade was their prime objective. The Dutch setup New Amsterdam on Manhattan Island, which lacked governmental or public buildings.

Colonial architecture developed in each of the new settlements. Each colony had their distinctive individuality. The forms were based on late medieval vernacular of the homeland, but took on different forms in the North and the South depending on the origin of the colonists and local conditions.

In Colonial America, public meetings and gatherings were quite common. The new colonies were setup by a small group and the colonists met together to discuss the future of the settlements. It was a gathering where the community came together to discuss improvements with the intent of starting an urban society. A public space was necessary for these gatherings. This archetype was called the meetinghouse. It was the only public building in the town; the meetinghouse is similar to a Muslim mosque serving multiple functions. It was a church, school, and forum, social and cultural center. The meetinghouse form was a simple square volume with a peaked roof with a belfry. The interior organization was a gallery with a pulpit and box pews and a moveable communion table. This building derived its form from the Protestant traditions of Europe. The architecture was similar to the domestic architecture that was being formed in the colonies with the use of clapboard frame. The important design of this building was that it was non-directional and a square building. Religion was important to the colonies, but having a secular building was important for exercising Puritan theocracy.

## Colonial Township Organization

The original intent of the colonies was creating townships. A township was composed of a small covenanted group and its farmland with an aim of being self-sufficient. The economy was undifferentiated. Each township existed under a commission of God looking to establishing a utopian Christian commonwealth. The leader of the township was the chosen minister and the physical symbol of the covenant was the meetinghouse. The land of the township was organized with a central common and the meetinghouse and the colonists built their homes around the common. The land was divided according to merit and the contribution to the initial expenses of the township. The meetinghouse was also organized in this fashion with the pews being organized by rank with sitting

closer to the pupil. The town was thus this nuclear village organized around a common green or more formally with a geometric frame. This organizational process of the newly established colonial communities continue this long history of process and place making through established histories of cultures.

## Colonial Boston

There were two types of settlements: the township and the port run by the merchant class. Boston was successful with becoming the port of colonial America and London's main connection. Boston was established on a small hilly peninsula that the local Indians referred to it as Shawmut, meaning "Living Waters." Boston was setup by Governor John Winthrop. Winthrop had an understanding of God's divine purposes for the colony. He thought of Boston as "a city set on a hill" with the church being the center of life during the early years of the city. He believed in a new form of government bringing about a Golden Age that other nations of the World would copy, but he warned that "The eyes of all people are upon us, so that if we deal falsely with our God in this work we have undertaken and so cause us to withdraw His present help from us, we shall be made a story and a byword through the world." Governor Winthrop's goals of distinguishing Boston from the other colonies were successful with the implications of an ironworks mill and endowing Harvard College, in the nearby village of Cambridge.



Map of Boston in 1722



A view of Boston in 1768.

The Shawmut Peninsula was connected to the Roxbury mainland by a narrow neck on the south. The original center of Boston rose on three-humped ridges but only one remains today, Beacon Hill. The center was where a main road leading westward from the harbor joined the road leading inland. At this intersection was the meetinghouse in front of the marketplace, Faneuil Hall. Along with the construction of public space, commercial space was being constructed on the waterfront. Merchant owners making the harbor "fittest for such as can Trade into England were building wharves into the harbor" (Kostof, X). The town was expanding westward and a piece of land, 45 acres was designated as the Common, Boston Common as we know today, the oldest park in America. Boston at this point became "the Metropolis of this Colony or rather the whole country." The north end of the peninsula had grown into its own independent district with its own meetinghouse and crowded spine connecting to the waterfront with its warehouses, ropewalks, and shipyards. Row houses and buildings facing the streets along with public buildings having residential characteristics was the architecture of early Boston. The ironworks factory was a multiple-gabled house. The townhouse was similar in design with wooden porches that supported the overhanging upper storey. The ground floor was open to shops for the merchants with the General Court holding meetings above. This organization of space was similar to the European model of the Middle Ages of the town hall.

In 1692, Massachusetts was re-chartered as Royal Providence with its governors not being elected, but being sent from England by royal appointment. As Boston grew as a port city and capital, so did its economy and building. Larger houses were being built on the

South end where the original small row houses remained in the North End where the merchants and artisans resided. The town center became more elegant, remade with brick due to the Fire of 1711. The new Georgian town house holding the provincial government faced east toward the harbor that extended to the water with the Long Wharf, a long extension lined with shops and warehouses, the gateway to America. This gateway is where large ships unloaded and loaded their cargo, taking colonial goods back to England and bringing back fashion, officials and troops. In the mid-18th century, Boston's skyline grew with cupolas and towers.

### Old South Meeting House

The main Puritan meetinghouse was known as The Old South Meeting House. It was built in 1729 as a Congregational Church; the congregation included famous colonists such as statesman Benjamin Franklin and patriot leader Samuel Adams. Old South was the largest building in colonial Boston and when attendance at town meeting grew too large for Faneuil Hall, Old South served as the meeting site. Colonists gathered at this public space to challenge British rule. Old South became known in colonial history with two important events that changed the course of this New England capitol. The first was on March 5, 1770, when colonists resented against the British troops sent to Boston to maintain order and to enforce the Townsend Acts. The troops were tormented by gangs, which led them to fire into a rioting crowd killing five men. This event became known as the Boston Massacre. Thousands of outraged colonists descended upon Old South to protest this event. Samuel Adams led the meeting and obtained Governor Hutchinson's promise to withdraw British troops from Boston. This event led to pre-revolutionary uneasiness in Boston.

### The Boston Tea Party

Old South's place in history is marked by the date of December 16, 1773, when more than 5,000 colonists crowded into Old South to participate in a fiery debate about the tax on tea imposed by the mother country of England. England began to import tea into the colonies because its market in London was unable to absorb the abundant supply imported from the Far East. The 13 colonies thus became the best tea market in addition to England; 3 million inhabitants used 3,000 chests annually. Boston and Charleston consumed one chest each day. The East India Company that was importing tea from England had competition from the Dutch importers who were bringing tea from Holland and smuggled in by Dutch traders. Thus England set a tax on its tea along with other goods such as glass, lead, painter's colors, and paper. This jeopardized the American tea market and led to strained relations between England and the colonies especially when British Parliament passed the Stamp Act in 1765 and the Townshend Acts of 1767. The colonists began to rebel and refuse to import or use the taxed commodities. England responded with repealing the taxes on goods except tea in an effort to calm down rebellious colonists. The colonists still refused to import the tea and denied themselves of their favorite stimulus, which they used twice a day and was a household necessity.



The Boston Massacre of 1770



The colonists disguised as Indians throw the taxed tea from the East India Company overboard into Boston's Harbor.

Smuggling occurred through the Dutch imports of tea and the East India Company's tea chests remained unopened. England and the East India Company were both losing money due to the boycott of tea by the colonists. The East India Company petitioned Parliament for the right to export tea to the colonies directly rather than going through England, this would then remove the tax of a shilling per pound and lower it to a three-pence entrance duty to the ports. This measure was designed to benefit the Colonists as well as the East India Company removing England's tax to meet the price of the smuggled tea from the Dutch.

Even though the East India Company tried to resolve this conflict, the colonists stayed strong to their beliefs led by Sam Adams. They declared a resolution that the tea tax was enacted without the consent of the colonists and that anyone involved with unloading and the selling of tea was an enemy to the new country. Shopkeepers were warned not to handle or sell tea or they would be public enemies. They distributed anti-tea literature labeled as "badge of slavery" with the East India Company branded as "political bombardiers demolishing the fair structure of liberty and an enemy of the country." This political uneasiness led to women voting to refrain from the use of tea and the Sons of Liberty, a group of 300 or more Bostonians meeting to discuss this topic of liberty while the Dartmouth, a tea ship was arriving in Boston Harbor with 114 chests of tea. This meeting took place in the Old South Meetinghouse. At this second important event at this location the Sons of Liberty declared:

"Friends, brethren, countrymen-That worst of plagues, the detested tea shipped for this port by the East India Company is now arrived in the harbor. The hour of destruction, or manly opposition to the machinations of tyranny stares you in the face. Every friend to his country, to himself, and posterity, is called upon to meet at Faneuil Hall at nine o'clock. THIS DAY, at which time the bells will ring, to make a united and successful resistance to last worst and destructive measure of administration."

On that same evening the 16 of December 1773, a group of 60-80 copper-faced Indians traveled down Milk Street and Hutchinson Street towards Griffin's Wharf. They took over the Dartmouth and by the time it was over they threw over 342 chests of tea valued at 18,000 pounds. Bostonians thus decided by this act the relative virtues of tea and independence. This event sent rapid news throughout the colonies of this upheaval of tea. Tea ships that were heading for the other port cities in Philadelphia and New York turned around or left port so the same event would not occur twice. This historical event won a moral victory and had driven the East India Company and its English sources out of the colonial market. The Boston Tea Party, rose above mere mob action and is explained in John Adam's diary written the day after:

"This is the most magnificent Movement of all. There is a Dignity, a Majesty, a Sublimity, in the last Effort of the Patriots, that I greatly admire. The people should never rise, without doing something to be remembered-something notable and striking. This Destruction of the Tea is so bold, so daring, so firm, intrepid, and inflexible, and it must have so important Consequences and so lasting that I can't but consider it as an Epocha in History."

## The Tea Party's Implications

Thus, the American Revolution started in Boston. In 1774, the British closed Boston Harbor. The architectural building was at a standstill. With Britain's defeat and the establishment of the United States of America in 1776, a flourishing period developed for architecture. The Government was the biggest client. With the new national identity and pride that the United States invested in themselves with material symbols of their independence led for a search for a permanent home for the government. In 1793, Washington was named the seat of the government with the building of monuments and memorials, schools, commercial exchanges, and public facilities.

Thus the formation of a "more perfect union" was established and the United States flourished due to historical precedents, especially the turning point of the United States with the Boston Tea Party. This event in the colonies showcased how important tea was to the mother country of England as well as to the new British Colonies in the New world. The establishments of the colonies allowed for



The landmass evolution of the city of Boston from 1630 - 1995. This illustrates the change in shoreline over a 365-year period. The change is due to the filling in the tidal flats that once surrounded Boston.

### Boston Today

Boston has expanded its landmass more than a 100% since 1640. Boston is one of the nation's top cities and its history makes it an important city today. The city is not a large port city anymore due to the ports moving to New York and Newark, New Jersey. Boston lost its prominence as port because of its shallowness in depth and its failure to compete successfully with New York. The Port of Boston has transformed from a working waterfront of ships, wharves, and warehouses into the stylish neighborhood of today, a place of residential, cultural, and recreational uses.

Boston grew as a city from 1640 as a small land mass on the Shawmut Peninsula to today where half the city is built upon landfills. In the early 17<sup>th</sup> century, hills of the city were cut down, to make them easier to build on and to supply landfill to extend to the city's perimeter. After the American Revolution, Boston grew in prosperity and aspired a more urbane character. The basis of the economy was trade with Europe, the West Indies, and the Orient making Boston a cosmopolitan place. Boston achieved its goal of urbanity by two analogies: building regarded as a person, and city regarded as a building. The new city plan was based on the European model. Boston thus became a loose system of outdoor rooms and Beacon Hill was cut down to fill in South Cove.

After the Civil War, 1880-1900, became the time of building public Boston. Boston had great railroad transportation, public works



(parks and waterworks), cultural institutions (library, symphony, museums), and Commonwealth Avenue. The new South End and Back Bay was created thickening the "neck" of Boston. Boston became a capitalist city of pride, money, and growth during the Gilded Age. New styles of architecture like the Beaux Arts style allowed architects to work with a diverse palette of shapes and colors. The Great Fire of 1872 created opportunities to build and to add inventions like the steel frame and elevator urging the city's buildings to grow in height.

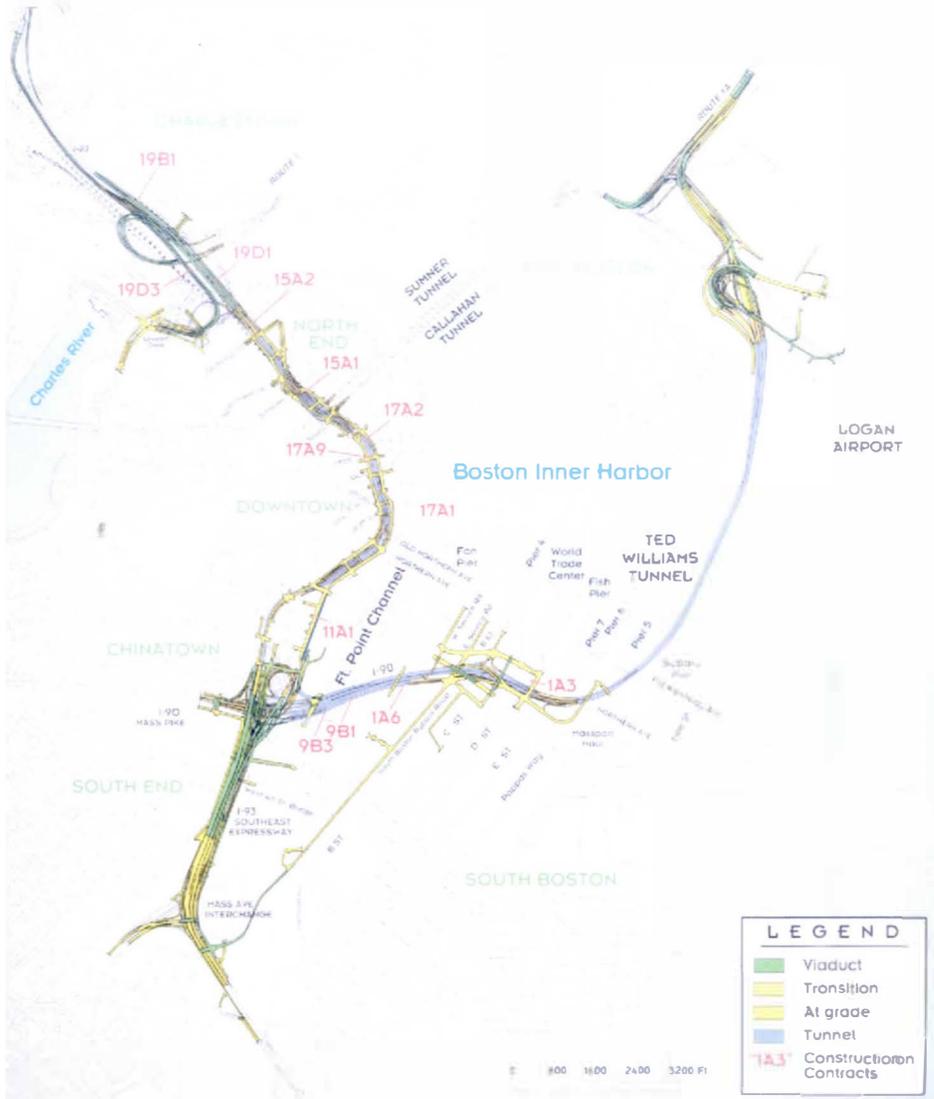
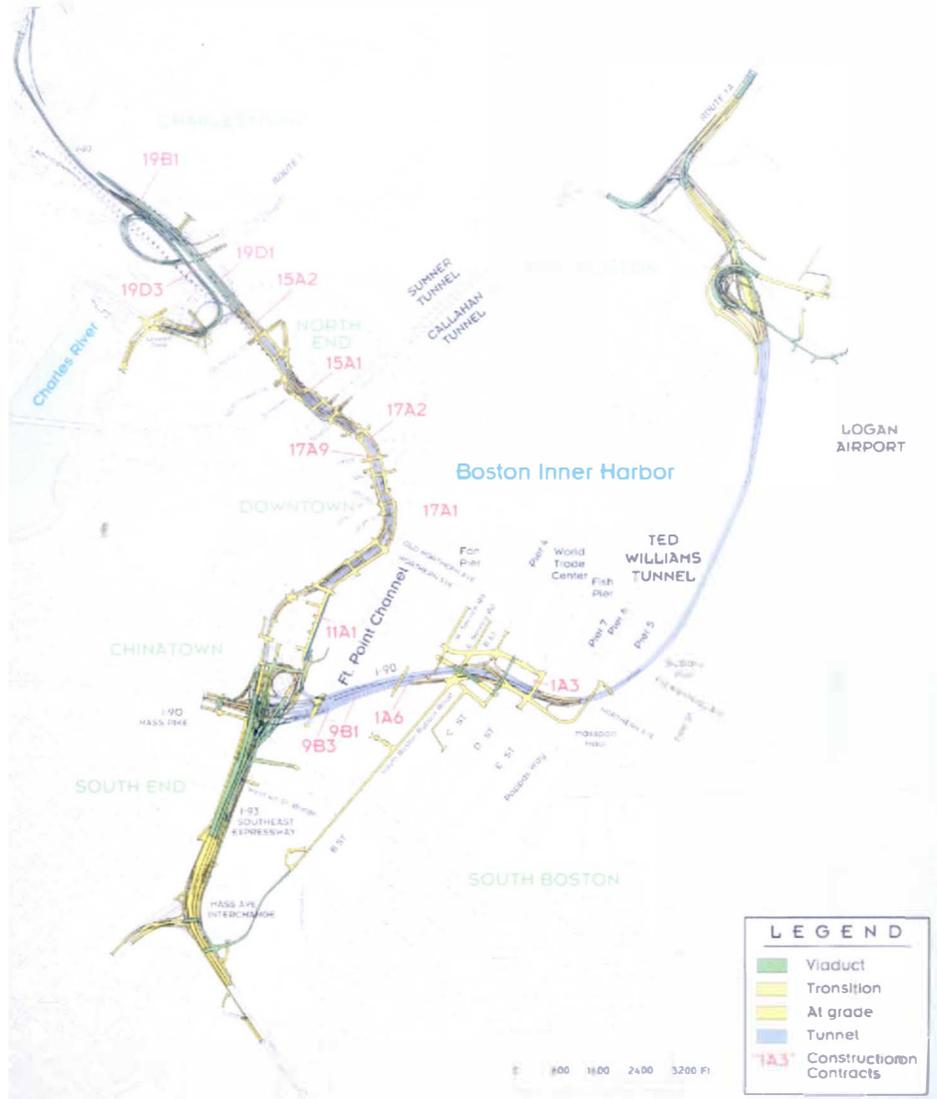
At the end of the 19<sup>th</sup> century, Boston became flooded with refugees from Ireland, Italy, and Eastern Europe. Theatre flourished during this time along with baseball introducing multiple cultures into this city, which was becoming a melting pot of cultures. From the mid 19<sup>th</sup> century and on, different neighborhoods and satellite downtowns developed creating suburbs. The streetcar changed the city as well as the commuter train and then finally the car. Also during this time there was major physical growth with the new Logan Airport in Boston Harbor.

