Reclaiming the Void

The Humanization of the Space under the Freeway in Seattle's International District

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Introduction

Transportation infrastructure in our modern cities has determined the physical form of the urban fabric and dominates the image of the landscape. In dense urban conditions, rail, road and highway networks operate for the primary purpose carrying massive amounts of vehicular traffic. However, while they work to provide essential linkages within cities, these gigantic superstructures can also cause ruptures in the urban fabric that restrict mobility. They prevent the expansion of urban neighborhoods by creating the static chains of lost spaces that belong neither to the highway nor the street. Despite its massive scale, long lifespan, and the investment of materials and construction, the space underneath the structure is, for the most part, not occupied by any human activity. In Seattle, the introduction of the elevated interstate freeway into the urban core provides an example of the negative impact of infrastructure on the city. As it cuts through Seattle's urban core, the mega-structure neglects the potential of the space below. The expansion of the adjacent urban neighborhoods on both sides of the freeway has been interrupted, and activities at the human scale of the street have been discouraged.

The massive structure of the elevated freeway and the space underneath it, however, need to be perceived as a possible public resource that can reconnect the separated urban neighborhoods. While the elevated freeways create lost spaces that are socially and culturally separated from the surrounding neighborhood, they still provide physical connections in the cities divided by the freeway. They still have the possibility to connect the urban neighborhoods which they are divided. What needs to be done is humanizing the lost space, in other words, the insertion of the social and cultural value into the space under the freeway in order to transform it in to the communal space that allows the urban neighborhoods to expand and interact beyond the rupture created by the freeway.

The International District, the multicultural ethnic district to the south of downtown Seattle, is one of the urban neighborhoods that have been divided by the elevated freeway for several decades. In order to reconnect this community and maximize the human scale interaction and respond to the rapidly changing urban phenomena, the static mega-structure of the elevated highway needs to be reconsidered in a way that responds to the culture and social life as well as the development of the International District. The opening for through traffic and the void associated with the space underneath need to be treated in a careful manner in order to achieve a high level of connection as well as blend between this infrastructure and surrounding fabric. Instead of simply filling in the vacant space, the void created here needs to be considered as the driver of physical connection and expansion. The activation of the inherent openness and fluidity of the space underneath is the key that enables the mega-structure to evolve as a linkage for the community and eventually contribute to the street life connecting the entire culture of Seattle's International District.

