

CONTEMPLATION AND REFLECTION

by

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ABSTRACT

Yokohama-Tokyo is the biggest city in Japan. It has been developed faster than people expected. People's regular lives are based on the city transportation schedules. An egalitarian system dominates Japanese people's behavior and thought starting before birth. Because Japanese society revolves around a strict education structure, its environment becomes really stressful and competitive for everyone. Buildings are too tall for people to realize scale of themselves and the city. This urban environment has been affect people to lose their perception of their sense and of the world.

Architectural layering can and does influence humans. My project will use specific architectural layering devices, such as colors, texture, light, physical structure to create an environment which will stimulate person's mind and imagination. This unique environment will stimulate a person's sense and the world and will rejuvenate the individual as he or she reflects what life could be beyond ordinary life. Architecture is not only about how to create an essential space for reasons, but also about what happens to the world after architecture influences people with the environment.

CHAPTER 1

INTRODUCTION

When I was seventeen years old, nervous, uncomfortable, and afraid of being alone, I left my home in Yokohama, Japan. I have studied abroad the past seven years, not only in America but also around Europe. Everyday is my adventure. I desire to take as many opportunities as I can. Sometimes my adventure becomes a risk, such as my trip in Turkey. I took a local van to just see an unforgettable archeological site by myself. I was scared because nobody spoke English on the van, and I wasn't sure where I was being taken. I had no plan how to get back to my cruise, and the only thing that kept me in the van was my desire to experience the archeological site. I have never figured out where my motivation comes from, but I take risks to see the world.

I have asked my self this question: Which period of past, present, and future do people actually live in? Some people believe strongly in their history. Other people only think ahead for their prosperity. So, who lives in the present? How do people know what occurs in the world at the present?

I saw a world when I was on the top of the desert in Morocco. I felt sun, sky, sand, and my self. I looked around the desert. Nothing was there but the moment. I absorbed the space in my body, feeling it through my body, and thinking what a wonderful world I existed in right at the moment.

Today's Japan

An egalitarianⁱⁱ system dominates Japanese people's behavior and thought starting before birth. Because Japanese society revolves around a strict education structure, its environment becomes really stressful and competitive for everyone. In public spaces school uniforms represent the level of school a child goes to people easily judge private or public schools by the material and fashion of school uniforms. Some parents send their children by train to an elementary school better than some local schools, preparing the children for a competitive society. Not only these circumstances get more critically competitive along with their ages and education. Standardized examinations for high school and college are well known as a determination of one's future. Junior high school students begin to study for the exam in order to be accepted by a top-level high school. Their teachers force them to study competitively. After the exam for high school, students have to study for college. Pressure builds up continuously instead of being reduced. Also at point, students are required to decide their future; what type of job they prefer, and how much money they hope to make. After college, people compete each other to get good careers people live with this choice until they retire. Since the Japanese economy has declined along with the world economy, people have become even more serious and sensitive to their education from early ages. Although this hierarchical society reflects on their lives critically, their education should promote students to dream and to attempt to build their life rather than just to float in the flow of society.

“The problem of temporal fragmentation of modern life, the destructive effects of increasing levels of media saturation resulting in stress and anxiety, might be countered in part by the distention of time in the perception of architectural space”ⁱⁱⁱ- Steven Holl

Pace of time

“In Zen, mindfulness practice means bringing one’s complete and full attention to whatever one is doing, and maintaining that complete and full attention, moment by moment by moment, regardless of what one is doing. ^{iv}”- Tom Porter

A Japanese garden celebrates a moment and a space to relieve people from their ordinary lives. Orientations of sun and moon enrich a value of design elements, such as rocks, plants, and water, and stimulate a sense of space by alternating depths of shadows. Any time of a year, time of a month, and time of a day, the garden is filled with the design elements to provide new space and new experience as people observe the present moment. Quietness, temperature, and the view of the garden calm people’s minds; the garden becomes a place to reflect on their lives. People perceive the space by how they see the world.

“In everyday language it is often associated with opportunism, as in ‘seize the moment.’^v”- Tom Porter

Morning rush hours starts at five o’clock. Public transportation is completely crammed with people heading for business and school. Waves of people on trains, buses, and taxis. Each wave has a set speed according to time schedules. Valuable opportunities

float everywhere; however, a high density of busy people conceals these opportunities.