In the 1950's the city center was being separated from the waterfront due to the central artery. A half century later, it was decided to put the artery that was a barrier in the city underground creating a public park and connecting the downtown to the waterfront. All of the land from this underground project has been dedicated to add more mass to Boston with a new island called Spectacle Island.



The landmass of Boston circa 1985





### Downtown Organization

Zooming into the scale of the Downtown of Boston, there are two bodies that are organizational pieces for the city. These two pieces are the Central Artery and the Fort Point Channel, part of Boston's Harbor. Both of these elements of the city act as edges to the proposed site for this thesis.

### The Big Dig – CA/T

The Big Dig is the largest and most complex highway construction project ever undertaken in the history of the United States. The cost is at \$15 billion dollars. The Big Dig will create state-of-the-art tunnels and bridges, reclaiming wasteland for parkland, and providing the last piece of the U.S. Interstate Highway System that was begun in 1950. The Big Dig is officially called Boston's Central Artery/Tunnel Project, with the abbreviation CA/T. The project is reconstructing the "Green Monster", Boston's elevated highway that runs through the heart of the city. It is referred to a monster due to it rusting, being dangerous, and that it bisects the city from the waterfront. The CA/T will be an underground tunnel that will move traffic through Boston quickly and efficiently. When the highway is relocated below ground it will be replaced by a series of open spaces for public use and redevelopment of the parcels that are created. These parcels will be connected at a smaller scale by a Surface Artery roadway. The reorganization of traffic circulation patterns along the new streets and sidewalks changes the context of site and restoration of surface above, which will transform urban design and the open space context of Boston. The current Central Artery acts as a wall subdividing the downtown financial district and the Waterfront and Wharf district. The new parks and urban developments will help tie the city together bringing downtown to the water. Each area of land has been designated a parcel number as part of the CA/T project.



## Fort Point Channel

The Fort Point Channel consisted of mudflats that extended from high ground on either side to a central tidal drainage channel. Boston was dependent on waterborne commerce and required better access from the shoreline. Since the early 1700's, Fort Point Channel was a thriving maritime waterway handling any type of vessel engaged in world commerce. The Channel was reduced in size with the expansion of Boston in the 1800's. Bridges were built spanning the Channel that also was a hindrance for the navigation of vessels through this body of water. Also vessels required deeper water, which the Channel did not provide. Fill from different moments in the city's history was piled on mudflats and wharves were extended towards deeper water. The land along the Channel was filled in by the 1880's with debris from the Great Fire of 1872. The Channel was defined with a granite seawall to prevent run-off from clogging the Channel.

In 1900, the South Boston waterfront including the Fort Point Channel employed 50% of Boston's industrial workers. The Gillette Company opened along the Channel in South Boston in 1908. At this time the Channel was a major warehousing and distribution center for wool, ice, sugar and molasses, lumber, coal, bananas, and leather. The activity of the Channel as well as the Boston Waterfront has declined over the past 50 years rendering Boston's maritime industrial infrastructure obsolete. The warehousing and distribution businesses moved away from the area leaving vacant buildings. In the late 1970s the artist community flourished in the Fort Point Channel. At the same time the cultural and tourist related components added to a new dimension in the district. With the addition of the Children's Museum and Boston Tea Party Ship & Museum created an unusual urban enclave along the Channel where small businesses, residents, light manufacturing, offices, artists, and retailers co-existed.

The Fort Point Channel is currently undergoing a master planning stage with five objectives. Those objectives are:

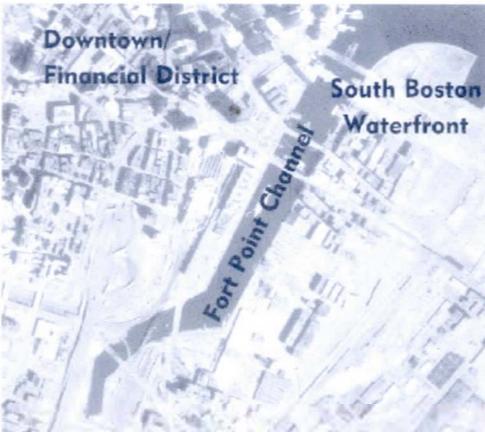
1. Promote Access to Boston Harbor as a Shared Natural Resource
2. Preserve and Enhance the Industrial Port
3. Plan the District as a Vital, Mixed-Use Area
4. Develop the District as an Integral Part of Boston's Economy
5. Enhance the South Boston Community



Fort Point Channel in 1870



Fort Point Channel in 1929 view of Congress Street Bridge and Russia Wharf with the smokestacks.



Fort Point Channel today with its relationships to the city districts of Boston.



Fort Point Channel in foreground with Boston in the background.



Diagram denoting the State Harbor line and the Federal Channel. The State Harbor Line defines the limit of any pier or major float structure from extending into the Channel that could interfere with navigation. Permanent structures can be extended beyond the Harbor Line. The Federal Channel prohibits any structures located within the designated area.

## South Station District Map

The space that exists between the two bodies of interest, the CAVT and the Fort Point Channel is called the South Station District. This district is organized into smaller sub-districts: historic properties and historic districts. These areas provide a diverse district architecturally as well as programmatically.

### Historic Properties

1. **Russia Wharf** is the proposed site of this thesis and is elaborated on page 39
2. **The South Station terminal** is a five-story semi-circular brick and granite structure built in 1896, which is Boston's only surviving historic rail terminal. The South Station was built in 1900 along with an electrical substation at 500 Atlantic Avenue, the adjacent site to the proposed site.
3. **The Congress Street Bridge** is a single-leaf bascule bridge built in 1930 to replace an 1875 drawbridge
4. **The Northern Avenue Bridge** connects Atlantic Avenue and Sleeper Street and is a pivotal-lift swing bridge that opened in 1908.
5. **The Richardson Block** has nine attached marble and brick commercial buildings with principal facades on Pearl Street, secondary facades are located on High and Purchase Streets. This block was designed as a unit and erected from 1873-1876 and is the only Neo-Greco style commercial block in the city.
6. **The United Shoe Machinery Corporation Building** is a 24-story Art Deco office building located in the Financial District and is among the city's finest and earliest skyscrapers.
7. **The Congress Street Fire Station** houses the Boston Fire Museum and was erected in 1891 of brick and granite in Romanesque and Panel brick styles.

### Historic Districts

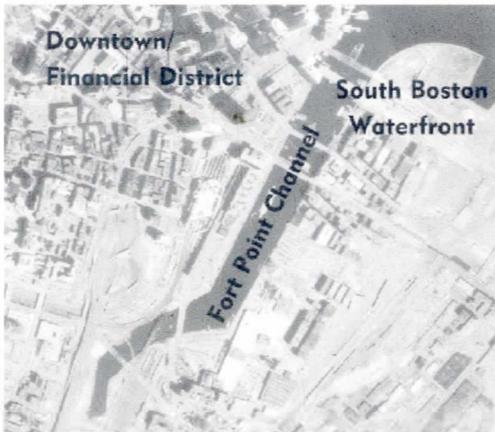
8. **The Leather District** is a nine-block area bounded by Atlantic Avenue, the Surface Artery, Kneeland Street, and Essex Street and contains 19<sup>th</sup> century brick warehouse buildings associated with Boston's once flourishing leather trades. Its large display windows on the ground floor and cast-iron columns characterize the Leather district. The buildings take off the Romanesque Revival design as well as Classical vocabulary at the turn of the century.
10. **The Commercial Palace Historic District** has four-six story commercial buildings dating from after the Great Fire and built in Italianate, Neo-Greco, and Panel Brick styles. This district includes Church Green, the historic name for the intersection of Bedford and Sumner Streets and a polygonal building that occupies the site.
11. **The Church Green Buildings Historic District** is the finest grouping of granite mercantile building of the post 1872 Fire period. This district was associated with the shoe and leather industries.
12. **The Textile District** is at the intersection of Essex and Kingston streets, and it is an ensemble of late 19<sup>th</sup> century, brick manufacturing and wholesale buildings associated with the textile trade.
13. **The Gridley Street Historic District** encompasses an intact group of late 19<sup>th</sup> and early 20<sup>th</sup> century commercial buildings.
14. **The Oliver/Purchase Street Historic District** is a small district of post 1872 fire structure.
15. **Chinatown** was built on landfill created from tidal flats in the early 1800s providing for housing for Boston's middle class population. It is home to the largest Asian community in a mix of residences and family owned and operated businesses. In the 1840s Chinese, Irish, Italian, Jewish, and Syrian immigrants moved to this area converting single-family homes to multiple unit tenements. Chinese and other Asian restaurants and specialty shops fill the ground floor levels of residential buildings. Similar to the Leather district, the buildings are very compact and there are no setbacks from



Fort Point Channel in 1870



Fort Point Channel in 1929 view of Congress Street Bridge and Russia Wharf with the smokestacks.



Fort Point Channel today with its relationships to the city districts of Boston.



Fort Point Channel in foreground with Boston in the background.



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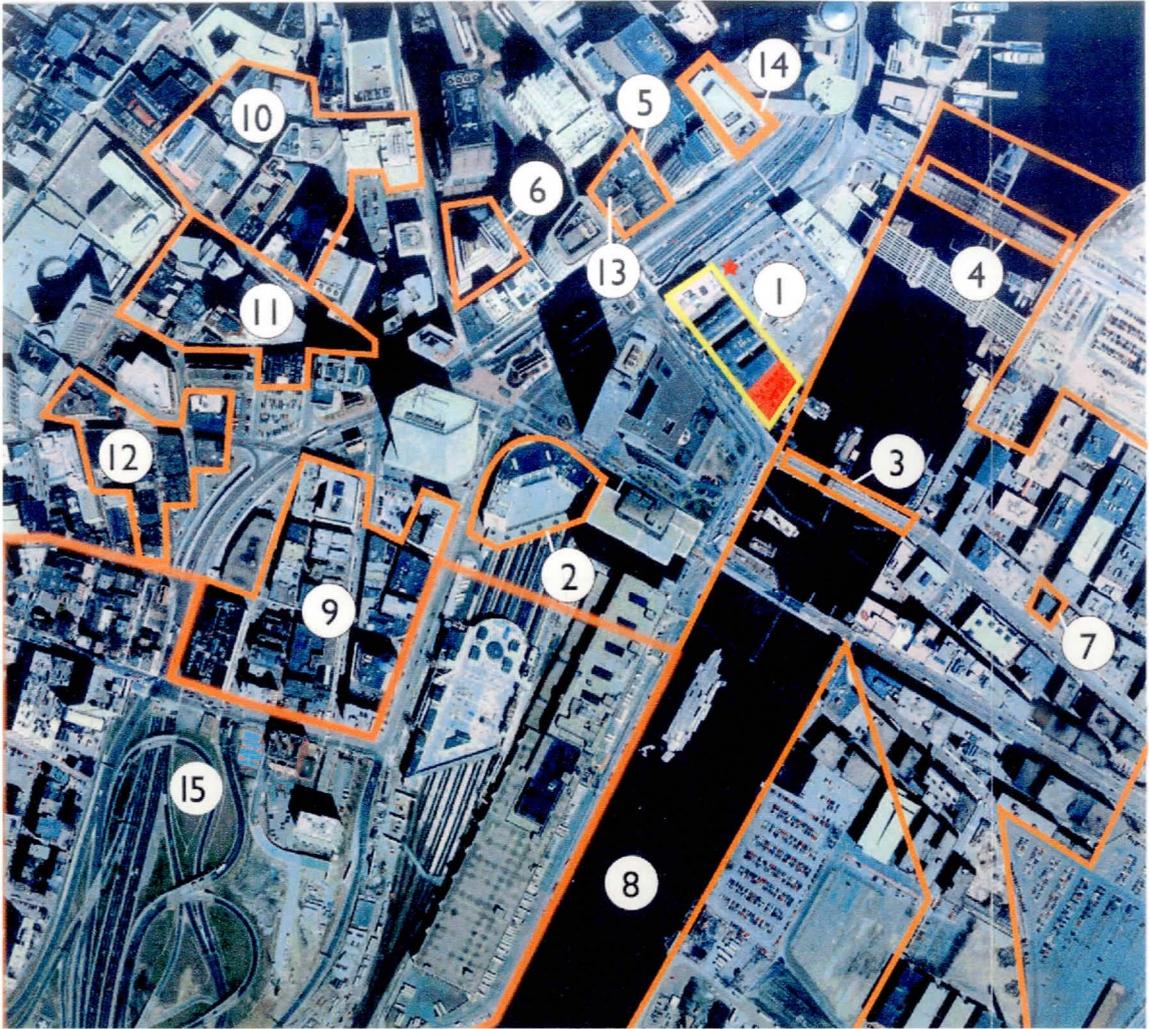
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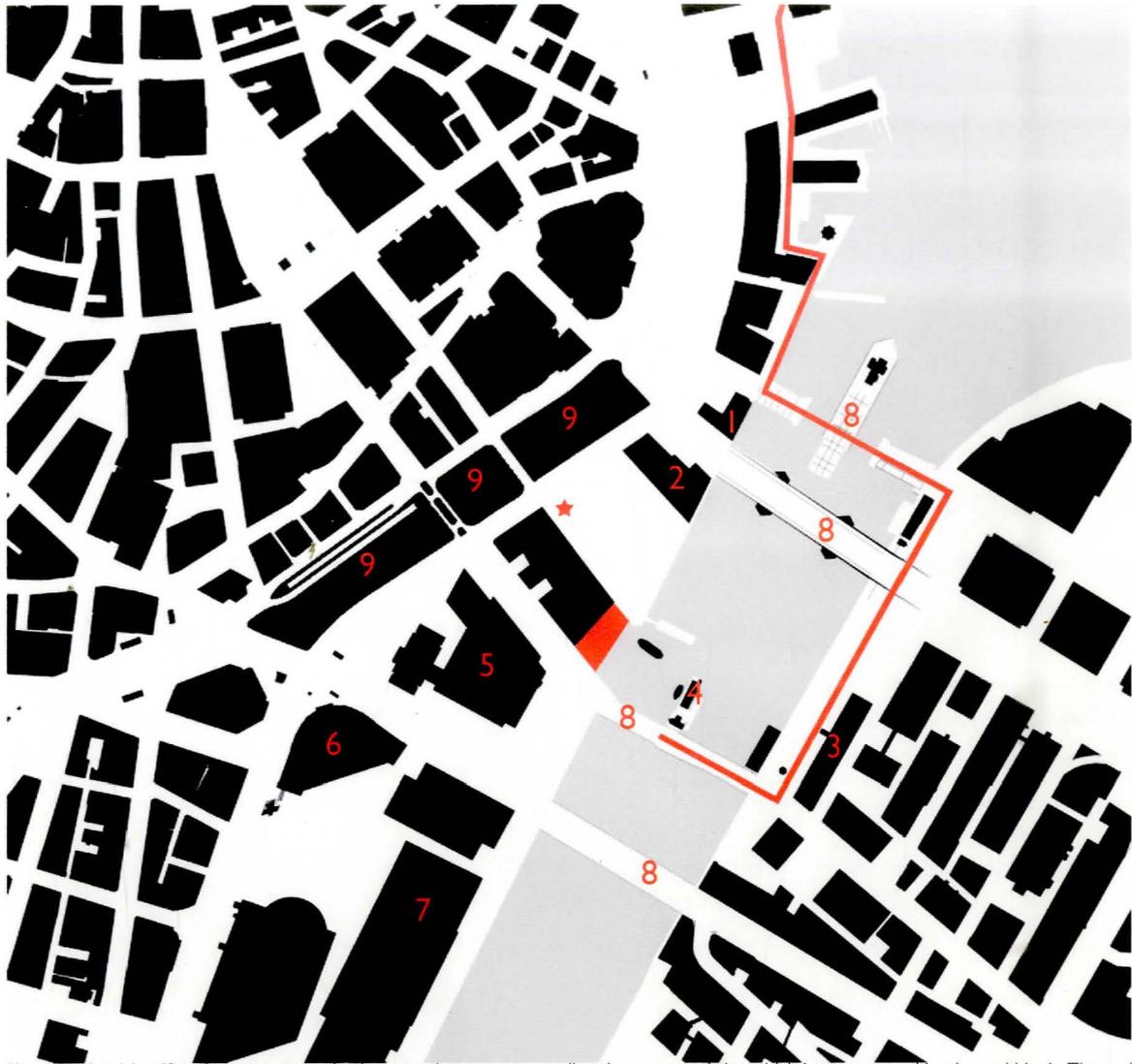


South Station District map with the historic properties and districts identified by numbers.  
The red block represents the site for the thesis.  
The red star represents the site of the Boston Tea Party in 1773.

## Boston's HarborWalk

The HarborWalk is Boston's goal to provide public access to the waterfront. The Boston Redevelopment Authority initiated it in 1980 when the city set a goal of creating a continuous 47-mile waterfront walkway along Boston Harbor. Boston works with private developers, property owners, and Harbor advocates improving waterfront sites. The HarborWalk is integrated into the design of new developments to create a continuous accessible open space around the waterfront. It can be connected to other pedestrian systems and can tie into views and connections to the downtown of Boston to bring this cut of district to the waterfront. The HarborWalk also includes lighting, signage, and urban furniture to enhance the public space around the Channel. The HarborWalk is continuous along the Fort Point Channel, and connects the major players of the proposed site. This walk ties these buildings and institutions together. In the documentation portion, there is a smaller HarborWalk for tourists, which is in the Site Analysis section. The following are the players that are adjacent to the proposed site and part of the HarborWalk.