1. The Infrastructural Cuts and the Cities

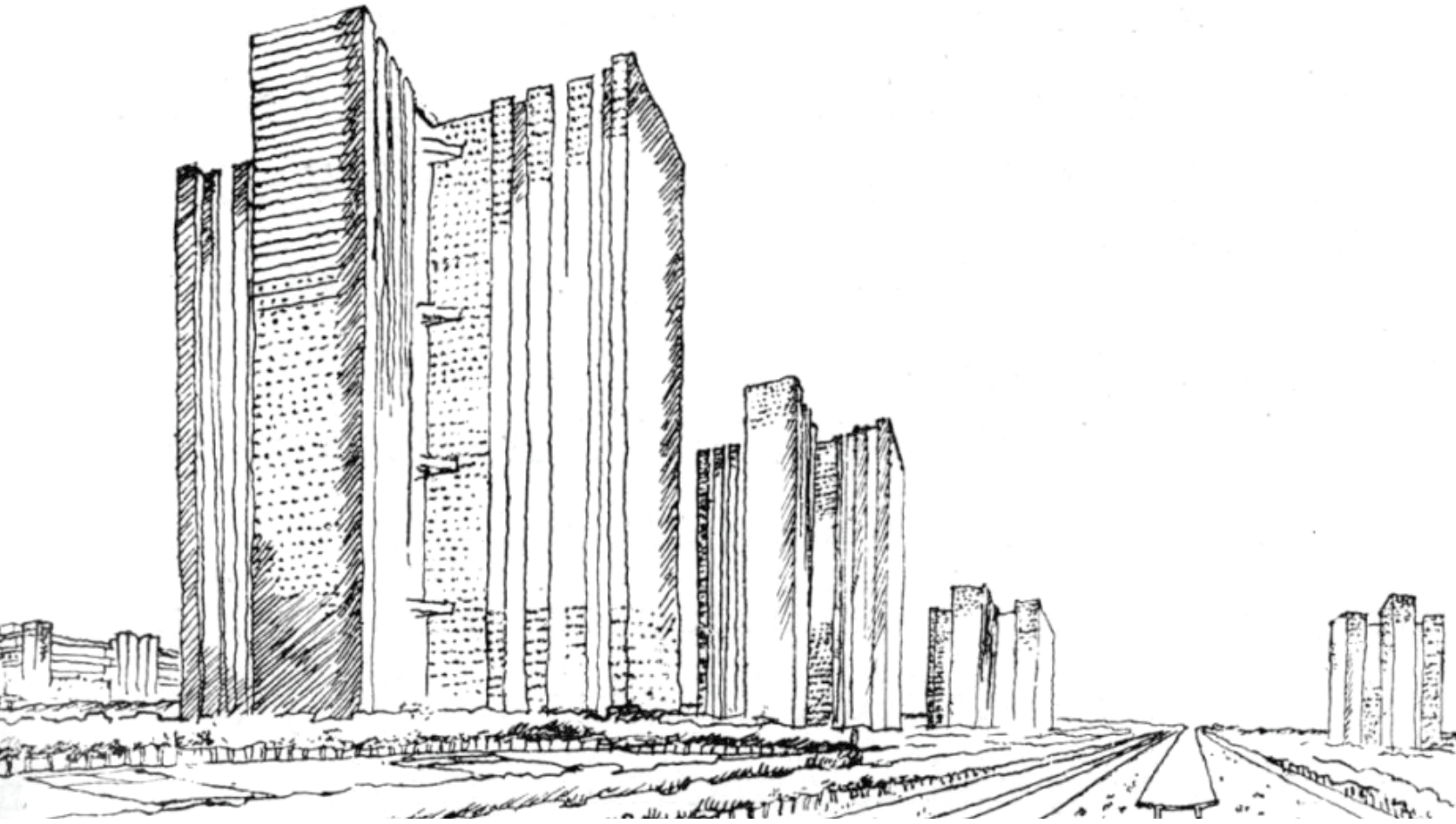


Figure 1.1 Motor-tracks in Le Corbusier's scheme "A City of Towers" in 1923

Infrastructure as Engineering

The history of transportation infrastructure is intertwined with the development of contemporary cities. However, the design of the large physical networks of roads usually falls into the realm of engineers. Typically architects and designers have neglected it, intimidated by its immense scale geometric complexity, and handed its authority to the engineers. Early in the twentieth century, the possibilities that modern highways could offer was evident in the theories and projects of modern planners such as Haussmann and Le Corbusier. (Figure 1.1) Nevertheless, as Gabriel Dupuy notes, "they were always approached mostly through a technological bias, leaving the technical decision for the engineers without understanding all its social significance, their spatial range and its strategic territorial capacity."[1] This kind of approach not only resulted in the specialization of the infrastructure design as a technical discipline for the engineer but also limited architects from reengaging in both the systems themselves and their associated urban context. In the article *Connecting infrastructure and urbanism*, Heraldo Ferreira Borges pointed to a practice divided between the disciplines of architecture, urbanism and engineering. He claims that engineers still consider the infrastructure as their "private hunting ground," while architects and landscape architects only usually participate in the latter stages of construction to either celebrate or decorate the elegance of the geometric form.[2] This division between disciplines has influenced the lack of approaches to linking the gap between infrastructure and the urban fabric.