The pace of time built in a city never slows down to catch the opportunities.

“The only sense that is fast enough to keep pace with the astounding increase of speed in the technological world is sight. But the world of the eye is causing us to live increasingly in a perpetual present, flattened by speed and simultaneity.^{.vi}” - Davey Harvey

Scale of space

“The shadow gives shape and life to the object in light. It also provides the realm from which fantasies and dreams arise.”^{vii}- Junichrou Tanizaki

Sound, vision, and, texture determines the scale of space. Sound reflects off a stone material inside of the Pantheon in Rome, creating echoes by the shape of the dome. The vast space creates solitude to touch a spirit of the building. A central hole on the dome ceiling enriches the interior space by filling it with natural light. The reflected light on the dome ceiling contrasts darkness and brightness. It also defines the orientation of the earth through the size and location of the light. Not only the consequential history of Rome but also human’s sensibility and values of nature collaborate to establish a unique beauty of the Pantheon.

“A walk through a forest or a Japanese garden is invigorating and healing because of the essential interaction of all sense modalities reinforcing each other; our sense of reality is thus strengthened and articulated.^{.viii}” – Juhani Pallasmaa

Scale of nature, instead of pressuring people, amazes them with the strength of nature which we respect. Its scale incorporates human sensibilities via vision, sound,

smell, and texture. Sunlight comes in through a large scale of trees and enriches paths in a forest. Quietness and the sound of water calm our minds. It was used to be easy to attach our feelings to the natural scale; however, more and more our minds are tied within the manmade environment that creates an unsuitable proportion to our human scale.

With a population of between 33 and 35 million, the area comprising Tokyo and Yokohama is the world's largest megacity.^{ix} Space, like high-rise buildings, provides accommodation for people to live in the area. High-rise buildings became large wall surrounding small areas. Windows and doors on the walls are hardly noticed because of the wall's scale. Since the space became out of scale compared to human scale, people easily lose a sense of self as an individual. The shadow of oneself is invisible in the shadows of those buildings. Although these shadows change according to the orientation of sun, these shadows overlap each other without hitting ground. Making it hard to tell where shadows are coming from. Since the loudness created by a heavy traffic and millions of people reverberate off the walls I lose my focus. It is hard to hear myself so I put myself in a box to protect me from the distractions; however, this also covers any opportunities and the world I am looking for.

"I think of a city as not only as a place where the human hand forges the right balance between manmade things and nature, but as a place that nurtures innovative art and culture. In essence, a city is a place full of life.^x" - Tadao Ando

CHAPTER 2

THESIS

“Architecture strengthens the existential experience, one’s sense of being in the world, and this is essentially a strengthened experience of self. ^{xi}” – Juhani Pallasmaa

Architectural layering can and does influence humans. My project will use specific architectural layering devices, such as colors, texture, light, physical structure to create an environment which will stimulate person’s mind and imagination. This unique environment will stimulate a person’s sense and the world and will rejuvenate the individual as he or she reflects what life could be beyond ordinary life. Architecture is not only about how to create an essential space for reasons, but also about what happens to the world after architecture influences people with the environment.

I offer people the opportunity to experience, reorientation or new perception through senses. I challenge them to engage with their environment to bring what they gain into their future. The experience of anxious and uncomfortable senses creates new edge condition. It is the interface between the built environment in which people live ordinary lives and the world of nature, the world people hardly recognize as existing. I consider those two circumstances as layers where people are challenged to take opportunities into the world ahead of and around them. Understanding and utilizing the quality of architectural layering, I focus on the present time, rather than past or future. My goal is to create moments that will carry into the future.

“Edge condition in architectural terms refers to the interface between the natural and built

environment, the place where social territories meet, particularly the boundary between public and private, the edge of a space, and where different building materials and assemblies of materials come together.

^{xii}” - Tom Porter

The significance of the present is the moment of existence. It is simple to ask, but is difficult to perceive and to perpetuate the consequence of where and when we exist.

“Practically we perceive only the past, the pure present being the invisible progress of the past gnawing into the future. ^{xiii}” – Henri Bergson

Ernest Hemmingway explains how often a chance of the moment occurs in our short lives and around the world regarding in his works, such as The Old Man and the Sea.^{xiv} His powerful belief in catching a fish helped the old man to conquer a fear of death. No matter how tired he was and how dangerous fishing was, he never missed any moment to catch a fish. Even though, the story is fiction, it encourages people to inspire themselves to dream and to attempt to succeed in a limited of time in their world.