1. **The James Hook Lobster Co.** is a fresh seafood wholesale and retail distributor located across from the 470 Atlantic Ave. office complex. The company is built on a pile-supported structure over flowed tidelands. The structure is water-dependent and is a unique part of the Fort Point Channel Area.
2. **Independence Wharf** also known as the 470 Atlantic Ave. office complex, is a fourteen-story building. About 50% of the building is on pilings. The building has a public space on the north side, which is termed the new Griffin's Wharf, which is connected to the city's HarborWalk. The building also has a public viewing platform on the roof of the complex.
3. **The Children's Museum** is an interactive museum where the Exhibits focus on early childhood development and have three themes: arts, culture, and science.
4. **The Boston Tea Party and Ship Museum** tells the story of "the event that changed the world forever." There are exhibits, films, and memorabilia and a full-size working replica of one of the three original tea ships where people can reenact the Tea Party by throwing over crates of tea. The museum is expanding its facilities and will add two vessels, a public viewing area, bathrooms, and a Tea Room to expand its visitor support facilities.
5. **The Federal Reserve Building** is a 600-foot high office building located on filled tidelands, which is south of the proposed site. The building is set back from all street edges making it an independent building within the field of the city. The Federal Reserve is planning a re-landscaping of its grounds, connecting to the HarborWalk, as well as, developing a 5,000 square foot Economy Museum, a public educational resource and destination attraction, that will be located on Congress Street, directly across from the proposed site.
6. **The South Station Intermodal Transportation Center** is the largest transportation center in the city. The hub includes southern and western commuter rail service, the Red Line, a bus terminal, and East Coast Amtrak service. With the construction of the new Silver Line Transitway, a 1.5-mile underground transit tunnel will provide a direct transit link from the South Station to the World Trade Center in the South Boston Piers area. The tunnel goes under Russia Wharf and 500 Atlantic Avenue to provide access across the Fort Point Channel. This transitway system offers improved public transportation to development sites on the South Boston waterfront and the Fort Point Channel.
7. **The United States Postal Service Annex** contains connecting buildings on 706,500 square feet of land. It is 96 feet high and almost 2,000 feet long. The facility is adjacent to South Station.
8. **Four bridges** span the Channel that represents early development of moveable bridge design. Three of the bridges are drawbridges: the Northern Avenue Bridge, which is a swing bridge, the Congress Street Bridge, and the Summer Street Bridge. The Evelyn Moakley Bridge is a fixed bridge that begins at Independence Wharf/470 Atlantic Avenue.
9. **Rose Kennedy Greenway** will be a new park space in the parcels 19, 21, and 22 of the Central Artery. The Massachusetts Horticultural Society will develop these parcels. The Horticultural Society's proposal is for a Garden Under Glass that would be a major urban year-round destination serving both recreation and educational purposes.



Site map that identifies the programmatic elements that are surrounding the proposed site which is represented by the red block. The red star represents the site of the Boston Tea Party in 1773. The red line marks the HarborWalk that exists in this area of the city.

## Russia Wharf

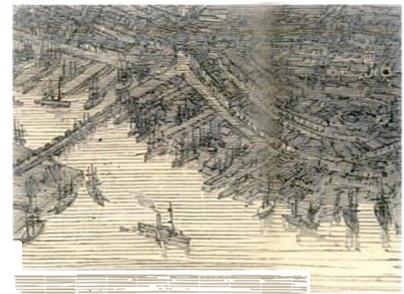
The Russia Wharf site has a 250-year history associated with the changing economic needs of Boston. The site was intended for the maritime-oriented community in colonial times. At the time of the Revolution, the wharf located closest to Russia Wharf today was Gray's Wharf. Thomas Russell bought it in 1784. Russell was a leader in Boston trade with Russia from 1793-1797. Vessels left Boston with New England fish destined for Lisbon. After a stop in Portugal, wine and fruit was carried to St. Petersburg, Russia. The ships returned to Boston loaded with hemp, iron, canvas, and cloth, raven duck, hide, goose quills, bristles and tallow. These Russian imports were critical to Boston shipbuilding industry. In 1800, the pier extended into the Fort Point Channel, which came to be known as Russia Wharf, and the trade link remained part of its function into the 19<sup>th</sup> Century. Structures that were constructed on Russia Wharf in the 19<sup>th</sup> Century supported mercantile trade and included warehouses, sheds, and ropewalks. The Great Boston Fire of 1872 destroyed the buildings at Russia Wharf. The City then filled Congress Street to extend it as well as the south edge of Russia Wharf. As the need for maritime wharves declined and a growing demand to accommodate modern commercial development, a grid of buildings and access alleys were designed for this area. The Boston Real Estate Trust Company constructed three buildings to house commercial and light manufacturing separated by two access courts. This complex was known as Russia Wharf. Russia Wharf consists of three buildings: the Russia Building, the Graphic Arts Building, and the Tufts Building.

**The Russia Building** was designed by Peabody and Stearns in Classical Revival Style in 1897. It is constructed of buff-colored brick and trimmed with granite and terra cotta. The building was built to house retail space at street level and office and light manufacturing above. The earliest tenants were office supply, publishing, and printing businesses, and currently the Russia Building houses architectural firms, consulting and management firms, and there is space for a retail ship model shop at the corner of Congress Street and Atlantic Avenue.

**The Graphic Arts Building** was designed by Randall & Taylor, Kendall & Steven in 1897. It is a red brick mercantile building with limestone accents, and the first two floors have cast iron storefronts and ornamental copper cornices. Built to house printers and a type foundry it was home to printing and publishing trades. The building is currently used now for office space with ground floor retail space. Steel and glass connectors were added to the west and east elevations to provide interior access between the three Russia Wharf buildings.

**The Tufts Building** was designed by Randall & Taylor, Kendall & Steven in 1897.

The 22 bay red brick mercantile building with limestone accents, cast iron storefronts, and ornamental copper cornices has brick that is browner than the Graphic Arts Building. Its original occupants were manufacturers of soda fountain apparatus including the Tufts Company. The open floor plan had spaces designed for manufacturing, design, and sales. Currently the spaces are used for a restaurant and an interior parking garage for 62 spaces as well as offices on the upper levels.



1870 View of Russia Wharf



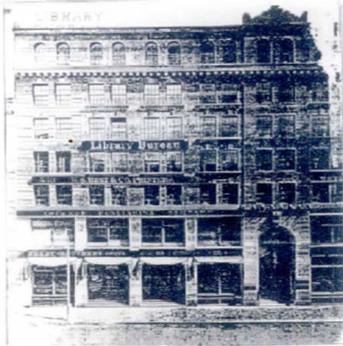
1880 View of Russia Wharf



1905 View of Russia Wharf



1920 View of Russia Wharf



Russia Building ca. 1918



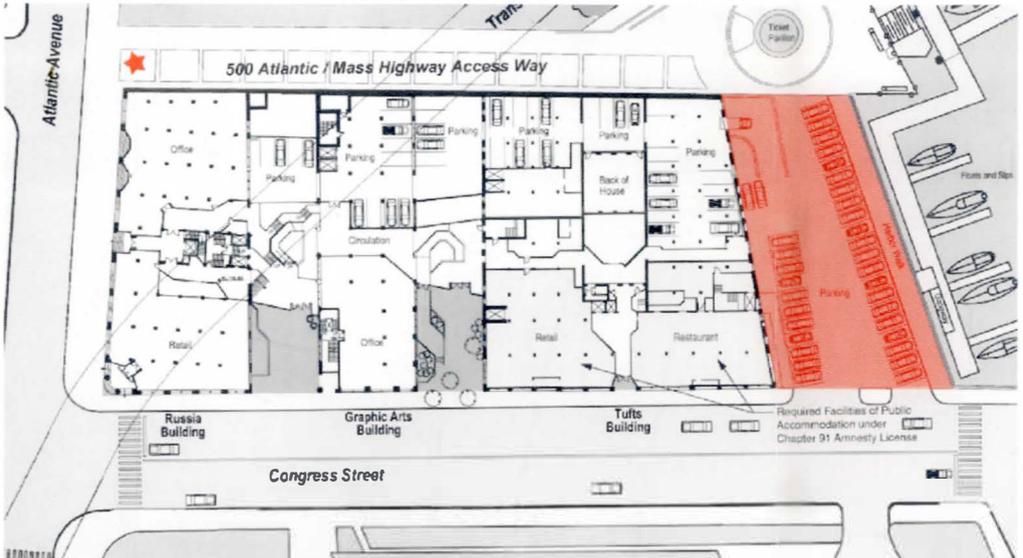
1895 Sanborn Map of Russia Wharf



1909 Sanborn Map of Russia Wharf



Early 20th Century sketch of the Graphic Arts Building with an advertisement for the George H. Ellis Co. printing service.



2003 Site Map of Russia Wharf



Tufts Building original ground floor plan



Computer rendering of proposed projects at Russia Wharf and 500 Atlantic Ave.



Aerial photograph of Russia Wharf with CA/T ventilation tower at 500 Atlantic Ave.



Proposed Site Plan with dimensions of the thesis site in red.

## The Future of Russia Wharf

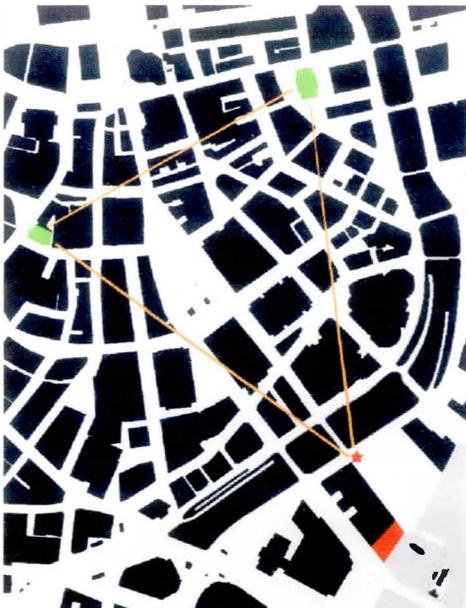
Equity One, a Boston development company is proposing a mixed-use development on the site and will restore the existing buildings into loft-style residential units. The project will preserve elements of the buildings to incorporate a 300-suite hotel. There will be a 22-story 500,000 square foot office building above the Graphic Arts and Tufts Building, and a 512-space underground parking garage. With the proposal the thesis site will be a large waterfront plaza on Fort Point Channel enhancing the sidewalks and streetscape of Atlantic Avenue and Congress Street.

Adjacent to the site is 500 Atlantic Avenue. Currently there is a 240-foot tall vent structure for the depressed Central Artery on the site. There are also two small intake structures on the site. There is a proposition for a 20-story mixed-use commercial building on the site that will surround the ventilation stacks screening the vent structure from view. The building will house a hotel and residential units.

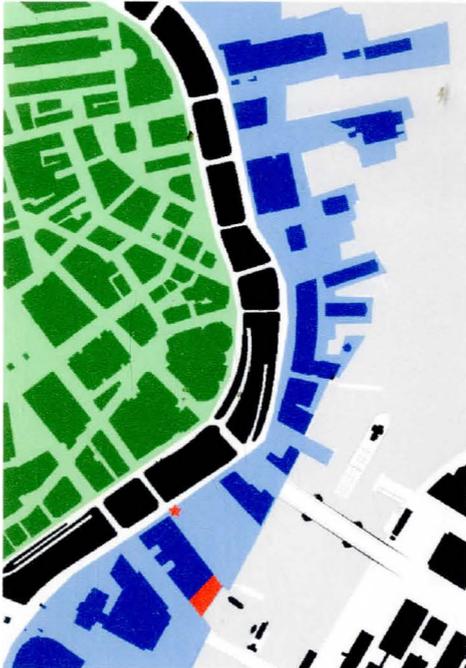
## The Site

The Russia Wharf Buildings have different floor heights, but they all have seven stories. The waterside pier, a parking lot that is adjacent to the Tufts Building is the proposed site of this thesis. The proposed site is a polygon that is 77 ft x 166 ft x 108 ft x 159 ft with a total square footage of 14,707 ft<sup>2</sup>.

Portions of the MBTA Fort Point Channel Silver Line Transitway are being constructed underneath the buildings. The complex is bordered by Congress Street and the Federal Reserve Bank on the south, the 500 Atlantic Avenue property to the north, the Fort Point Channel to the east with the Boston Tea Party Ship and Museum in the center of the Channel, and Atlantic Avenue and the future Surface Artery corridor/Rose Kennedy Greenway to the west. South Station is located one block south of Russia Wharf.



Historic Connections: Old South Meeting House, Customs Tower, and the site of the Boston Tea Party.



District Barrier: The Central Artery acts as a wall that separates the Financial/Downtown District from the Waterfront. The CA/T proposes to reconnect the districts.

## Site Conclusions

Tea related to Boston can be looked at from many different scales. There is the scale of the site, the scale of the city of Boston, and then the global scale. Tea has its history rooted in Boston due to the Boston Tea Party. The actual tea party occurred two blocks from the proposed site on Griffin's Wharf. The closest body of water to remember this event is the Fort Point Channel. The Channel is where the Boston Tea Party and Ship Museum is located. This museum is undergoing an expansion to add three replicas of the tea clippers as well as a larger museum and conference rooms with a tearoom. The museum is a way for people to reenact the night of December 16, 1773. Visitors can throw over tea chests from the tea clippers.

The tea party affected the scale of Boston due to its effects on the economy in Boston at the time as well as other historic sites in Boston. Those sites include the Old South Meeting House and the Customs Tower. Old South is where the colonists met to discuss the Tea Party and then the Customs House is where the tea clippers' captains had to go to get permission to unload the goods from their ships. There is a separation from the Downtown Financial District to the waterfront. The Big Dig is trying to reconnect these two parts of the city. That is where an urban connection or armature can be made from the proposed site. This can extend to the Downtown to encourage more of a fusion between downtown and the waterfront in Boston.

The scale of the site in comparison to the global economy has changed. In the historic times the Fort Point Channel was a very commercial and mercantile port. There was a lot of trade from other countries to Boston. With time and with changes in boat design, the depths of the Channel and Boston Harbor could not provide easy navigation to use the wharfs as ports for global trade. Tea was one of the largest commodities traded throughout the history of Boston. With the new Watersheet Activation Plan, the city of Boston is trying to bring back this history of water trade. Even though the large trading ports have moved south to New York City and Newark, New Jersey, Boston still can be competitive with trade. The Channel would be a good place to activate this trade due to the South Station being close to the site and being a large rail center. All of the pieces are in place to encourage trade, but since trade has been established in these other cities, it might be difficult to bring people to Boston. The Municipal Harbor Plan as well as the CA/T project can be enticements for these companies and can encourage the revitalization of this property with the proposed establishment of a Tea Importers' Headquarters and Interactive Tea Museum.

The program that will culturally transform a site in the Inner Harbor in Boston, Massachusetts, is a Tea Importers' Headquarters and Interactive Tea Museum. This program will take the issue of tea and explore it historically, ritually, culturally, and as a process. There are two main programs to the thesis. The first is a Tea Importers' Offices/Headquarters and the other is an Interactive Tea Museum. This exploration of both will further enhance these transformations of cultures and rituals that exist with the development of tea.

### **Tea Importers' Offices – 8,800 ft<sup>2</sup>**

The existing site has warehouse buildings on a former wharf where ships docked that had goods transported from Russia. The actual wharf that extended into the water is gone, but the history and memory of offices and warehouse space that were used once is still prevalent with the architectural forms of the buildings.

Offices are usually blocks that have similar programs, but a tea Importers' office is different. A tea Importers' office complex is different because of the knowledge and respect that one has for tea. A small company that has a profound influence on American culture with the influences of Japanese and Chinese tea usually occupies the office space. This company's headquarters should have ample offices as well as conference rooms. Even though the office is run similar to most offices with spaces for employee offices/cubicles, there are other spaces that might not be associated with normal office blocks: a cupping room, a warehouse and storage space. The following are square footage estimations for this component of the design:

#### ***Lobby/Entry/Bathrooms – 600 ft<sup>2</sup>***

The lobby space would be very inviting. It would display artifacts or items associated with tea and its historic past. Also there would be the sense of smell included with this space due to the proximity of the warehouse space that is associated with this program.

#### ***Offices - 2,400 ft<sup>2</sup>***

Employee – 10 offices at 120 ft<sup>2</sup> each – 1,200 ft<sup>2</sup>

Support Staff – Cubicle space – 700 ft<sup>2</sup>

Conference Room – 2 rooms at 250 sf – 500 ft<sup>2</sup>

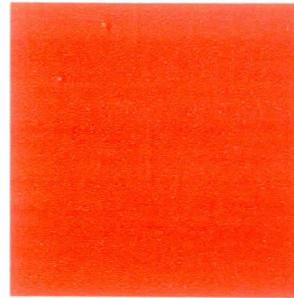
This company should have offices for the main employees as well as small cubicle spaces for the support staff. Within this space, there should also be conference rooms for meetings with clients, as well as, customers. These spaces would be the typical office space, but can utilize techniques and strategies of Feng Shui and Japanese Architecture to design an interesting and unique office layout.

### *Cupping facility/room – 800 ft<sup>2</sup>*

A tea importer or company usually has a special room that is exposed to natural light called a “cupping” room. A “cupping” room is a room where teas are tasted through the cupping process. Teas that the importer receives from the exporter are always tasted and discussed. During this process the tea that the tasters slurp is spit out into a spittoon rather than drunk so it won't ruin the tastes on the taste buds because many cups of tea are usually tried.

### *Storage/warehouse – 5,000 ft<sup>2</sup>*

The tea importer orders tea for the consumer and customer, and the importer is held in full responsibility for the tea. The tea importer handles pre-sold tea, which will automatically go to the consumer rather than remain in storage. Importers also order unsold tea so that if a client is a frequent buyer of that type of tea, the tea will always be available to them instead of having to wait anywhere from 3-4 months for tea to arrive from being plucked in the Asian countries. This unsold tea is usually kept in a warehouse or space of storage and can create an aroma due to the blended teas. There would also be a requirement for storage space for the naturally unblended teas that cannot be next to the blended tea.



SITE



Tea Importers' Offices



Storage/Warehouse



Lobby/Office Space



Cupping Room

### Program Massing Distribution



## **Interactive Tea Museum – 33,000 ft<sup>2</sup>**

The tea museum was chosen as an architectural program due to the historic connotations of tea with the city of Boston primarily, The Boston Tea Party. The current site is directly across from the Boston Tea Party Ship and Museum. This Museum is more about the political connotations of the historic event in Boston and the American Revolution. The museum is undergoing renovations due to a fire caused by lightning creating damage to the museum.