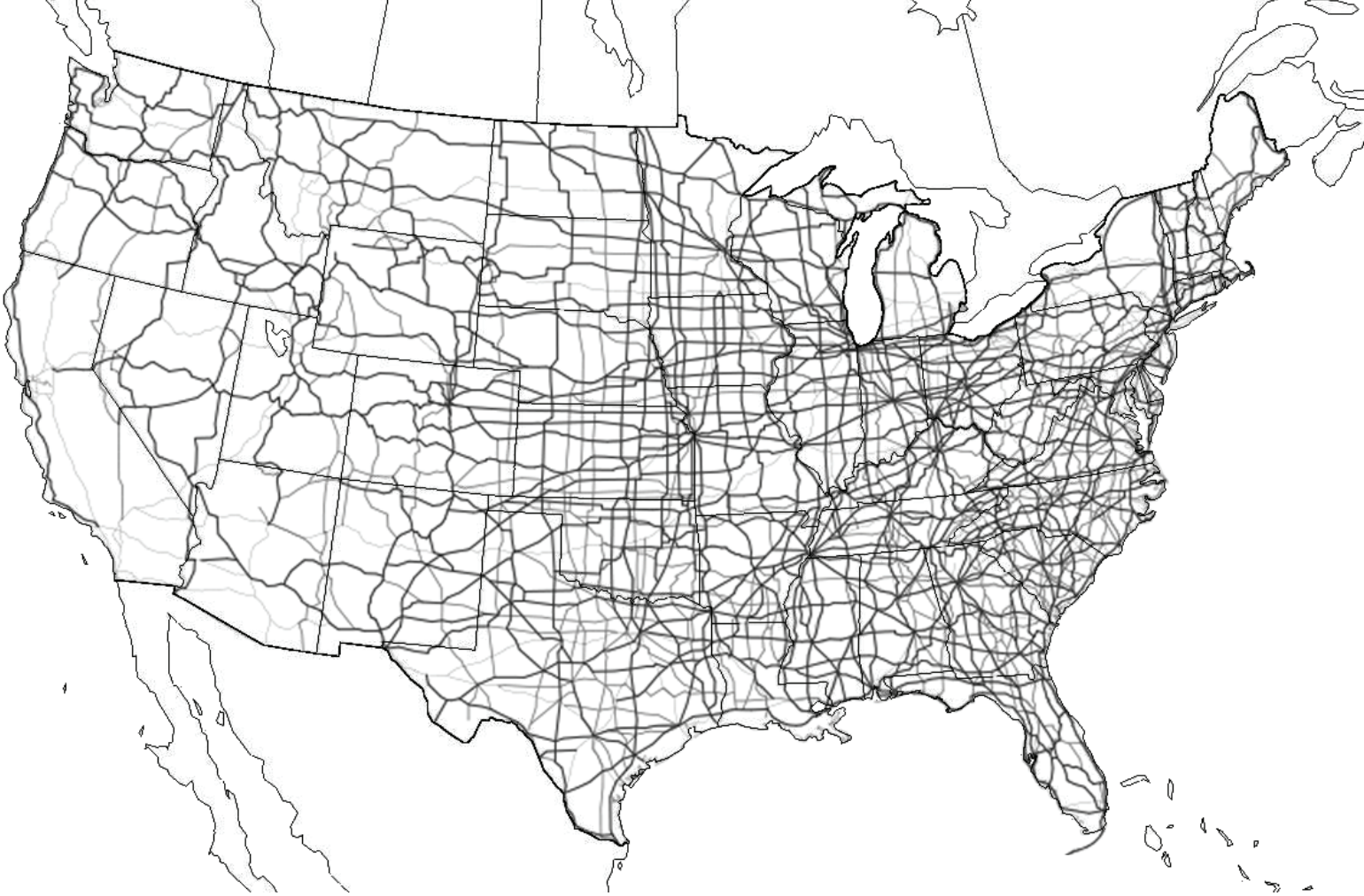


Figure 1.2 Freeway Network in the United States

Fragmentations of Cities

Most of U.S. freeways are part of the Interstate highway system, the pragmatic network of roads which was first conceived during the Roosevelt administration in 1937 and started its construction in 1956. This technocrat system is all about standards and homogeneity relating to the specificities of the materials and geometries of roadway planning. As Kelly Shannon and Marcel Smets note, “over time, improved efficiency required levels of compatibility, interchangeability, and commonality – eventually leading to the adoption of uniform procedures, dimensions, and components.”[3] When this system came into cities, it superimposed its own standard and regularity into the urban fabric. (Figure 1.2) The adoption of standard dimensions and elements was necessary for safety and efficiency. The authors further explain:

> *The modern network – an amorphous connective web of roads, highways, railroads, ports and so on that crisscrosses the land with relative indifference to geography – has been set up predominantly by engineers, in accordance with an autonomous logic or performance and technical requirements.* [4]

While this highway infrastructure was intended to support the development of cities, at the same time it was gradually disconnected from the surrounding environment and eventually became an inclusive system only serving vehicular traffic. Often times, the construction of this infrastructure gave very little consideration to the communities in the path of the new roads, hence generating problems by interrupting the continuous urban fabric and pedestrian life. Although the highway was designed as an intercity network, it was not designed to respond and adapt to the complexities of the city. It was simply designed for vehicular traffic to move from point to point without any interruption. As it was only designed to follow this single function, the structure is not capable of integrating with any urban neighborhood.

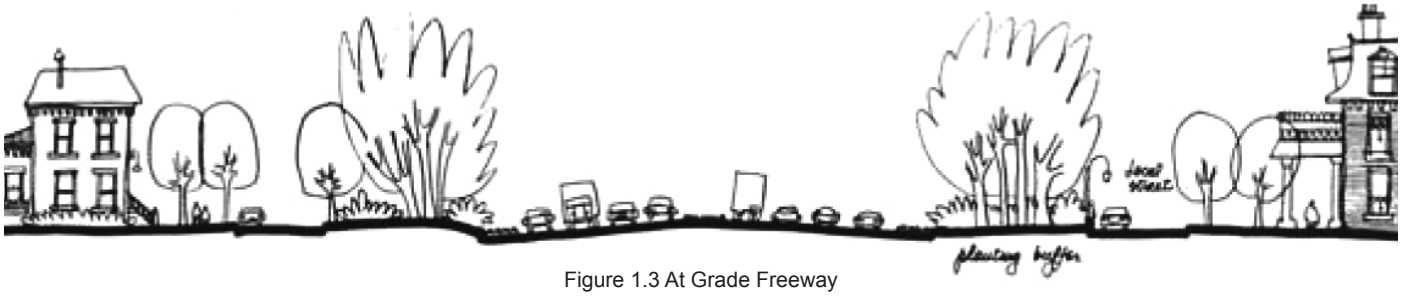


Figure 1.3 At Grade Freeway

Figure 1.4 Depressed Freeway

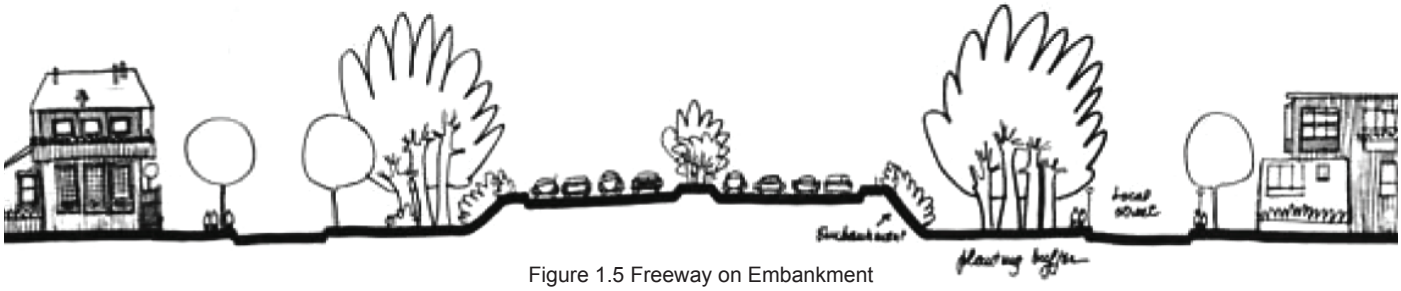


Figure 1.5 Freeway on Embankment

Elevated Freeway and Birth of the Lost Space

In American cities divided by freeways, however, there is a possibility to reconnect our urban neighborhoods. When the system of freeway comes into the dense urban cities, the manipulation of elevation of freeway has been done in order to weave into the urban fabric. The freeway can be categorized into 6 types when this massive infrastructure comes into the city. (Figure 1.3 – Figure 1.8) Among them, the elevated freeway and underground freeway are the only structures which least disrupt the physical connection of urban fabric. (Figure 1.6 - Figure 1.8) Such physical connection of the urban fabric is still possible because of the structures of freeway are either elevated or buried underground. Typically when the massive structures of freeway come into the city, they are elevated in order to maintain a continuous high speed flow of movement of the vehicles and minimize disruption to the urban fabric. According to Brian Hayes:

> *On a two-dimensional surface, it's an obvious fact of life that whenever two roads cross, there must be some patch of pavement that belongs to both of them. One way or another, the roads have to allocate access to this shared territory, usually by having driver take turns. The only way to eliminate this contention for the right-of-way is to escape into the third dimension.*[5]

Hayes described that this third dimension usually consists of a system of overpasses and underpasses that allow traffic to cross the freeway at different levels. In comparison to the construction of underground tunnels, the erection of elevated freeways is relatively cheaper and faster. Different from addition of at-grade roadways, elevated structures require less

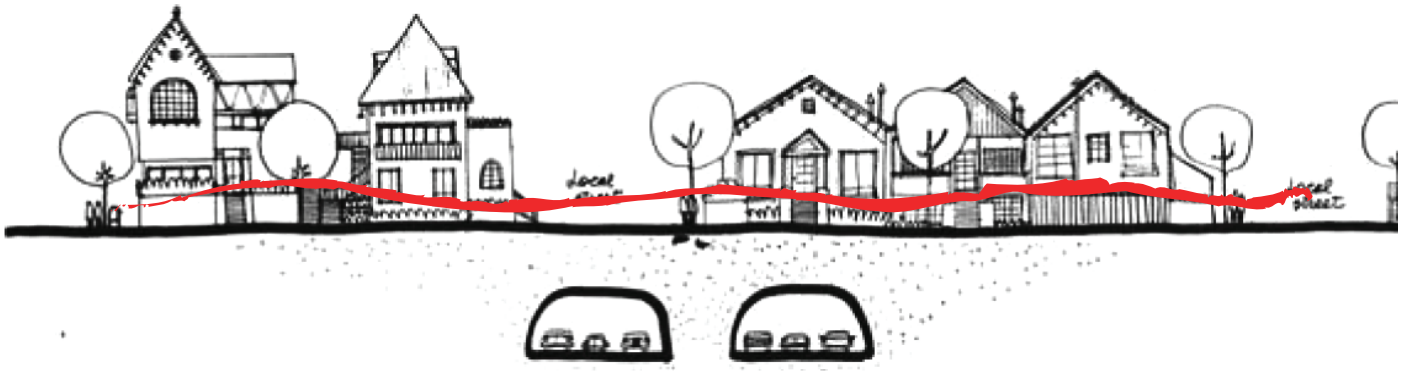


Figure 1.6 Underground Freeway

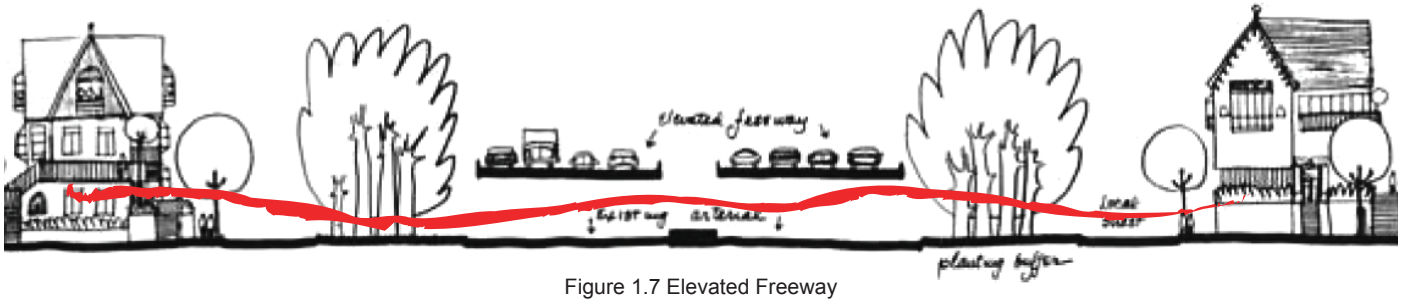


Figure 1.7 Elevated Freeway

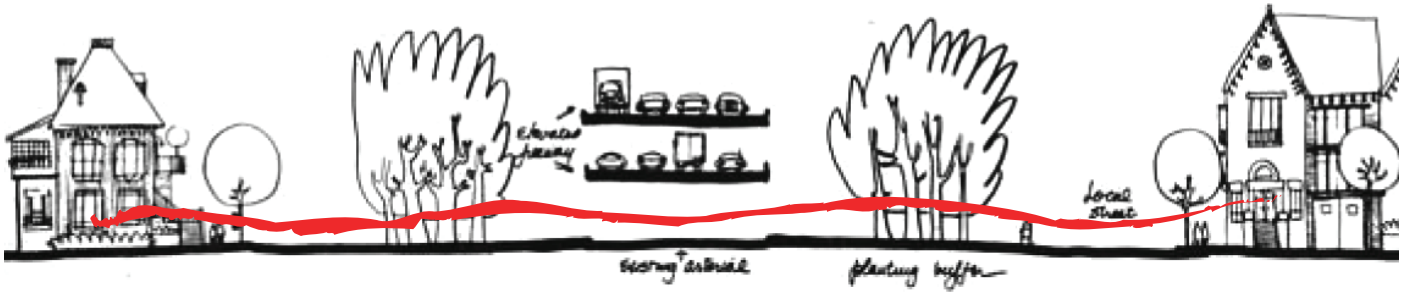


Figure 1.8 Elevated Stacked Freeway

removal of the existing built fabric around it. The freeways are then elevated with the belief that it will be the most cost effective solution that will improve the connection between points while preserving the existing urban fabric in the city.

Unfortunately, despites these good intentions in the design of elevated freeways, what they have given to the urban fabric are a static chain of lost spaces. Generally speaking, these lost spaces are the undesirable urban areas which have no positive contribution to the surroundings and fail to connect elements in a coherent way. [6](Figure 1.9) The space under the elevated freeway can be considered such a space because of its poor lighting, traffic noise, and the low head room. This kind of condition has made the space undesirable for inhabitance and decrease the land value of the space and area adjacent to the freeway. This decreasing of land value eventually results in the vacancy which is commonly seen as a rupture of urban fabric.

Figure 1.9 Vacant Land under Freeway

Vacancy and Land Value