“We human beings struggle constantly with what s in our heads: this struggle within us is what pushes us forward through life. Even as we pause to taste the joys of life, we nonetheless must strive to overcome our ‘rage’ toward an irrational society. The depths of these ruminations, the intense passion they elicit, are what drive us to live. I have always believed this.^{xv}”- Tadao Ando

We depend on a pace of time to solve our problems or struggles: Time is the most powerful governance of our human world. Regardless of what is happening in our environment, at the present moment, we can find, catch, and feel who we are. It is not an

answer about a life. It identifies that we are in a process of not just waiting for time to solve our struggles, but also perceiving what life and the world is for us. Looking for the opportunities is our responsibility regarding our existence and the world surrounding us whether the answers appear or not.

“It’s the belief in the Self as the Ultimate Reality and the inner struggle of this Self is the basic fact of existence. An individual’s reality is understood as complex, ever changing and certainly not predestined.^{xvi}” - Tom Porter

CHAPTER 3

LAYERING

Through analyzing previous case studies, I discovered architectural layering as perspective, sensual, and spatial. I considered what or how each design element is determined as layering, and what sort of layering it applies to. A function of each layering stimulates individual's senses. These design elements, materials, and features in precedents support my thesis idea and architectural strategy.

“Our experience and sensibilities can evolve through reflective and silent analysis. We must try to access that inner life which reveals the luminous intensity of the world.”^{xvii} –

Steven Holl

Perspective Layering

“A network of overlapping perspectives. The old conditions of linear perspective with its vanishing points and horizon line, disappear behind us as modern urban life presents multiple horizons, hovering horizons, and multiple vanishing points.”^{xviii} – *Steven Holl*

A perspective layering of reality is right in front of us, but the one of the world is hard to look for, to catch, and to engage with. This reality is created by human-made environment, like high-rise buildings. The layering overlaps as many human-made objects build up, covering sky and creating out of scale shadows around us. Because of the overlapping, a question arises: What and where is the end of the layering? The continuity

of the layering influences us in our ordinary lives; however, many people want to examine the layering and others do not perceive it.

“In buildings such as the Barcelona Pavilion designed by Mies van der Rohe or Le Corbusier’s Villa Savoye, rooms were only partially separated from each other or from exterior space, allowing one to experience the building as a series of overlapping layers of space and opaque planes whose relationship changed as the viewer moved.”^{xix}

- Tom Porter

Perspective layering excites visitors from every angle they see in the Barcelona Pavilion designed by Mies van der Rohe. Every space is connected by perspective views, called perspective layering that fascinates visitors by experiences of overlapping perspective layering. Mies van der Rohe experienced this architectural layering from the structure of Japanese shrines.

Rooms inside a Japanese shrine are sometimes possibly separated by a traditional Japanese paper screen. It creates softness through a translucent quality that brings natural light into the interior space. To control the amount of light, those screen were built as a moveable element. Since the screen never actually separates rooms, it stimulates people to perceive a different perspective layering through those screens. It is also interesting to contemplate a location of the earth following an angle of sunlight coming into an interior space. It offers a significant moment of experience of overlapping perspective layering depending on how people perceive the space and natural light together.

Sensual Layering

“Since there has been life on earth, it is our feet which remind us we are alive. We know we exist when we feel it in the soles of our feet and all of us in infancy begin by learning to

walk.^{xx}” - Tadao Ando

Sound, sight, and touch establish a sensual layering. For instance, blending layering of colors, such as blue and yellow, is shown as one layer of green color. The quality of sound has similar effects. It depends on how sounds are heard or if they are actually listened to. In Jean Mairer Tijibaou cultural centre by Renzo Piano used wind as a natural source to create sounds as a part of his design components. Different slat widths and spacings in the exterior walls generate areas of differing porosity and resistance to air movement. Thus creating optical vibrations also enrich the building better visually.^{xxii} This sound with the optical vibrations as a sound layering, and sounds of the ocean as a natural sound layering, are intended either to overlap or to blend as one sound. This layering system not only stimulates people to hear or to listen to it in different ways, but it also becomes a fascinating construction to visitors. In the Jean Mairer Tjibaou Cultural Center Piano intended to maintain the Kanak culture before the urban area erased it. One of his ideas for the project was to use local materials in conjunction with high technology materials which he explained this way:

“In essence, the design could be said to consist of enclosed capsules of imported high-technology materials and equipment, set on a local mineral base, and wrapped around with huge husks of local vegetal matter.^{.xxiii}” – Renzo Piano

Local materials as a foundation of a structural system provide a reliability of the building for the Kanak people familiar with the qualities of these materials. It also represents the strength of the local materials as a part of their history. Based on the dependable foundation, new materials, as a new layering, are used as an exterior structure. The collaboration of those two layerings provides an interesting aspect throughout the area for visitors to experience the Kanak culture. Renzo Piano intended to create a sense by overlapping of those layerings for people to experience what they have never experienced before.

Patina is a different example of a sensual layering through natural history. For instance, Euskalduna Jauregia Conference and Concert Hall designed by Federico Soriano and Dolores Palacios uses steel panels as the exterior facade.^{.xxiv} It is an essential way to observe a contrast between where climate has influenced on the material, and where it has not. The contrast of the differences enriches the building historically and physically.

“Architecture, as all art, makes us aware of our fundamental solitude. At the same time, architecture detaches us from the present and allows us to experience the slow, firm flow of time and tradition. ^{.xxv}”- Steven Holl

Spatial Layering

“It refers to the perceived characteristics of space: the void, the nothing- ness, the ‘in between’ that when brought into existence and given shape by the solids that define its limits, becomes invested with its own apparent qualities.xxvi” - Tom Porter

The environment has changed since man built the pyramids in Egypt; however, the pyramids have never changed structurally. There are two spatial layering surrounding it: the layering built by the pyramids is a powerfully solid. The other layering is constantly adjusted by the manmade world. These layerings are not visualized clearly but can be analyzed spatially. Known as one of the world’s heritages, the pyramids represent and maintain a great history. This layering of strength and power amazes people and stimulates their lives and perception of their world. In contrast, other layering creates uncomfortable space against the layering of the pyramids. The layering of the manmade world contrasts with the ancient layerings to create a space to reflect on the way a people thought. Because now they can see and touch the beautiful pyramids, they believe strongly in the world other people used to live in. This perception makes people question the need for a newer more modern world; however, it is impossible for them to ignore the new world ahead of them. People are sandwiched between theses spatial layers. Many debate which is more important: an unchanged world or a changed world in the future.

“Architecture emancipates us from the embrace of the present and allows us to experience the slow,healing flow of time. xxvii” - Juhani Pallasmaa

CHAPTER 4

PRECEDENTS

National Museum of American Indians, Washington D.C.

Architect: Douglas Cardinal

Concept: The representation and interpretation of Indian Culture as living phenomena throughout the hemisphere

The Jean-Marie Tjibao Kanak Cultural Center, Noumea.

Architect: Renzo Piano

Concepts:

- 1, To evoke the Kanak skills in building with nature and in nature
- 2, To use traditional local materials, such as wood and stone, together with modern materials, such as glass, aluminum and state of the art lightweight technologies.

Zocalo Nomadic Museum, New York, Santa Monica, Tokyo, and New Mexico.

Architect: Shigeru Ban

Exhibit: “Ash and Snow” by Gregory Colbert

The animals subjects of the photographers and films include interactions between both wild animals and also those that have been habituated to human contact.

Structure: Shipping container walls and the biggest bamboo structure.

CHAPTER 5

PROGRAM AND PROJECT

Site area-	38,035 sq ft
Two Exhibits	8,000 sq ft
Theatre(250 seats)	2,800 sq ft
Reception + Lobby	1,500 sq ft
Café	1,500 sq ft
Store + Storage	1,500 sq ft
Office(9-10 people) + Break Room	1,500 sq ft
Meeting Room	500 sq ft
Bathroom	1,200 sq ft
Storage	8,000 sq ft
Mechanical Space	3,555 sq ft
Circulation	4,740 sq ft
Loading Place	1,500 sq ft
Total	33,495 sq ft
Figure 1.1 Program	

I propose to design a cultural exhibition hall incorporated along with the idea of 150 year Anniversary event in Yokohama city, Japan. This event caused people to think what is going to happen in Yokohama city's future, such as nature, technology, and around the world. Therefore, by following this event, the exhibition hall is intended to cause people to reflect upon their lives and the world.