The museum that I am interested in designing is a museum to illustrate the history of a plant, tea. This museum will illustrate how cultures have transformed due to rituals with tea as well as rituals of tea transforming from influences of cultures. This museum will be more than an art museum; it will be an interactive experience. This experience will engage the visitor through learning about tea as well as being a part of the whole experience from plucking to consumption. This interactive museum is a way to incorporate something that isn't an American idea, but it has had an impact on the American culture. It will be interactive through the displays as well as a space for tea ceremonies.

Due to these programs that share the same building it is necessary for overlap and blending of these two programs. These overlaps can be from the tea that is imported will then be sold in the store of the museum. Another way of overlapping and incorporating the two programs together would be having the visitors to the museum taking part in the “cupping” experience or that they have the ability to observe it. Besides incorporating the architectural issues of ritual, culture, place making, process, and transformation into these programs, it will be important to work with sensory perceptions in relation to the human. An important thing about tea is its smell, texture, color, and taste. Incorporating these sensory perceptions of smelling, tasting, seeing, and touching will be part of the architecture. The word interactive helps to inform sensory perceptions as well as this program which is listed as square footage estimates:

### ***Underground parking – 6,000 ft<sup>2</sup>***

The actual site for the proposed program is a current parking lot with 35 spaces. The Russia Wharf buildings have parking within the structure and with 62 spaces. With the new proposal for the Russia Wharf Complex as well as with the new Boston Tea Party and Ship Museum, parking is essential for this area of Boston. Incorporating an underground parking garage will aid in assisting visitors with parking for the programs that will be used for the revitalization of the Fort Point Channel area.

### ***Lobby – 1,000 ft<sup>2</sup>***

This space should be a transparent atrium. The lobby space would include the restrooms, ticket kiosks, and an information desk. This space will be highly activated by visitors and can provide views to the exhibit spaces of the museum, to Fort Point Channel as well as to Downtown Boston being a mediating space between historic Boston and Boston of the future.

### ***Tea Shop and Bar/Café – 4,000 ft<sup>2</sup>***

These two programmatic elements will be associated together. The Tea Bar/Café will be a place to sample tea and a place to have the traditional afternoon tea for guests to the Interactive Museum. The space can be transformed into a space for private parties as well.

### ***Museum Galleries/Exhibits – 16,000 ft<sup>2</sup>***

The spaces for the interactive tea museum will be several rooms/galleries connected together to form a linear process. This museum will have educational exhibits as well as interactive exhibits. It will begin with the history of tea and an overview of the whole process through a small video in a theatre, which will be around 1,000 ft<sup>2</sup>. After the theatre, visitors can move through a linear process where they will learn more and interact with what they learned in the theatre presentation.

### ***Administrative Spaces – 1,500 ft<sup>2</sup>***

The administrative spaces can be located or overlap with the office spaces for the tea importers' offices. Both programmatic elements can share the conference rooms.

### ***Educational Classrooms – 1,500 ft<sup>2</sup>***

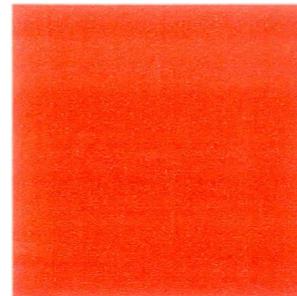
The Classrooms as well can overlap into the spaces for the tea importers' offices. The classrooms will need to utilize the cupping station. They can also teach two sides of the tea process: the history side of the museum and then the manufacturing and production side of the importers' offices.

### ***Japanese Garden – 2,000 ft<sup>2</sup>***

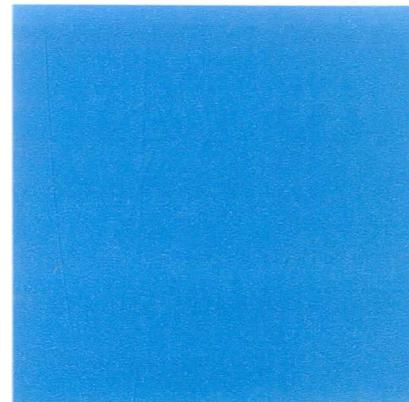
The garden spaces will consist of two. There will be an exterior space for the museum where visitors can enjoy the tea outside or be a part of the experience. In this exterior garden can employ techniques of the typical Japanese garden. Also the garden aspect of this program can be an urban extension to the proposed "Gardens Under Glass."

### ***Tea Ceremony Space – 1,000 ft<sup>2</sup>***

This space can be incorporated into the interactive exhibits of the museum as well as the classrooms. There could be an actual tea hut built within the exhibits to be an interactive example or the tea hut could be incorporated into an urban armature to the "Gardens Under Glass" allotted to the Massachusetts Horticultural Society for the adjacent Surface Artery parcels.



SITE



Interactive Tea Museum



Museum Galleries/Exhibits



Parking Garage



Lobby + Tea Shop/Cafe



Administration/Education



Tea Ceremony + Garden

### **Program Massing Distribution**





Architects have explored rituals through architecture in their building. These rituals usually pertain to a life-cycle event or religious event. Events such as church, burial, or baptism all have a ritual aspect to them. With a ritual, there is the inclination of process. To partake in a ritual, one usually follows a process or path. Different cultures have their own rituals, but rituals can be explored in architecture through ideas of place making and experience.

An architecture precedent is analyzing something that has already been completed, usually a work of architecture, and using the architecture as an example to inform an architectural idea or architecture of the similar kind. In looking at precedents for this thesis, there are two ways of analyzing them. One way is to analyze how architects have used ideas of transformation, culture, place making, ritual, and process to inform architecture and the other way is analyzing a similar program, which can be a precedent for the architectural design and program for this project. The documentation that can be accomplished through the study of precedents includes applying through diagrams the proposed program and inserting elements of it into the architectural precedent.

#### **Precedents of Architectural Issues:**

- *Ritual* through the Church of the Water
- *Place making and Process* through the National Constitution Center
- *Culture and Process* through the Heineken Experience
- *Transformation* through Brion Cemetery

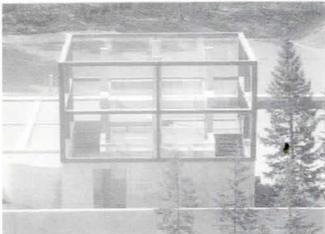
#### **Precedents of Architectural Program:**

- *Tea Importers' Headquarters* through the Wollenhaupt Tea Company
  - *Tea Ceremony* through Tea Huts
  - *Tea Bar/Cafe* through the Franchia Tea Room
  - *Museum Galleries/Exhibits* through the National Constitution Center and the American Museum of Natural History
- Tea Importers' Headquarters* through Kentea Ltd. Tea Importers'



## Ritual + The Church of the Water

The Church of the Water (1985-88) designed by architect Tadao Ando has the architectural intentions of a sacred ritual space defined by a process. The architect works with procession to enhance this architectural idea. He defines the sacred space in two ways. Ando makes the entry route intentionally circuitous to create a sense of ritual and purification, similar to the sufferings and revelations that define the religious experience. He also defines the space through architectural structure with a L-shaped wall that demarcates the church as a protected, secluded area, unlike and apart from the resort hotel directly behind it. The transition of passing through the wall immediately responds with a full view of the church, which is not visible at any other point along the outside path.

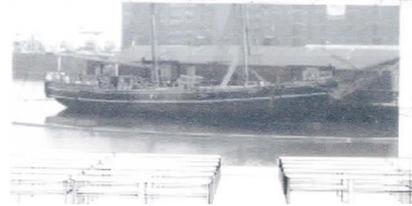


Ando uses architectural ideas to help generate his architecture. In this project he works with the idea of harmony and nature creating a connection with his building to the surrounding environment and nature. He also looks at ancient Japanese architectural philosophy with his spaces evoking a sense of frugality and tranquility. His spaces are designed to create a Zen-like mood of introspection, similar to a teahouse. The architecture generated by his ideas is appealing to the senses through an airy feeling by the utilization of light, contemporary materials, and strong geometric forms that interpret traditional styles and ideals. This project thus is a strong precedent for this thesis. There is a strong relationship to the process of place making and ritual of a space. He uses the religious ritual to play a role in creating the architectural spaces relating to nature as well as to procession.



Incorporating the program of the Tea Importers' Headquarters and the Interactive Tea Museum into the Church of the Water is possible. The Church has the large window that overlooks the lake and nature. This idea could be incorporated into the thesis to have views to the water that create a memory. The Fort Point Channel is rich in history and one of the strong views from the site would be the Boston Tea Party and Ship Museum. Having a view to this would remind visitors of tea's relationship to Boston as they view people throwing tea chests into the water from the replica ships. The L-shaped wall is an armature extending the Church into its site. Incorporating urban armatures in the proposed program would be necessary to establish a relationship with the surrounding site of Boston from the Surface Artery Corridor to the Fort Point Channel. In the Church there is the procession along the wall and moving up into a glass cube, which then creates a place to be one with G-d and nature. The cupping room is a place where one experiences the tea through the sensory perceptions with viewing the color, the aroma, and the taste of tea. It is necessary for natural light as well. The cupping station has been thought of being overlapping in both programs. This cube/space in Ando's design overlaps the sanctuary and acts as a mediator between the natural world to the holy world. Being aware that Tadao Ando used similar architectural ideas as in this thesis helps one





Views - Ando uses a large window to create a view into nature and an extension of space. Incorporate a view to the Boston Tea Party and Ship Museum within the proposed program.



Procession - The red line is the circulation pattern through the site along the L-shaped wall and then up into the glass cube and then back down to the sanctuary which extends a view into the landscape where one came from.

The axonometric illustrates placing the proposed program into the existing architecture. The overlap of the two programmatic elements is a possible design strategy. Urban armatures are also a design strategy to connect the existing site back to the city of Boston.



Armature

Interactive Tea Museum

Tea Importers' Headquarters

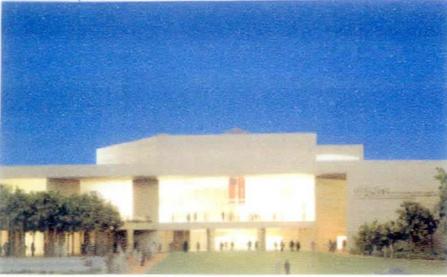
## Place Making + The National Constitution Center

understand the design spatially through experience and organization. Incorporating the program into this precedent can hopefully inform design ideas and decisions.

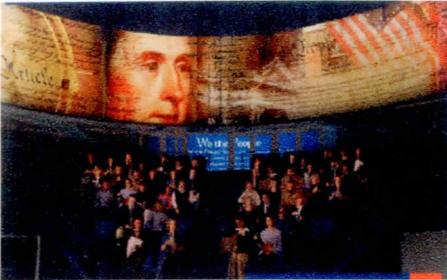
The National Constitution Center is located in Philadelphia, Pennsylvania, designed by Pei Cobb Freed and Partners with Ralph Applebaum designing the visitor's experience and exhibition halls. A central theme in the project is the conception of architecture as preeminently an art of place making - an art embodying a concern for the quality of public space and public life. The center is described as: "a place for visitors, but not just a tourist attraction; a place for exhibitions, but not just a museum; a place for scholars, but not just a study center; a place for discussion and debate, but not just an auditorium; a place for public gatherings, but not just a reception hall." This illustrates the activation of place making through different strategies in the program distribution as well as how interactive exhibits contribute to this idea of place making.

This experience is a process as well. The museum is organized in a linear process. From the beginning, the visitor takes on the role of one of the Delegate's. This is their ticket as well as receiving a pocket copy of the United States Constitution. Then they move into the Kimmel Theatre where they watch the program entitled "We the People." It is a 20 minute History lesson with a live narrator and video. The architecture of the museum acts as a backwards funnel of knowledge. One moves into a cramped space below the theatre and then moves into the theatre which is in the round and then moves upwards to a seat. After the presentation the movement up is continued and then a circular pathway through the interactive exhibits and then into the Signers' Hall and then back into the main lobby.

Visitors make their place within the museum through the interactive experiences. Visitors can use interactive monitors as well as activities to engage the Constitution. A visitor can be inaugurated through a video monitor and a virtual judge swearing the person in. Also visitors can sit on the bench as a Supreme Court Justice. These interactive exhibits and experiences allow the visitor to make their own place in the history of the United States as well as literally making their place by signing the



Exterior View of Museum



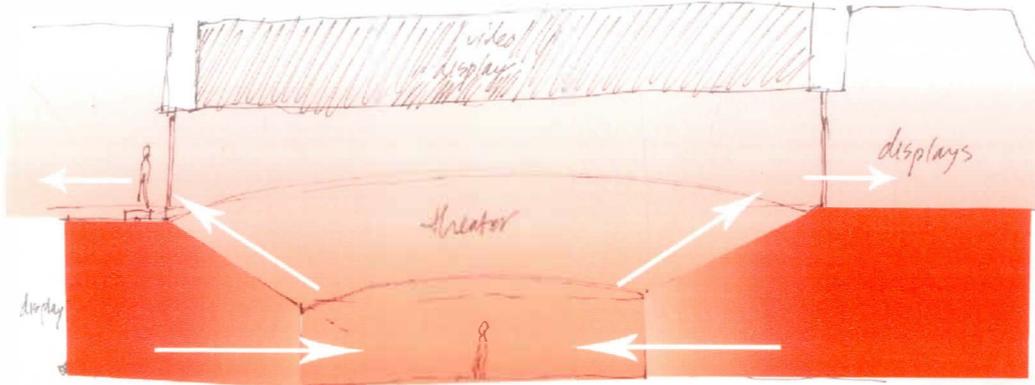
Kimmel Theatre - We the People



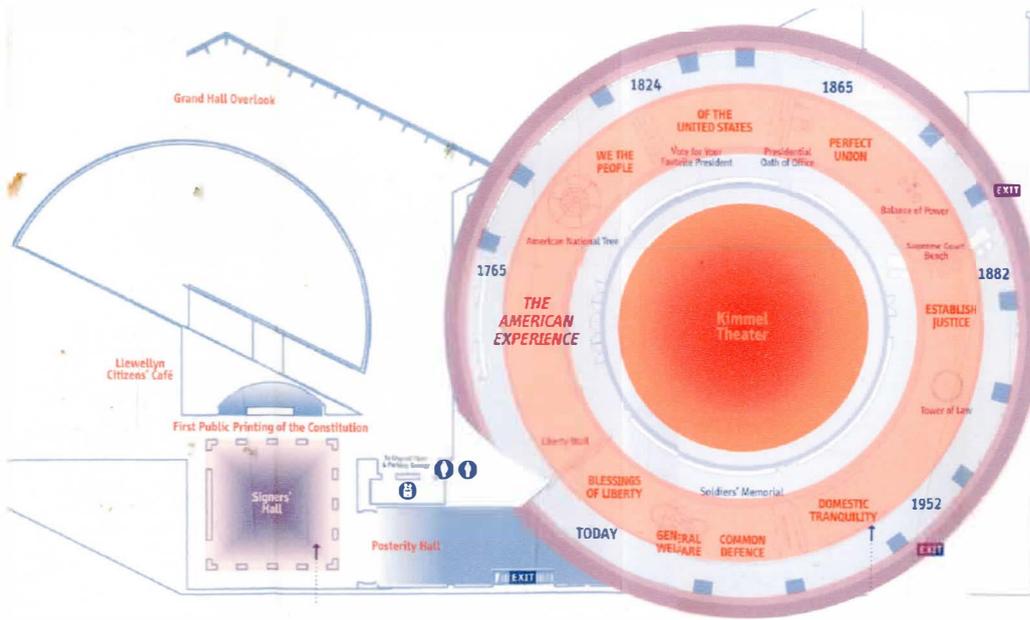
Interactive Exhibits - The American Experience



Signers' Hall



Section of the Museum at the theatre. This shows the circulation and movement of the visitors and this reverse funnel effect that is a design idea of the museum.



Plan of the museum with the red shades illustrating the reverse funnel effect. The interactive experience is organized by the Preamble of the United States Constitution.





This diagram illustrates the Heineken Experience process (green) and the stages one goes through. Thinking of this process, it has been applied to the program of this thesis to identify a process of learning (black) and then at different stages in the process it is complemented or illustrated through an interactive experience (red). This illustrates a weaving strategy that can be applied to the architecture.



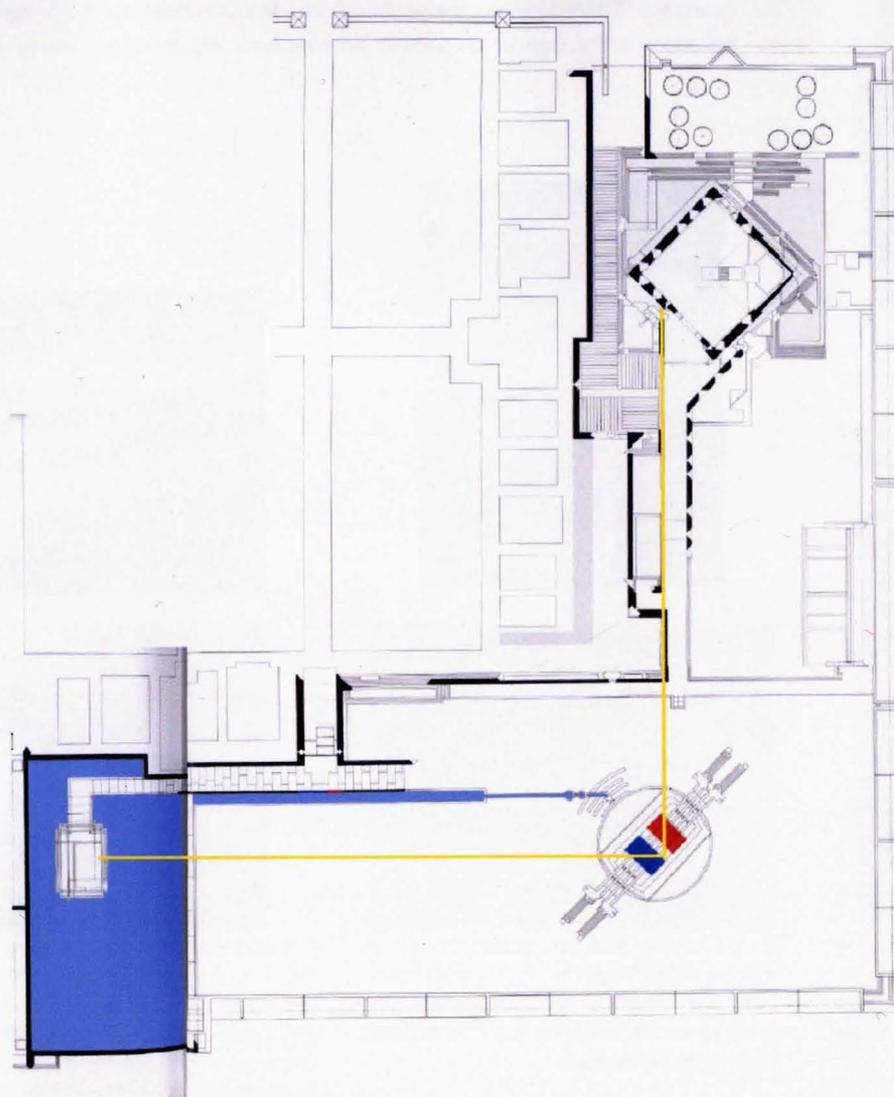
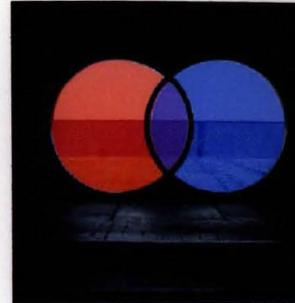
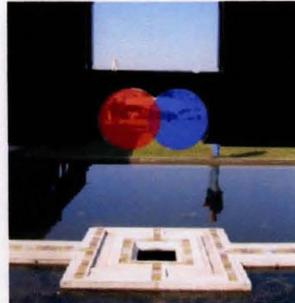
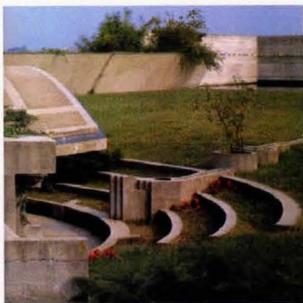
## Transformation - Brion Cemetery

Brion Cemetery (1970-72) designed by Carlo Scarpa has the architectural intention to illustrate a way where one could approach death in a social and civic way to express the meaning of death and the ephemerality of life. In creating architecture out of this contention, Scarpa analyzed symbolism and incorporated dualities as vehicles of exploration to transform the architectural idea and program.