Vacancy or the absence of human control in our cities is not quite acceptable in contemporary cultures. The accumulated trashes, weedy vegetation, deteriorating fences, and the occupation of marginal groups under the freeways or bridges are understood in contemporary culture as “human failure made tangible in an anthropomorphized landscape.”[7] As Carla Corbin argues in most cultures, landscapes are seen as commodities and are valued either in terms of their aesthetic value or their function and productivity.[8] In his extended essay *Ephemeral Places*, Grady Clay writes “American myths do not accommodate easily to voids” and “to fill up empty spaces with homesteads, railroads, and activity was considered the proper thing to do.”[9] When a culture confronts a vacant or empty space, there is the urge to fill in and to assign it a function based on what value can be assigned to the land or what can be produced or extracted by cultivating it. Otherwise land is considered difficult to manage and classify. This is the reason why vacant lots under the freeway get paved over and zoned as parking lots. (Figure 1.10) The pavement holds the vacancy for some future notion of progress, while providing some means of financial support in the form of a daily fee. This illustrates an economically driven obsession with land value that results in the imposition of officially use over the informal use of the space. Although the parking lot is considered more functional and economically productive, it is lacking in any sense of cultural or social connotations. As Rogers Trancik observed, “instead of acknowledging and exploiting these characteristic kinds of space we make them into parking lots or feeble patches of grass – no man’s lands between the scale of the region and the locality.”[10] Instead of seeing them as a possibility, we have focused on their economic value, creating vacancies that carry a negative connotation. Thus, many spaces underneath the freeway continue to exist as a rupture in the urban landscape.