Two temporary exhibits are involved. A foreign exhibit will display what people have done to influence the world. A Japanese exhibit will display what Japanese people

have done to their culture, and how they have influenced the globe. The project also includes a theater. Each performance will utilize aspects of these exhibits.

Quality and characteristic of each space

Exhibit spaces: By studying precedents, such as the Beyeler Foundation Museum by Renzo Piano and the Kimbell Art Museum by Louis Kahn, I discovered that a combination of both indirect sunlight through skylights and artificial lights can offer an adequate amount of light for visitors to enjoy the two exhibits. Also, soft materials provide a complementary background for these exhibits to be outstanding foregrounds.

Theater: By using soft materials similar to the exhibits' combined with an acoustic strategy, a smooth transition between the inside of the theater and the exhibits' spaces will be created. This will help keep the motivation and enthusiasm of the visitors up, which is important for exhibitions.

Coffee shop and Store: Since there is an amazing view to the Pacific Ocean and Yokohama Bay Bridge, made even more spectacular at night by the lights of the bridge; a coffee shop and a store keep the view by using transparent materials. This will provide the visitors a chance to relax and enjoy their time after experiencing the two exhibits, while providing them with a fantastic view. At the same time, these open and inviting spaces will attract people through the material into the building from outside.

Reception and Circulation: Since the exhibits' spaces stimulate people's minds, a reception and circulation space establish architectural layering, by using perspective,

sensual, and spatial layerings. Reception is the beginning of a new journey. The space is filled with natural sources, such as lights, plants, and water. Circulation is where people experience the architectural layerings. For instance, the inside space and the outside view are overlapped while people go through the building. Each individual senses is created and manipulated by what they experience through the exhibits and natural sources. Circulation offers a new journey for visitors but it lets people to decide where the journey goes to in their future.