Scarpa analyzed social ideas about life and death and collective expression. He expressed these ideas in the architecture through interlocking circles, which symbolize the lives of two people as well as the inseparable qualities of life and death. Another symbol Scarpa signifies in this project is water. He utilized this symbol in the architecture through the inundated civilization and the elevated superstructures as well as the moving water and the water beneath the concrete. Scarpa incorporated details with presenting the water and its path and hiding it at particular moments. The water is used to blur the distinction between built and natural elements. A third symbol Scarpa employs in the architecture relating to life and death is the passage of time. The passage of time is symbolized through lighting effects illustrating the passing of the time of day and the passing of the seasons and years. Light plays an incredible role in this project as one of the dualities of this project. Light and shadows are created in the architecture in different ways. There is an interaction and juxtaposition of different materials that absorb and reflect light. Combining these building materials allows light to be filtered creating patterns at different moments. The architect modifies the light through the use of materials, which changes the quality through color and intensity. Shadows generate a sense of mystery or past memories relating to the original intention of expressing the meaning of death and ephemerality of life.

Another duality is old vs. new and was created through the architectural structure. The structure accommodates death, but at the same time it celebrates life. This duality expressed two components of the project. The chapel in the cemetery has a ziggurat pattern, which is reminiscent of Mayan architecture. The wall structure that surrounds the complex is heavy symbolizing a fortress, which is enhanced by the light and shadow elements.

Dualities are a way to explore architectural ideas. Having two things working together or transforming to create different things can create interesting spaces in architecture. The dualities that exist in the proposed project are history and the present as well as culture and ritual. Identifying these dualities can then inform the architectural design as an architecture that incorporates the dualities of ideas working together or against each other. Architecture can define the roles that these ideas play through architectural strategies. The strategies of weaving and overlapping can play an important role in defining the dualities for this thesis. Dualities and ideas are informed through architectural strategies are these strategies are applied to illustrate the idea in a built form, architecture.



## Tea Importers' Headquarters - Wollenhaupt

This is an example of the manufacturing side of tea at the Wollenhaupt company located in Hamburg, Germany. This is a tea company and its program can be related to the proposed program of a Tea Importers' Headquarters. One can analyze this precedent for its programmatic elements that this company employs in order to run a tea manufacturing company. Some of these elements can be incorporated into the program of this thesis. The following is the step-by-step linear process how this company works along with images.



1. The teas arrive in chests from the tea estates in China, India, Japan, Africa, and Taiwan.



2. The teas are then placed in blenders and blended with herbs to create flavored teas. Once the teas have been blended, they have to go through "quality control."



3. All of the teas are tasted through a process called "cupping" in a special room that utilizes natural light to highlight the color of the tea in leaf form and in brewed form in the white cups.



4. Wollenhaupt has five tasters who taste all of the teas that they manufacture. The tasters use a tasting spoon and quickly slurp the tea with a lot of air to get the aroma and flavor of the blend around the back of the mouth. The tasters "spit" out the tea into the spittoon instead of swallowing because it would sense their taste-buds.



5. Each blend is stored in airtight containers from contamination and then stamped for the date and the approval that blend was blended.



6. Once those teas are approved they move on to being packaged for different companies or being placed in large sacks or tea crates.



This is a map showing tea's travel from India to Hamburg, Germany, (Wollenhaupt), and then Hamburg to the United States. The following is the average travel time:

1. 5 weeks from India to Hamburg
  2. 1 week for Customs clearance
  3. 1 week from port to Wollenhaupt
  4. 2 weeks blending
  5. 12 days from Hamburg to United States
  6. 1-2 weeks for Customs clearance
- Total - About 3 months from plucking tea in India to being sold in the United States



7. The sacks are 3 layers so no moisture can enter. Tea can also be placed in crates that have a special interior lining so moisture cannot enter. The crates and bags are marked of the garden and grade of tea along with the port of entry.

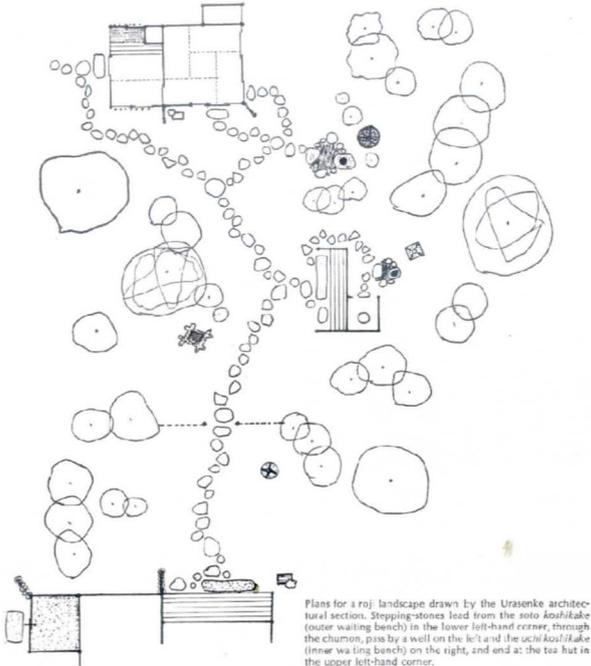


8. The bagged tea and boxes are placed on pallets which are then loaded onto freighters that leave the port of Hamburg to places like New York which takes 12 days to cross the Atlantic Ocean.

## Tea Ceremony - Tea Huts

Tea architecture reflects properties of ritual space, which is outside the ordinary everyday space. When one enters a tea hut they are transported into an ideal space, which can be a sensory experience. Tea houses incorporate natural materials in their construction, and they are not elegant because the tea house is solely a frugal experience. Tea houses are usually located in solitary and quiet places amongst a garden. The plan at the left shows the path, roji, to the tea house.

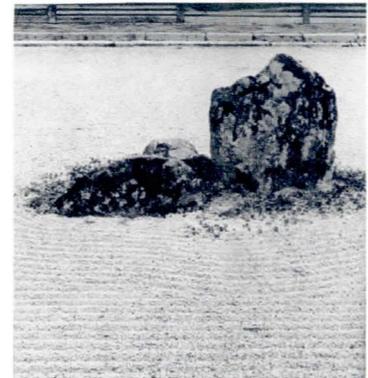
The series of seven images that exist in a tea house and tea garden were analyzed and sketches and writings were made to look at the ideas that these images are conveying through the architecture. These interpretations have aided in understanding the basics of a tea hut as well as architectural design strategies for incorporation into this program either by an interior tea house for ceremonies or to incorporate this program and extend it to the proposed Gardens Under Glass. Incorporating a space like this within the proposed program will help bring new attitudes to Boston in terms of experiencing moments of solitude and peace as well as praising and giving respect to the Japanese culture and this ritual of tea ceremony that has been passed on and practiced for hundreds of years.



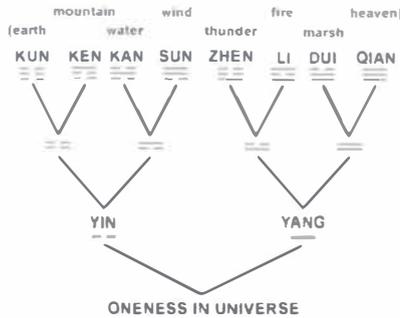
Wall - Protection, barrier, defensive  
Materials - Bamboo + knotted reeds  
Connections - man made knots  
Structure - Grid + rhythmic



Path - Sequence, choices, non-linear  
Materials - Stone and earth  
Nature  
Objects in a field

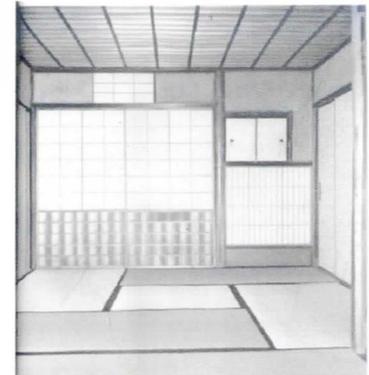


Core/Heart  
Rings - expanding like water ripples  
Isolated object in a field of rocks that symbolize water.

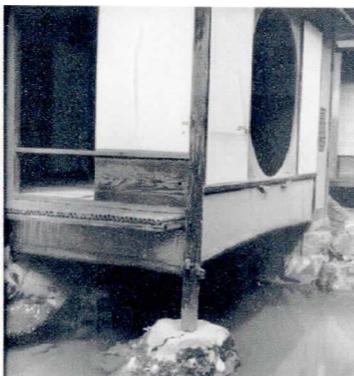


Eight Trigrams for 4 1/2 tatami-mat room  
4帖半の八卦

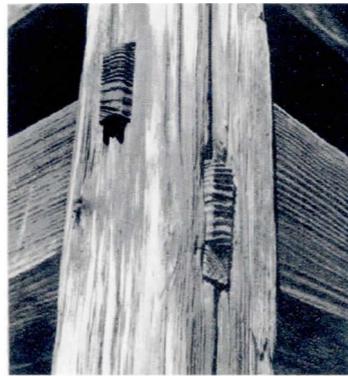
Tea had its original roots in China. The Chinese created an astrological system and a calendar based on the philosophy of "Yin Yang". This philosophy states that there was one force in the Universe. Then it was separated into two energies; yin and yang. Yin means moon or earth and yang means sun or heaven. Yin and yang energies influenced and mixed with each other and became five elements which are: Wood, Fire, Earth, Metal, and Water. Eight trigrams were developed from this philosophy, the first diagram. The Japanese applied this philosophy to the tea room. The ideal tea room has an alcove in the North side and a *nijiri guchi* (a crawling entrance) in the South. The guest sits facing towards the South while the host sits facing North. This is because guests are "yin" so they sit in a yang place while the host is "yang" therefore he/she sits in a yin place. Since a four tatami mat-room is square, it can be shown with the eight trigrams which has a center as shown above in the third diagram. The second diagram adopts these ideas and replaces them with adjectives of emotions within the tea room with the philosophies of yin and yang spaces.



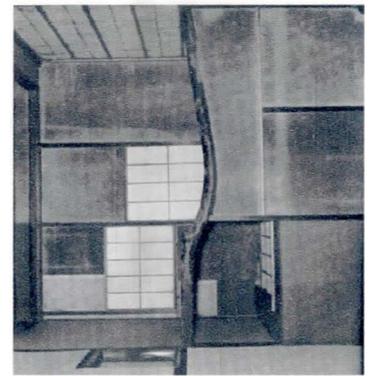
Order - Tatami - 4 1/2, control  
Linear - Ideal - Oneness  
Materials - natural, soji, bamboo



Connections - not typical, unique,  
jointery and support  
Juxtaposition - wood vs. stone



Connections details, jointery,  
interlocking/weaving  
Nature vs. Man-made  
Materials - wood



Order vs. Natural  
Materials - natural, transparency  
Linear vs. Non linear

## Tea Bar/Cafe - Franchia Tea Room



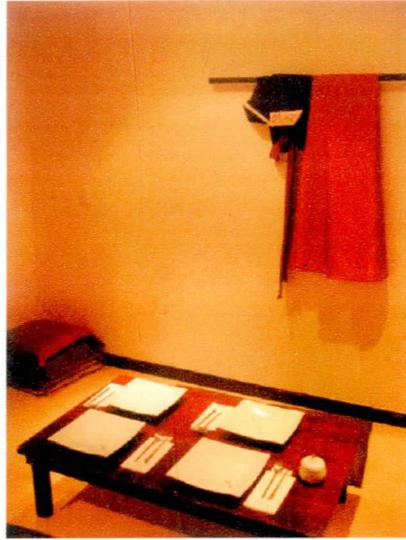
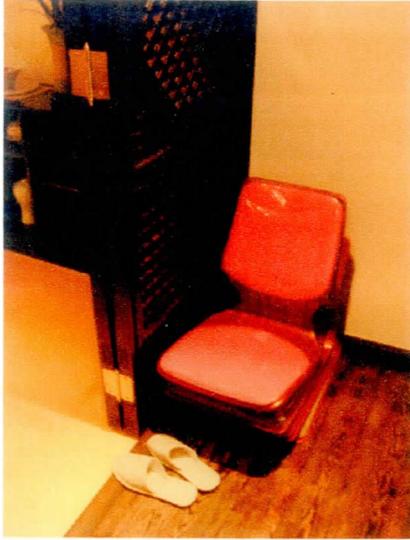
The tea bar where all of the teas are prepared with a tea shop adjacent to the bar where people can purchase teas as well as tea ware.

Franchia is a Korean tea room and shop located in New York City. Franchia was conceived out of a desire to share the knowledge gained from the personal journey to live a more balanced and healthy life. The Tea Room offers tea workshops and are held in the Korean tea room. When entering the space, guests experience the energy of the tea bar where all tea is brewed. The second floor has seating for those wishing to have tea time or to dine in a relaxed atmosphere. At the top of the Tea Room is the Korean tea room that was designed with wax floors with low tea tables and carved wooden sliding doors. The space also utilizes typical tea room materials with soshi screens and appropriate dress from slippers to kimonos. The space is supposed to evoke the thought of a mountain temple with the tea room at the peak.

This Tea Room has programmatic elements that will be applied to the proposed program of this thesis as a Tea Bar/Cafe. There are other types of Tea Rooms that have qualities of typical English Afternoon teas, as well as ones that are similar to Franchia with the actual submersion and being one with the tea. As mentioned previous, Korean tea ceremonies are more individualistic. The tea workshops are solely for learning the art of tea that is performed in the Korean culture. This Tea Room is a combination of education, food enjoyment, and the appreciation of tea. The Tea Bar/Cafe in the Interactive Tea Museum will be a place to enjoy different types of tea as well as facilities for group events where there will be a separate space for educational programs as well as possibly a tea hut as mentioned in the previous precedent.



A view towards the entrance from the main seating area where one can enjoy a small lunch or dinner as well as tea.



The Korean Tea Room that is located at the top level of the Tea Room. The materials are special for this space from woods to soshi screens as well as special furniture that consists of small tables for one to enjoy tea while sitting on a pillow. There are also slippers and special clothing that one can wear when they partake in the ceremony.



Tea classes and workshops are available at Franchia that are normally held in the Korean Tea Room, but I was treated to a personal individual tea ceremony with the tea master and owner of the Tea Room.

## Museum Galleries/Exhibits - The National Constitution Center American Museum of Natural History

Besides being a precedent for the architectural issues of place making and process, the National Constitution Center is a precedent for architectural design for the Interactive Tea Museum. The program for the National Constitution Center is exploring the Constitution through interactive exhibits. The architectural planning and design team of Ralph Appelbaum and Associates designed the interactive exhibits. The exhibits aim to illustrate the Preamble of the Constitution by being organized through the various parts of the Preamble. These sections are like galleries but there are no walls dividing spaces, only the interactive exhibits. Some of these "galleries" include: "Perfect Union" where a person can be inaugurated as President of the United States. They can go to the podium with the Presidential seal and a backdrop of the Capitol with a virtual Supreme Court Justice swearing in the visitor and then it is projected onto a video screen and at the end of the museum people can purchase pictures taken of them being sworn in. There is also the gallery for "Domestic Tranquility" where there are family oriented activities and discussions on current constitutional issues. The perimeter of the exhibition space illustrates different moments within the history of the United States that affected the Constitution with boards of text, touch-screen monitors, and listening stations with recorded stories. There are also alcoves with backdrops where visitors can take a picture being transported back in time. Exhibits having a level of interactivity are a way for the visitor to engage the program or idea behind the project. The Constitution is a written document that citizens of the United States are governed under everyday. Having interactive exhibits allow people to understand the document better and also brings the document to life.

Relating these ideas to the proposed Interactive Tea Museum illustrates how the beverage of tea has a level of interactivity by people who brew it and then drink it, but allowing people to interact with it in ways, which they might have not imagined is a goal for the interactive exhibits for this museum. This museum will allow visitors to learn more about the history, process, and art of tea. As proposed in the Heineken Brewery precedent, some of these exhibits could include the senses by tasting the tea as well as watching the manufacturing process, which would take place in the other proposed program, the Tea Importers' Headquarters allowing for both programs to have overlapping interactions. The National Constitution Center has the right balance of history and interaction. These interactive moments are for important elements of the Constitution. As part of the design process, the interactive exhibits and moments for the Interactive Tea Museum will be critically chosen. Display will also be an important part of the design process which is effectively done in the National Constitution Center as well as in the Hall of Biodiversity and the Fourth Floor Fossils Hall at the American Museum of Natural History in New York, also designed by Ralph Appelbaum and Associates. The use of light and multiple levels of response was the goal or the design through activation of the environment.

Appelbaum identifies the goals of his project as engaging the receptivity's of different visitors. He states that "Results are seen in people's sense of immersion, attention span, and enhanced memory of their experience, provoking them to discuss the exhibit with others and enhanced memory of their experience provoking them to discuss the exhibit with others and engage in activities such as reading more on the subject" (Bradford, 150). Circulation plays a key role in this project as well as any type of museum. There are many issues to discover and to critically analyze to form a coherent design. This process will explore the issue of tea through interactive exhibits and use the techniques and strategies such as: lighting, engagement, retention, memory, and circulation. These strategies will inform tea as a ritual that has been transformed through cultures.

The tional Constitution Center



Visitor being inaugurated with projection screen above.



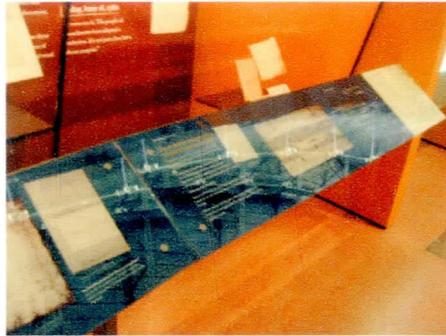
Visitor interacting with a touch screen.



Text, info graphics as well as monitors and listening stations.



Visitor signs her name to the Constitution.



Info graphics with artifacts and text explanations.



Alcove for photo opportunities.

American Museum of Natural History



Lighting techniques and display techniques at the Hall of Biodiversity



The black floor pattern acts as a tour of evolution activating the circulation space in the Fossils Hall.



Visual access to the skeletons is provided by transparency with the structure built into the floor. Also open platforms for viewing the fossils.

## Tea Importers' Headquarters - Kentea Ltd.

Kentea Ltd is an import tea company in New Rochelle, New York. This company brings in tea from all over the world in bulk quantities. The tea comes to the United States either in pre-sold or un-sold quantities. The pre-sold quantities are the tea that their clients have bought already. The un-sold quantities range from new teas or to older blends that client's use, so the company likes to have some in "stock" in their satellite warehouses in port cities such as, New Orleans, to be able to provide the client with the tea fast.

There are two types of ways a consumer can get tea. One can get tea through a broker or an importer. A tea broker works with the supplier and the buyer and get a commission from the supplier. The broker does not hold a title to the goods when it arrives in the United States. The importer has the liability and the possession of the tea and sells it to the consumer or other companies that request certain types of teas.

The office of a tea importer is different from a normal office because there is usually a "cupping facility" where teas are tasted and there is quality control. Then there is office space and then usually a warehouse to store the tea. The other difference from a normal office is the expertise that the employees have of tea. Tea is a subject that those who are involved with it have to be very educated. Victor, the importer at Kentea Ltd. stated that the consumption of tea in the United States is 80% iced tea which competes with the beverage market in the US that includes soda, alcohol, beer, and juice markets where hot tea is not consumed as much but only competes with hot cocoa and coffee. The tea that they import is the finest quality and sold to a small population in the America that appreciate the tea.

Kentea Ltd. has a cupping facility. It is a small size only 400 square feet, where an average size of the cupping facility is usually 700-800 square feet. The average size of the ideal tea importers' offices is 2,000 square feet. The majority of the space would be for warehouse where the other smaller percentage of the space would be used for a cupping facility as well as offices. This program has similar concepts as well as program that will be utilized in the Tea Importers' Headquarters for this thesis. Additional spaces can be added due to the size of the site as well as its history. Aspects of the program will overlap with the Interactive Tea Museum to create a unified whole of both programs.



The cupping room where the importers' taste the teas with the silver spittoon in the foreground.



Using the tasting spoon to slurp the teas.



Examining the tea leaves.



The cupping process includes seeing the dried leaves and then the wet leaves along with the color of the tea.



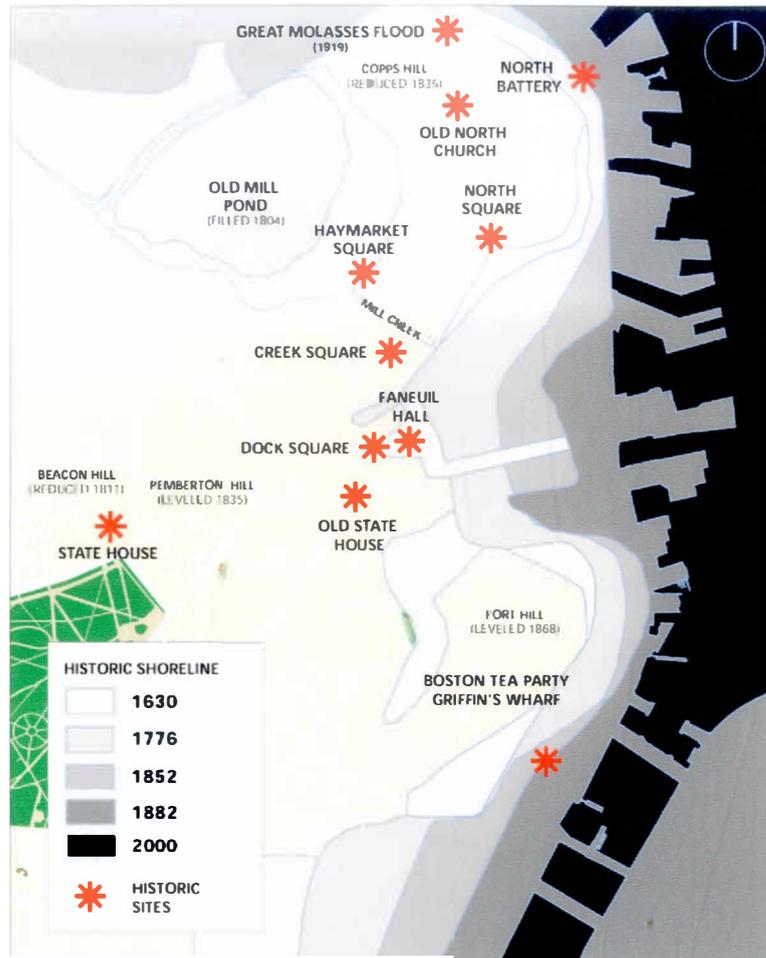
The interior of the office space.



The site is at Russia Wharf in the South Station District of Boston. The site is a parking lot that measures 166 ft x 77 ft x 159 ft x 108 ft with a total square footage of 14,707 ft<sup>2</sup>. The site is bordered by Congress Street to the south as well as the Federal Reserve. To the east it is bordered by the Fort Point Channel with the Boston Tea Party and Ship Museum. To the north is the new development at 500 Atlantic Avenue and to the West is the Tufts Building which is part of the Russia Wharf complex.

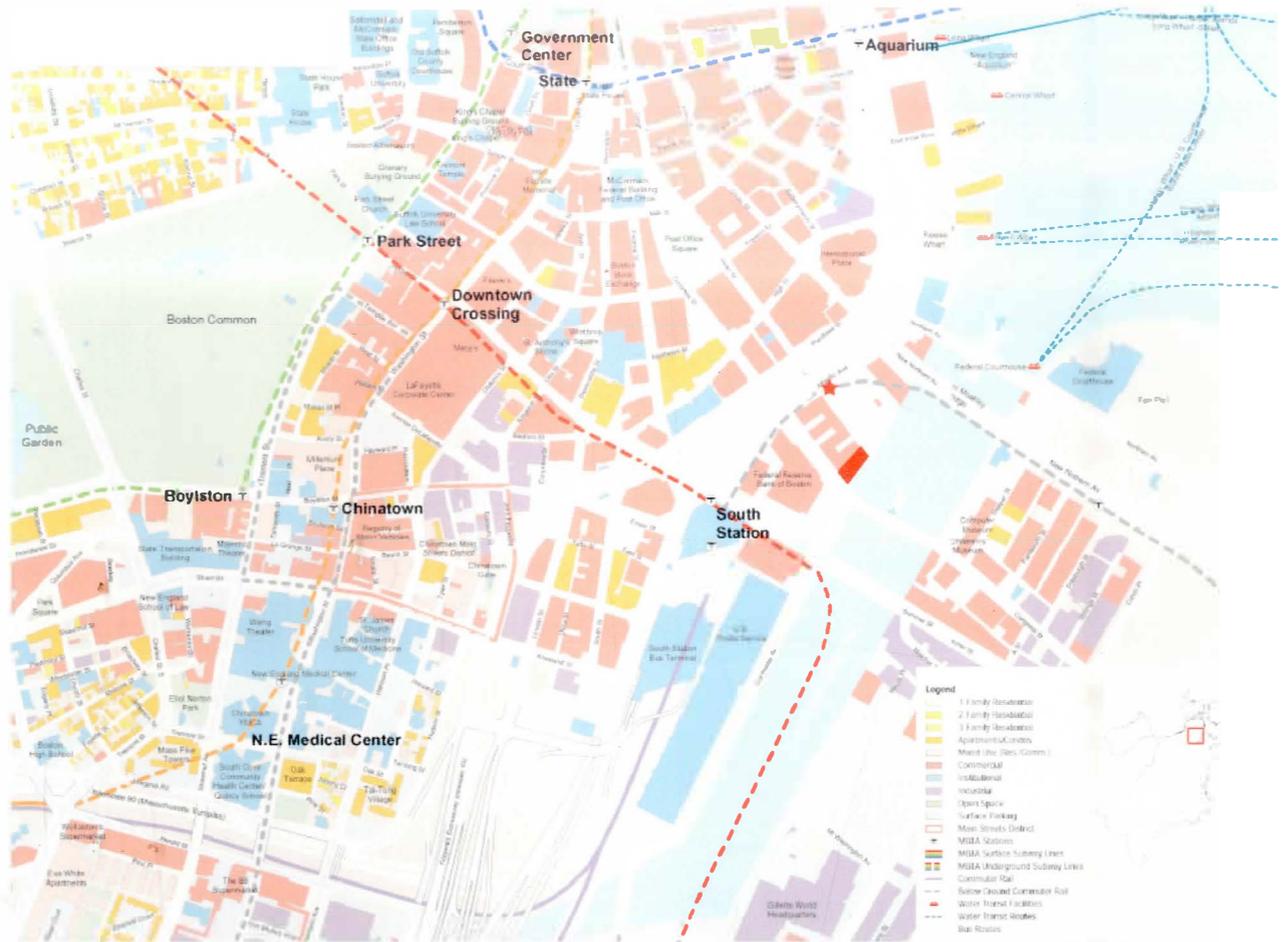
The following section pertains to mapping and documenting the site area to defend why this site is appropriate for the program of a Tea Importers' Headquarters and an Interactive Tea Museum. An argument could be made, why is it necessary for such a program when there is the Boston Tea Party and Ship Museum. The existing museum is about recreating through an interactive experience, the past history of Boston with the Boston Tea Party as the vehicle of exploration. The project that is proposed is to understand the implications of tea and its history. It is a dynamic product and metaphor for transformation and rituals in cultures over time. The Boston Tea Party is steeped in this tradition of tea, but tea's history and ideas derived from it is richer than a singular event.

The two museums can interact together to some extent, but it is necessary for the establishment of this program. It will further tie tea's history and the implications of it back to Boston and to the world in the other cultures that it affected. The museum will be more than just a singular event. It will be organic and can activate the surrounding site through urban armatures. These armatures as well as other techniques of understanding this site are as follows.



This map is taken from the Central Artery Master Plan document. This map traces the transformation of the landmass and shoreline of Boston Harbor. The historical sites are identified. The landmass as well as historical sites are two major players in the history and evolution of Boston.

# Chinatown/South Station District Map



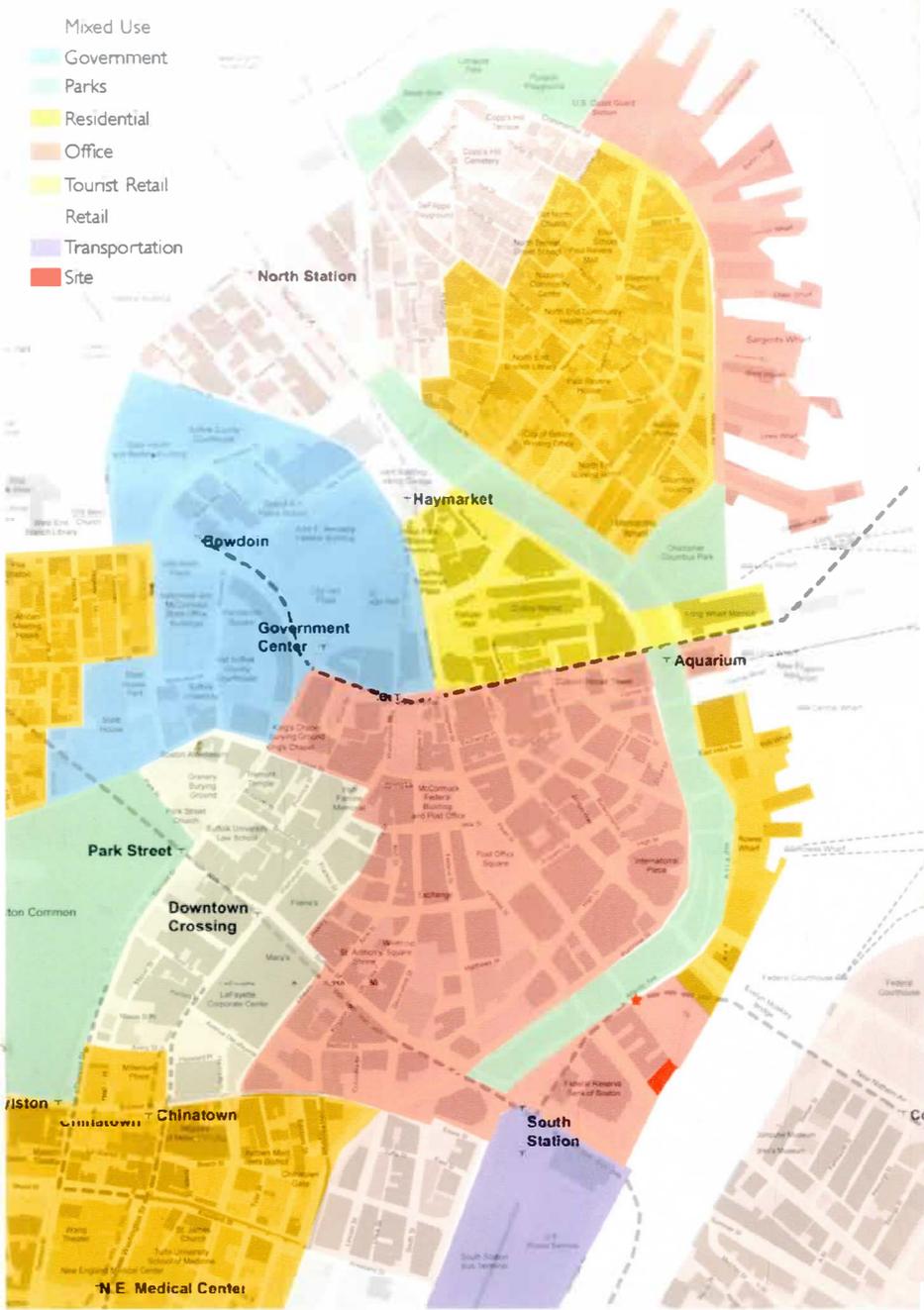
This map shows the relation of the site to the neighborhoods of South Station and Chinatown in Boston. The chosen site is on Fort Point Channel marked in red. The red star marks the spot of the Boston Tea Party in 1773. One can see the relationships of the site to the Inner Harbor, transportation systems (roads, subway systems, water routes), open spaces (Boston Common), and the different building uses.



Districts

This map of Boston delineates the different districts within the city. The Government center is the core of the city with the other districts radiating out. The site is in the Financial District

**Land Usage**



This map organizes Boston by land usage. Again, the government center and office spaces are the core with the residential areas surrounding these two masses with green space interwoven between all the sections.

# Transit Volumes

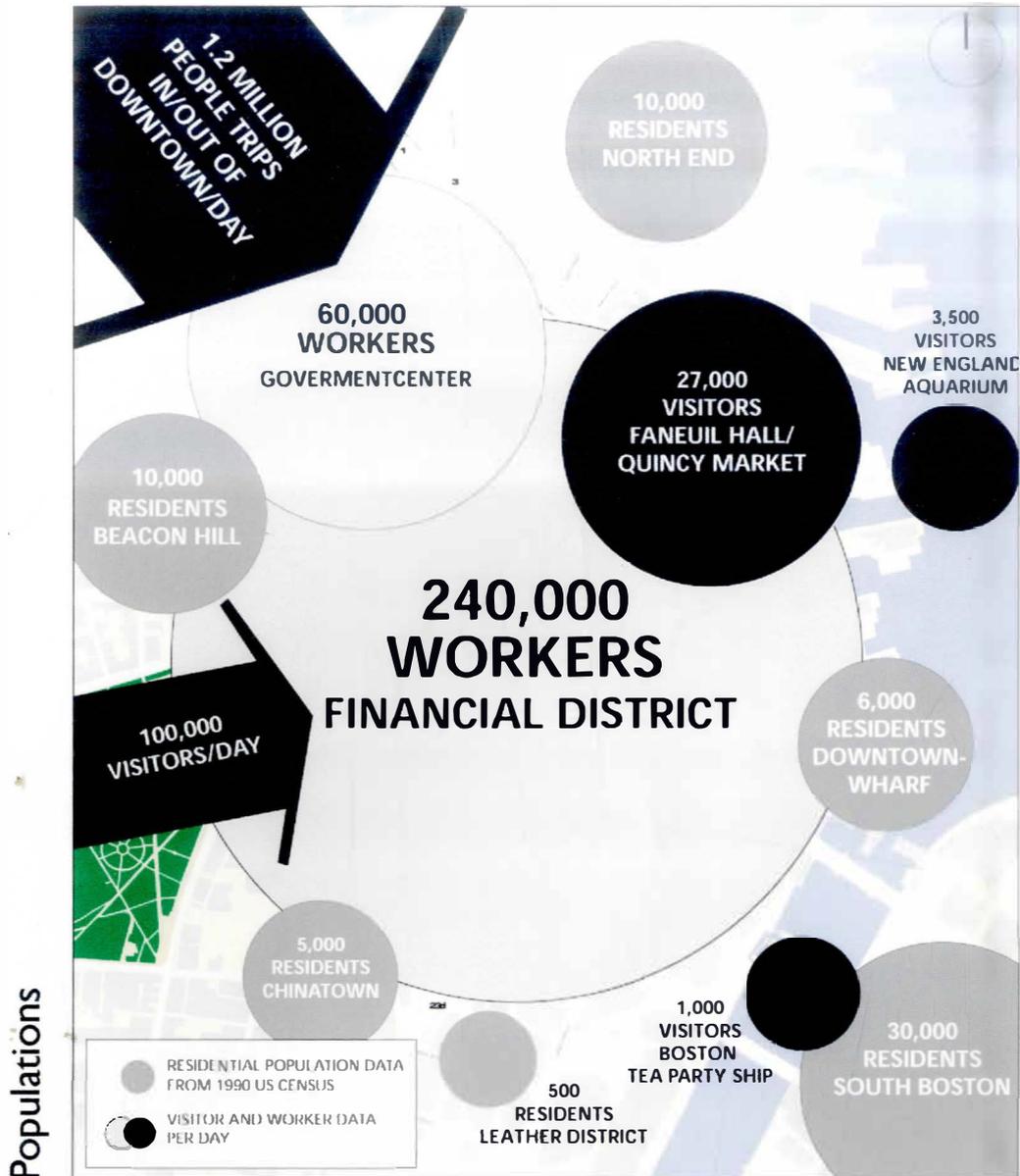


# Building Entrances



This map is taken from the Central Artery Master Plan document. This map details the ridership figures as well as the daily passage of resident, commuters, and other visitors into and out of the city.