CHAPTER 6

PROJECT AND DESIGN



Figure 1.2 Exterior View

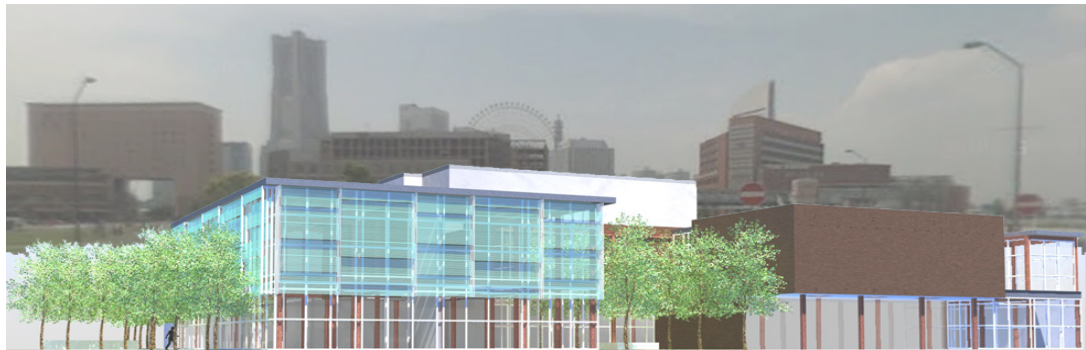


Figure 1.3 Exterior View on the East



Figure 1.4 Hall way



Figure 1.5 Exhibit Space



Figure 1.6 Entrance View

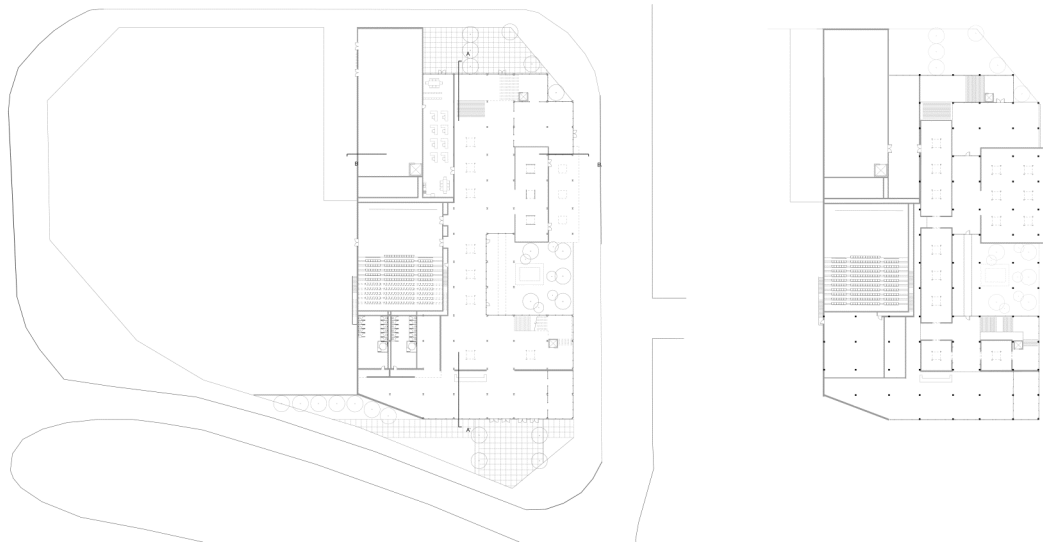


Figure 1.7 Plans

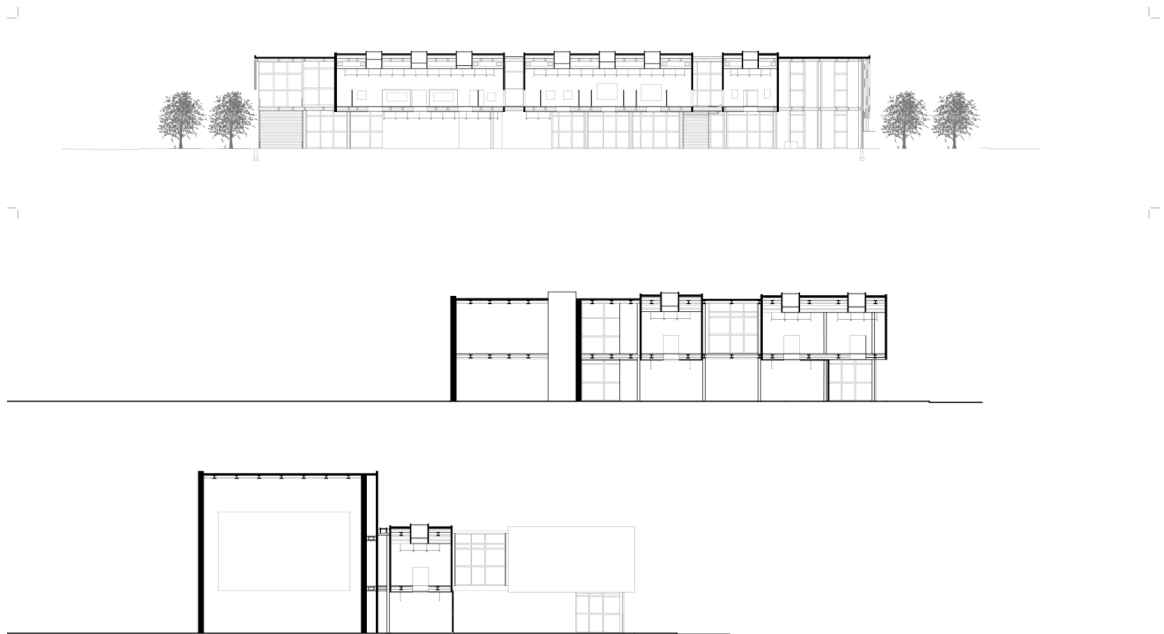


Figure 1.8 Sections

CHAPTER 7

SITE ANALYSIS

Significance of the site

Yokohama City Harbor celebrated 150th anniversary in 2009. This event focused on the future of Yokohama city. This event began at the beginning of April and lasted until the end of September. According to city information, 7.16 million people visited the city and participated in this event. Focusing on how to develop the bay side area after this event with new buildings and new landscape, I chose the site to continue stimulating people to think about their life and future.