This map is taken from the Central Artery Master Plan document and indicates the building entrances which are in relation to the proposed site.



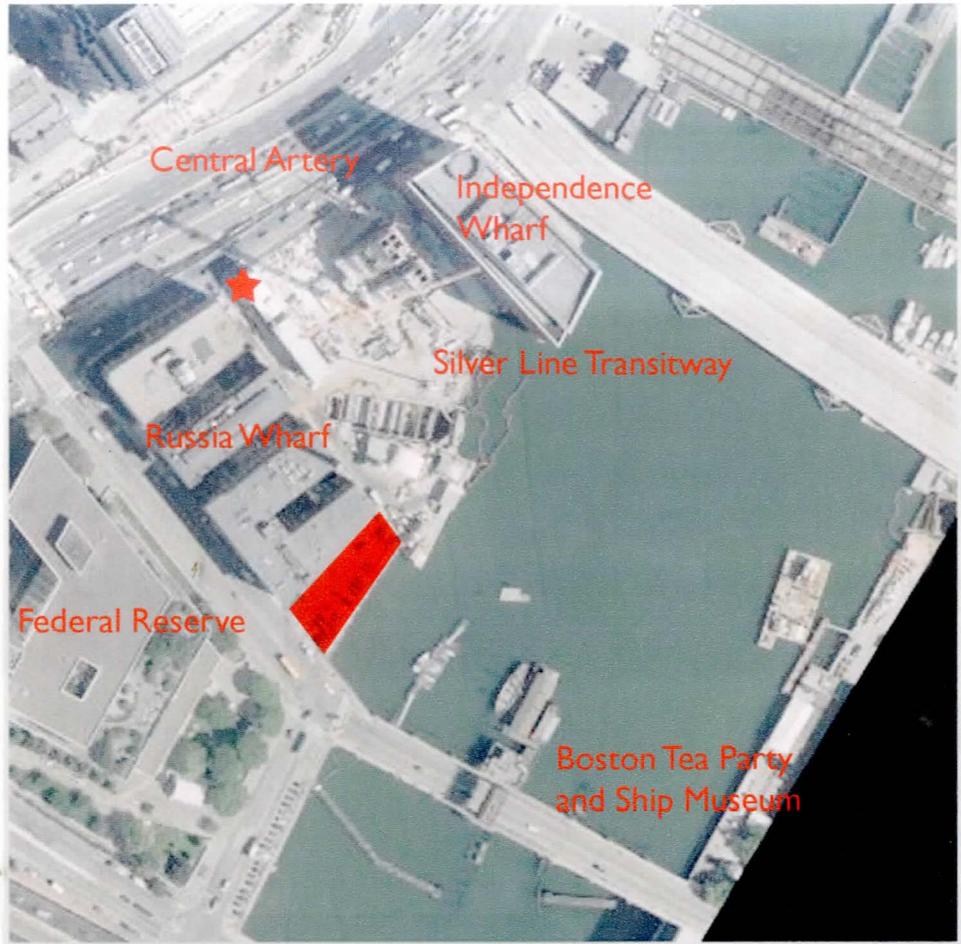
This map is taken from the Central Artery Master Plan document. This map identifies the populations in downtown Boston. The numbers include residential neighborhoods that surround the central core of workers in the Financial District and Government Center. The majority of the tourists populate around the waterfront.

## City Aerial Photograph



This is an aerial photograph illustrating the site in relation to the high rise buildings of the Financial Center as well as the Fort Point Channel and Boston Harbor.

Site Aerial Photograph



This is an aerial photograph zooming into the scale of the site in relation to the Fort Point Channel, the Central Artery as well as the Russia Wharf buildings and the Boston Tea Party and Ship Museum. The adjacent site is the construction of the Silver Line Transitway which is an underground tunnel connecting South Station with South Boston and Logan Airport.



Russia Wharf Building Complex



Central Artery - soon to be Urban Park



Independence Wharf



Boston Tea Party and Ship Museum. Replica of the Beaver II tea clipper.



The Federal Reserve Building



Ventilation tower for the CA/T project. Tower will be wrapped by a mixed-use building.

Site Context



View East towards Channel on Congress Street.



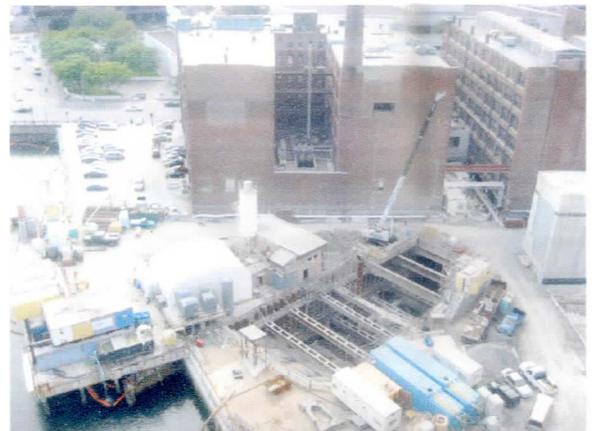
Alleyway between Tufts and Graphic Arts Building



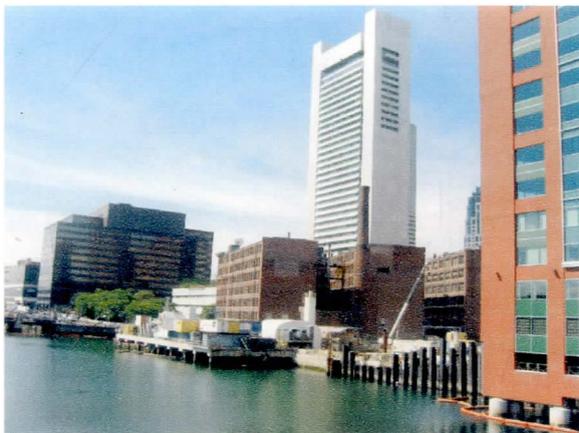
Nelson Court between the Graphic Arts and Russia Bldg.



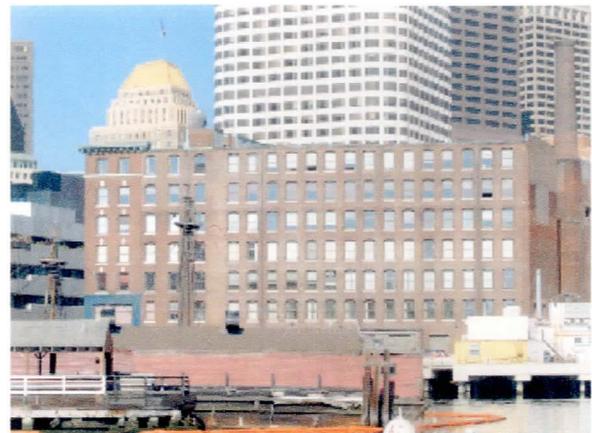
Aerial view illustrating relation to Boston Tea Party Ship and Museum



Aerial view of Silver Line Transitway underground tunnel and the view of the Russia Wharf Buildings' North elevation.



View from the Evelyn Moakley Bridge



View from the Children's Museum across the Channel with the Boston Tea Party and Ship Museum in the foreground



View from across the street at the Federal Reserve Plaza.

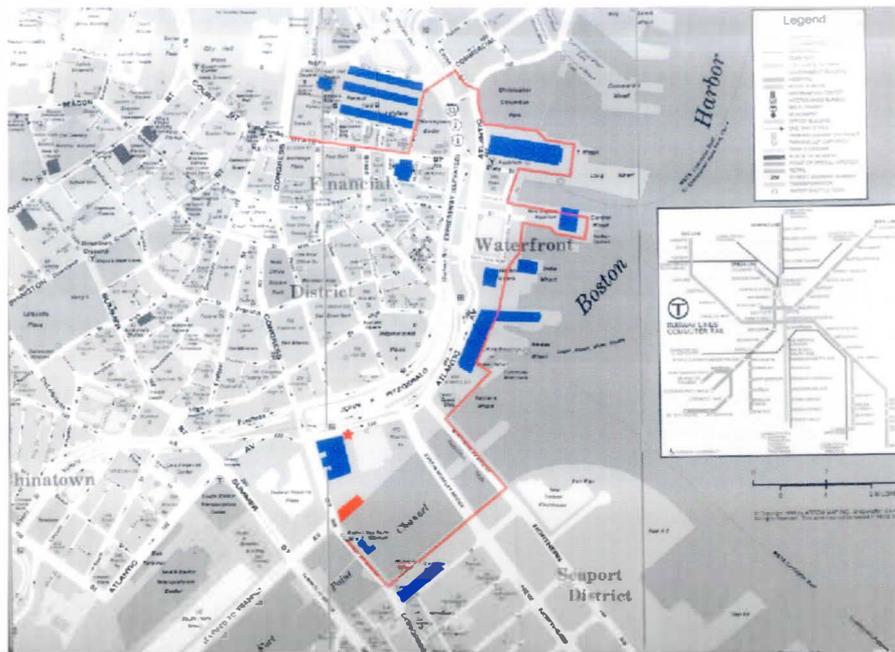


View from the Congress Street Bridge with the East elevation.

## HarborWalk



The Boston HarborWalk is 43 miles long tying the land with the water. Individual property owners along the harbor's edge are required to construct a piece of the HarborWalk when they make any changes to their property. This has been done at the proposed site. A 16-foot walkway was added to Russia Wharf.



This map marks the Wharf District's HarborWalk. It is connected to the HarborWalk system but ties together several buildings along its route which are represented in blue.



This map illustrates the sequence of spaces along the Wharf District's HarborWalk.

The HarborWalk of the Wharf District details some of Boston's maritime history and heritage. It is a self-guided 2-mile walk marked by a blue line on the pavement. The HarborWalk begins at the Old State House and takes in the following sites:



### **State Street**

In the 19<sup>th</sup> Century, this block between Congress and Kilby Streets became the center of the Merchant Exchange where sea captains and businessmen invested profits made from the China Trade.



### **Faneuil Hall Marketplace**

The structures of the marketplace are grouped around a cobblestone promenade and include Faneuil Hall, Quincy Market, North Market, and South Market. A visit to Boston would not be complete without seeing the attraction of the marketplace. The area is alive with the activity of shoppers, diners, and sightseers.



### **Custom House Tower**

The landmark was built in 1837-47 and the point where ship captains first reported upon arrival in port to pay duty on their cargoes. The tower, added in 1913, was at one time the tallest structure in Boston.



### **Christopher Columbus Park**

A waterfront park built on the site of a former poultry processing plant. Nearby are granite wharf buildings of the Mercantile, Commercial, Lewis and Union Wharves.



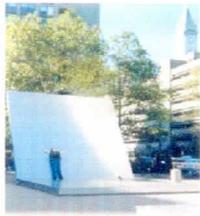
### **Long Wharf**

This has been Boston's principal wharf since 1971. The only surviving brick warehouse on Long Wharf is the Gardner Building. The wharf is the departure point for harbor cruises, whale watching boats, and service to the Boston Harbor Island. Also a water shuttle to Charlestown Navy Yard where the USS Constitution, "Old Ironsides" is berthed.



### **Central Wharf**

Central Wharf housed the New England Aquarium, which was built in 1969. The HarborWalk around the aquarium provides a good view of East Boston and the harbor.



### **India Wharf**

Where ships once sailed for the East Indies now stand two large apartment towers.



### **Rowes Wharf**

Rowes and Foster's Wharves were constructed in the early 1760's. Cruises, charters and ferry service, including the Airport Water Shuttle, operate from the wharf.



### **Fort Point Channel**

Fort Point Channel was constructed in the 1870's by the Boston Wharf Company. In the 1890s thousands of vessels passed through the channel carrying cotton, molasses, spices, wool, dye, fruit, shoes, and cattle. The channel is home to the Boston Tea Party Ship and Museum and Beaver II Ship.



### **Museum Wharf**

The Museum Wharf is home to the Children's and Computer Museums. The Computer Museum is the world first museum devoted to telling the story of the information technology revolution. At the Children's Museum are several hands-on exhibits.



### **Boston Tea Party Ship and Museum**

This is one of the three full-scale working replicas of the Tea Party Ship where Boston's most notorious protest against taxes on the Colonies took place.



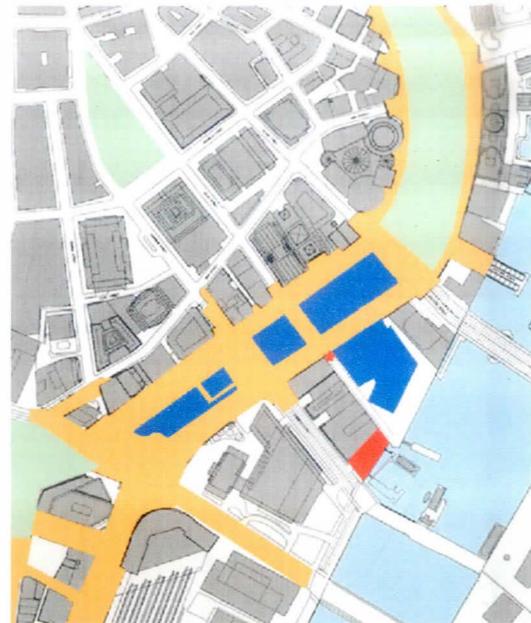
### **Rituals Transforming Cultures: Cultures Transforming Rituals**

Russia Wharf will be the future home to the Tea Importers Headquarters and Interactive Tea Museum. This project will explore cultural and ritual issues of tea through an office complex for a Tea Importing Company and an interactive museum showing the history and process of tea.

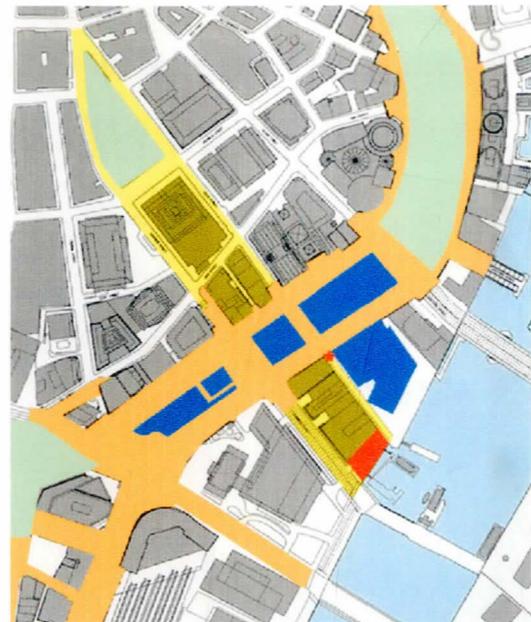
## Big Dig - Surface Area Parcels



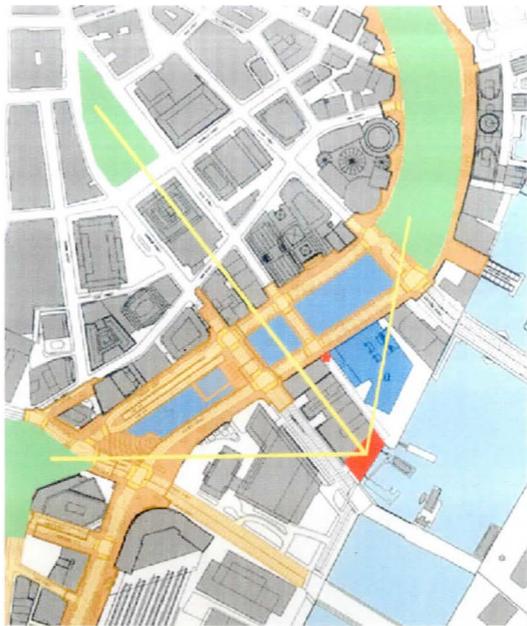
The aim of the Big Dig is to reconnect the city. This map illustrates this urban park that will create a harbor threshold from the city to the water.



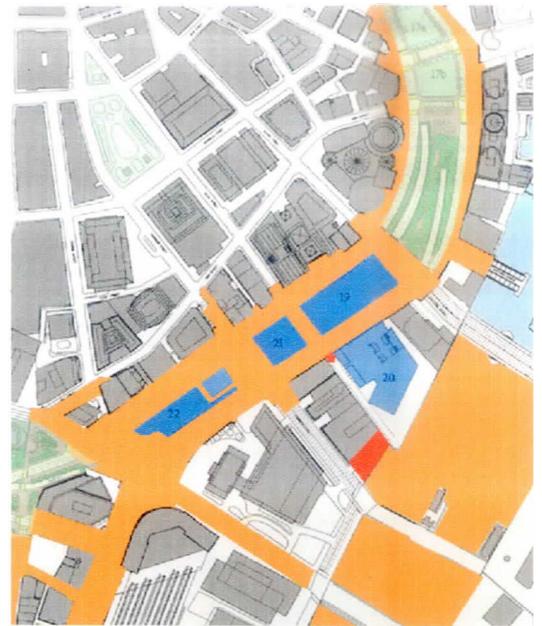
1. *Land usage* - Three elements: Green = parks; Blue = New buildings; Orange = Urban armatures/connections



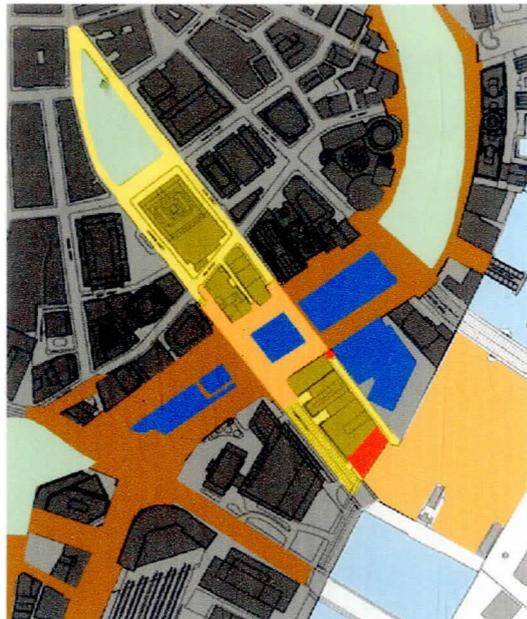
4. *Slice* - Five blocks that create an urban slice of the city as a whole. Highlighting these spaces and buildings.



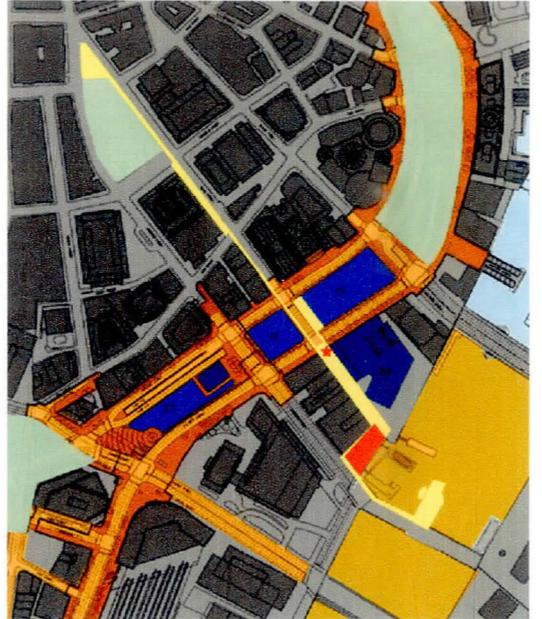
2. *Urban Parks* - Three urban spaces that are in relation to the site.



3. *In-between* - The site is in-between two bodies - the Big Dig and the Fort Point Channel.



5. *Slice (2)* - The programmatic elements that exist within this slice of the city.

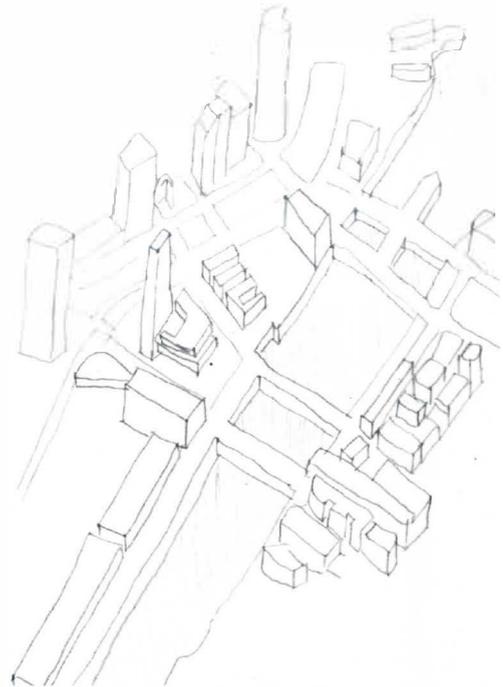


6. *Urban Parti* - Possible urban armature parti to connect the three elements to the site along with the Tea Party's historic site and to the Tea Party Museum.

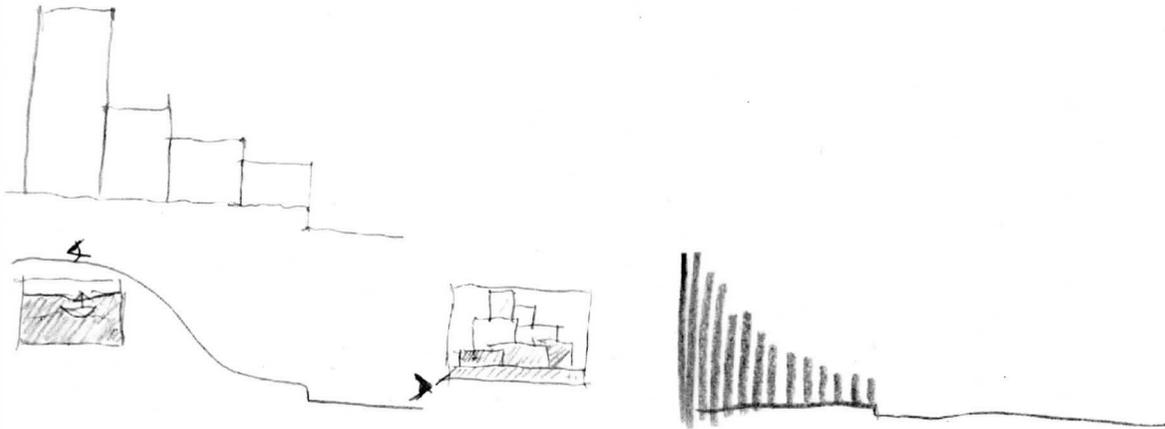
## Volumes and Sections



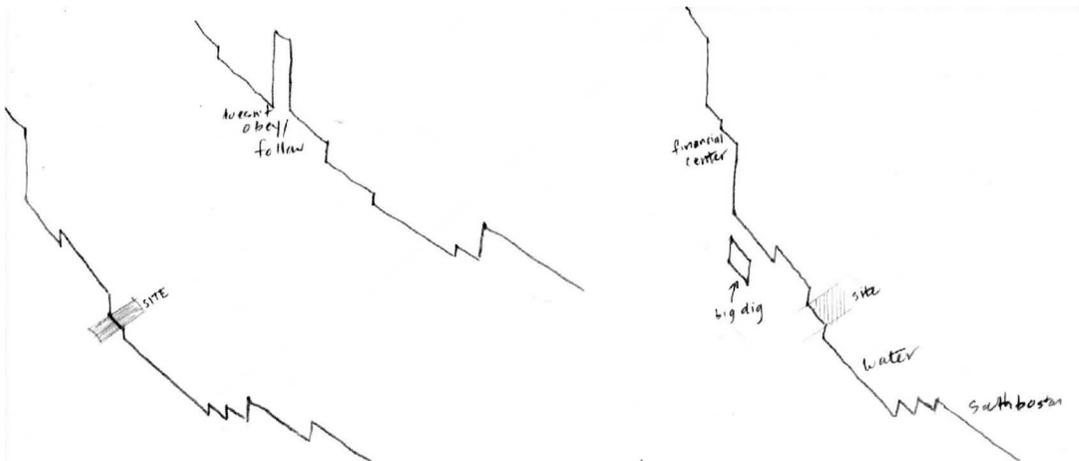
These sketches look at the site in section as well as in volume form. Putting towers on waterfront sites is dubious planning. As seen from water a good city should rise in tiers, starting with low buildings at the water's edge and gradually transforming to skyscrapers. This planning of the city would allow people in the city to gain a view of ocean and the city will suggest a family of related buildings.



Volumes - This axon illustrates the volumes and heights of the buildings that are near the Fort Point Channel and the site. This shows that the planning at this area of the city was thought of in terms of the tiering of the city.

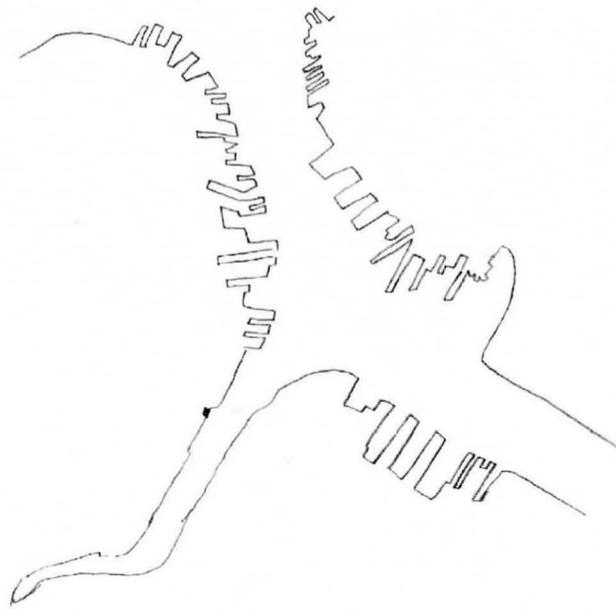


Volumes/Section - These diagrams basically illustrate the ideas of designing a city on water. As mentioned above, the idea of tiering the city is very important in terms of views to the water and from the water to the city.



Site Sections - Diagrammatic sections of the city including the site. Illustrating the tiering and what would inform the heights of the design.

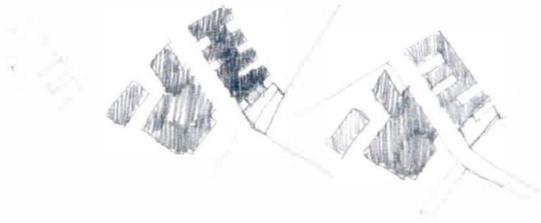
## Forms



**Wharfs** - The different wharfs that are part of Boston. No wharfs exist in the Fort Point Channel, possibility of using this vocabulary for the design?



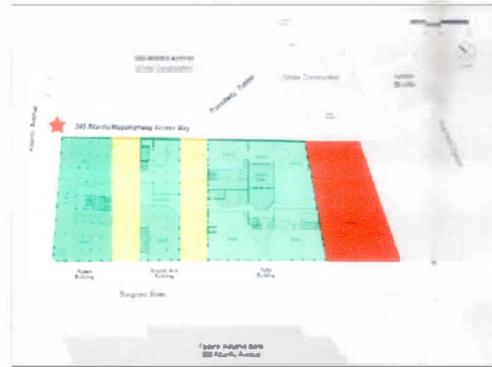
**Boundaries/Edges** - Rings of the city and edges broken up by the water and the Big Dig Park/Existing Highway. This future park divides the city from the harbor so the site is then on the periphery of downtown, but it is part of the waterfront.



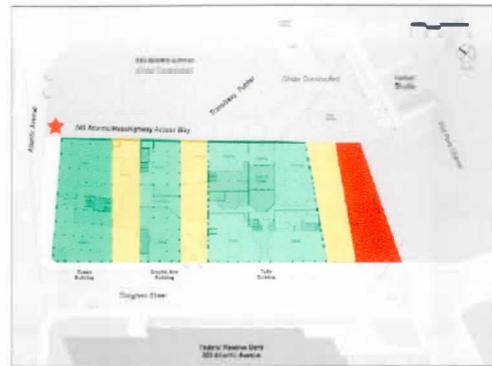
Forms - Extension of the Russia Wharf complex and overlapping. Two "E"s are created. The office part of the design can connect to existing structure and continue edge of Congress Street. The museum has a dialogue with the waterfront.



Forms - Possible form of building playing off the shapes that the building adjoins and extending into the water to create a new wharf.



Forms - Analyzing the alleyway structure between the buildings and its role.



Forms - Adding a new alleyway between Tufts Building and site to inform a repetition quality and be a public space.



Forms - Extension of alleyway to connect to Atlantic Ave. and a continuous facade facing Congress St.



The thesis began with the following phrase: When two separate elements are combined together they create something new, but the elements continue to retain their original independent memory. Thus, through the mediation between tea and siting it in Boston, the program for a Tea Importers' Headquarters and Interactive Tea Museum can come together architecturally. Tea is used as a metaphor applied to architecture as a strategy for the design of two separate programs that can combine together through the architectural issues of ritual; place making, culture, transformation, and process. This architecture will provide a cultural place for learning as well as interacting on a site that is situated in a rich history of Boston from politics to tradition. The cultural place will be thought of urbanistically through armatures to connect this program to the larger elements that are at the scale of the city, the Big Dig and the Forth Point Channel. These armatures will help with drawing the financial district to the waterfront as well as through interacting with the mediating space of the program. This program will be situated in the contemporary culture of Boston, which is changing to instigate ways of thinking and appreciation. Due to the two programs, there will be an interaction through public and private sectors. The warehouse can transform to a teahouse so both are working together with the same ideas celebrating a ritual architecturally as well as incorporating traditional materials from warehouse brick design and tea houses wood and natural materials.

The proposed program will respond to several scales. There is the scale of the site, the scale of the city of Boston, and the global scale, which examines tea trade. The program is a good choice for the proposed site. This site is strategic in the historic past of Boston located near Griffin's Wharf, the site of the Boston Tea Party. The site also has a waterfront which can be strategically developed to help revitalize the past water navigation. The Boston Tea Party and Ship Museum is next to this site, but the proposed program is different than this program of the Ship Museum. The museum has goals for teaching the history of the past and solely that of Boston's past. Tea was a part of Boston's past, but it has much more influences from its history and a museum of the history of tea is important as well as can provide a dialogue to the existing Museum. In terms of the level of Boston, the site responds as prime real estate on the water as well as situated within two large future building complexes. The site is also situated in reference to the HarborWalk, which connects the city through the waterfront. A 12-foot path has already been contracted to be the future link to the HarborWalk that is on the site. The project also responds to the scale of the city through the Big Dig and the new Surface Artery parcels influencing people to come to the campus. This site extends at a larger scale to global trade. Trade with other countries is a long process normally when there is reliance on boats. The project tries to re-tie in the history of the wharf from receiving products from Russia as well as tea in early colonial America. The Tea Importers' Headquarters will help bring back possible tea trade or sales due to the location of this program. This program will respond at every different scale.



Parti of the urban armature. The proposed site is the mediator with two poles, one the historic site of the Boston Tea Party and the other, the Boston Tea Party Ship and Museum. Both poles connect the site to the Downtown Financial District and to the waterfront of the Fort Point Channel.

## Parti Generations - The Urban Armatures

As illustrated previously, this diagram could be a possible parti for an urban armature. The site of the proposed program (red) would be a mediating zone urbanistically. The site will be the mediator between the Boston of today and the historic past of Boston. These two themes are realized through the memory of the actual site of the Boston Tea Party, which is marked as a red star. The other is the Boston Tea Party and Ship Museum, which is a cultural institution to remember this event and to have reenactments of the Tea Party

The actual site of the Tea Party in 1773 is located where the new Rose Kennedy Greenway will be and the former Central Artery once stood to separate downtown from the waterfront. This is the first urban armature to connect this future program to the proposed program. It will be an extension of space because in the Garden Under Glass there will be a Japanese garden.

The site of the Boston Tea Party and Ship Museum is in the center of the Fort Point Channel. The museum is located in the water and is the neighbor to the east of the proposed site at Russia Wharf. Fort Point Channel will be undergoing future renovations and this extension of space to connect this institution as well as the waterfront and the Channel will be the other urban armature.

The urban armatures can be designed through landscaped elements as well as ideas from the Japanese tea ceremony because materials and experience of space was important. This should be employed in these armatures because of the scale of the city; the urban armature needs to be at the scale of the individual experiencing the space. The urban armatures can be extensions of the HarborWalk as well to tie into the heart of downtown.

The final thing that the urban armatures will do is to connect the three elements that are important on this site. These elements are public parks, new buildings, and the re-design of the city streetscape. The armatures can work cohesively well with these elements. The elements add another argument for support for these urban armatures extending from the thesis site and the thesis site serving as the mediator or hub for these extensions into the city.



## Part I Generations - The Building Form

The building form needs to respond and respect existing conditions as well as making itself an independent entity that can stand on its own. The existing buildings are warehouse row buildings. The vacant lot would suggest for another building with the similar typology. Service alleyways separated the three existing buildings since they were all involved in trade so those alleyways could be used as loading docks. The program of the Tea Importers' Headquarters calls for warehouse space to store tea. The tea will have to be delivered and unloaded to that space so the continuation of the repetitive alleyways would be necessary in the building form.

The row buildings also are typical style of Colonial Boston as well as warehouse typology. They front the street with a continuous facade even though there is spacing due to the alleyways. The three buildings all are the same height, which could continue sectionally to the new program. An important idea in the form would be to bring the building to the edge of the street like the others to continue this "wall."

The historic shoreline of Boston was covered with wharves extending into the Harbor. Russia Wharf was once one of those wharves along with Griffin's Wharf where the Boston Tea Party occurred. Reintroducing this typology would encourage renewing past traditions and rituals as well as suggest the future of Boston with revitalization of trade as well as the Fort Point Channel. The urban armatures suggested as well as the already established armature of the HarborWalk tie in neatly with this building form.

In conclusion, the parti designs of the urban armatures and building form proposed are a way to generate an architecture of place making in an environment that allows the individual to fully understand a history and process through a narrative experience of tea. Rituals, place making, culture, transformation, and process will inform a dynamic design of a Tea Importers' Headquarters and an Interactive Tea Museum that will be pursued in the subsequent semester.



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## Definitions of the Architectural Issues

### rit•u•al

1. established formal behavior: an established and prescribed pattern of observance, for example, in a religion
2. actions done formally and repeatedly: the performance of actions or procedures in a set, ordered, and ceremonial way
3. unchanging pattern: a formalized pattern of actions or words followed regularly and precisely

### place

1. an area, position, or portion of space that somebody or something can be in
2. a particular geographical locality such as a town, country, or region
3. a building or area where something in particular happens or is located

### cul•ture

1. the arts collectively: art, music, literature, and related intellectual activities
2. the beliefs, customs, practices, and social behavior of a particular nation or people
3. a group of people whose shared beliefs and practices identify the particular place, class, or time to which they belong

### trans•for•ma•tion

1. a complete change, usually into something with an improved appearance or usefulness

### proc•ess

1. a series of actions directed toward a particular aim
2. a series of natural occurrences that produce change or development