History

- 1859 Yokohama was opened as the international harbor/ Population 482
-Western culture began to influence Japan
- 1866 Big Fire
1/5 of the area where foreign people lived
2/3 of the are where Japanese people lived were burned
The city was re-built as the modern international city.
- 1923 The Great Kanto Earthquake: Total 20,000 dead and 60,000 houses destroyed.
- 1929 Yokohama was completely recovered from the Great Kanto Earthquake.
- 1930 Hikawamaru ship made the first journey to Seattle from Kobe Harbor
- 1981 Yokohama Master Plan Project named as “Minato Mirai 21”
- 1993 Yokohama Landmark Tower opened

Figure 1.9 History

Significant Surrounding

Hikawamaru ship - the first ship of exchange students to U.S. – significant outstand as those who went to U.S. as exchange students- taking risks
 Landmark tower- the tallest tower in Japan- Close to the sky
 Passenger Shipping Terminal –Designed by Foreign Office Architects, London
 Height 50’ Length 1410’ Wide 230’

Figure 1.10 Buildings Details

CHAPTER 8

IBC

Occupancy group

303	A-1 Theater	2800 sq ft	250 seats
	A-2 Café	1500 sq ft	
	A-3 Exhibition halls	8000 sq ft	
	Reception / Lobby	1500 sq ft	
304	B Office	1000 sq ft	
	Break Room	5000 sq ft	
	Meeting Room	500 sq ft	
311	S-2 Low Hazard Storage	8000 sq ft	

Required Occupancy Separations

A-3 and B	2 hour
A-3 and S-2	2 hour
B and S-2	2 hour

Allowable Height and Building Areas

504.2 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section [903.3.1.1](#), the value specified in Table [503](#) for maximum building height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one.

506.3 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section [903.3.1.1](#),

Types of Construction

503	A-3	Type V-A	Maximum Height 50'
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Occupant Load Factors

Section	Occupancy	Program	Space Sq. Ftg.	OLF	OL
303	A-1	Theater	2800 sq ft	10	280
	A-2	Café	1500 sq ft	15	100
	A-3	Exhibition halls	2 x 4000 sq ft		15 533
		Reception / Lobby	1500 sq ft		15 100
304	B	Office	1000 sq ft	100	10
		Break Room	500 sq ft	100	5
		Meeting Room	500 sq ft	100	5

311 S-2 Low Harzard Storage 8000 sq ft 300 26

Means of Egress

1015.1 Exits or exit access doorways from spaces. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

1015.1.1 Three or more exits or exit access doorways. Three exits or exit access doorways shall be provided from any space with an occupant load of 501 to 1,000. Four exits or exit access doorways shall be provided from any space with an occupant load greater than 1,000.

1015.2 Exit or exit access doorway arrangement. Required exits shall be located in a manner that makes their availability obvious. Exits shall be unobstructed at all times. Exit and exit access doorways shall be arranged in accordance with Sections 1015.2.1 and 1015.2.2.

1016.1 Travel distance limitations. Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story along the natural and unobstructed path of egress travel to an exterior exit door at the level of exit discharge, an entrance to a vertical exit enclosure, an exit passageway, a horizontal exit, an exterior exit stairway or an exterior exit ramp, shall not exceed the distances given in Table 1016.1.

TABLE 1016.1 Exit Access Travel Distance			
Occupancy	Without Sprinkler System		With Sprinkler system
A	200		250
B	200		300
S-2	300		400

1018.2 Corridor width.

The minimum corridor width shall be as determined in Section 1005.1, but not less than 44 inches (1118 mm).

1018.4 Dead ends.

Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.

Plumbing fixtures

2902.1 Minimum number of fixtures.

Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Table 2902.1. Types of occupancies not shown in Table 2902.1 shall be considered individually by the building official. The number of occupants shall be

determined by this code. Occupancy classification shall be determined in accordance with Chapter 3.

Section	Occupancy	WC	Lavs	DF's Service	
		M/F	M/F	Sinks	
303	A-1 (280/2=140)	1/2	1/1	1	1
	A-2 (100/2=50)	1/1	1/1	1	1
	A-3 (633/2=316.5)	3/5	1/1	2	1
304	B (20/2=10)	1/1	1/1	1	1
311	S-2 (26/2=13)	1/1	1/1	1	

CHAPTER 9

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Map of Yokohama City and Tokyo: Google Earth and Google Map

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