Figure 1.10 Parking Lot under Freeway

The Void and the Connected Ground

Despite the negative connotations associated with it, the vacancy or void can also represents positive alternatives. Ignasi de Sola-Morales Rubio, an architectural theorist interested in the form of absence and void in the contemporary urban cities, writes about the concept of “terrain vague.” This French term refers to the roots of the word meaning “empty, unoccupied” as well as “free, available, unengaged”.[11] Through this concept, he describes the particular positive role that “empty” spaces or voids can play in the city. He writes that:

> The relationship between the absence of use, of activity, and the sense of liberty, of expectance, is fundamental to understanding the evocative potential of the city’s terrain vague. Void, absence, yet also promise, the space of the possible, of expectation.”[12]

Therefore, the void under the elevated freeway can also be considered as such possibility. It is the voids that allow the continuation of field, the horizontal surface connected to the surrounding fabric. According to Stan Allen, openness, blankness, and emptiness are the conditions that indicate the existence of the field which is the horizontal ground plane connecting vertical elements in the city. Openness refers to “unobstructed, accessible without restrictions or physical impediments” and blankness refers to

“openness, but more specifically describes an unbroken surface.”[13] Thus the elevated portion of the freeway provides the condition for the field or the ground plane of the city to continue. In other words, the opening under the elevated freeway has realized a field and allows the continuation of the cross traffic of the street. The ground surface underneath the freeway is the “expansive surface condition” which has “the capacity to multiply forms of connectivity.”[14] Therefore, the expansion of this opening can maximize the connection from one neighborhood to another. The more the space underneath the freeway is kept open, the more the field can expand and can reconnect the fragmented fabric. The space under the freeway needs to be kept open for the elevated structure to be able to engage in the flow of the city expansively instead of avoiding it. It is not a mere opening for the cross traffic but the potential connector for the divided urban communities. Unlike voids in the buildings which are defined by vertical walls, the opening underneath the freeway is defined only by the overhead canopy open to the two opposite sides of the elevated structure. In addition, it will not be occupied by any vertical element as these structures have little prospect for commercial or residential development. Therefore, its opening will remain as the potential for urban connection and the fluid flow of human traffic as well as the space for city to flow in.

Summary

As a part of the transportation infrastructure running through the urban fabric, the elevated freeway is the technocrat engineered structure devoting its life to the flow of automobiles. The consequences of this giant infrastructure are the massive number of voids underneath it and the fragmentation of urban neighborhoods. These voids have become the dead space having no contribution to the surrounding urban lands. However, the void means the possibility of intervention. The voids under the structure of freeway present the possibility to reconnect urban neighborhoods as it can provide a maximum street crossover and pedestrian flow at grade level. They are few places where the ground of urban neighborhood is still connected. They provide the possibility to continue the human activities and the possibilities of territorial expansion.

In the urban environment that is divided by the freeway, neglecting what the elevated freeway has provided to us is the waste of opportunity. The very fundamental potential of the elevated freeway is what needs to be recaptured in order to connects the urban neighborhoods and add more cultural value to the elevated structure. If the urban fabric is extended into this void instead of stopping in front of it, the lost space can become a part of the urban communities. If such placeless land can be the extension of the communities on the different sides of the freeway, the underpass is no longer the boundary but the connection of the separated neighborhoods. The new form of urban expansion and the possibility for the new city is in this void.

2. Fusion of Infrastructure and Urban Fabric

3 Ways of Occupations

In order to use the space under the freeway for connecting the city, it is inevitable to study the way to humanize such spaces and the resultant blend of urban fabric and transportation infrastructure. The example of the blend of architecture under the transportation infrastructure can be found throughout the world. The Promenade Plantée and Highline are some famous examples. The main focus of these precedents, however, is the preservation of beautiful or historically important infrastructural artifacts which are no longer in use. As the emphasis on historic preservation is not relevant for creating connections for the city, the thesis instead focuses of the humanization of elevated transportation infrastructures which are still in use. Such precedents are found in Japan where many space under the transportation infrastructure is humanized due to the lack of lands.

While interventions are done under both freeway and railway in Japan, many interventions are found under the railway which is the main transportation infrastructure of the country. Studying the occupation under the elevated structure of the main transportation infrastructure of Japan is therefore, a reasonable approach that informs the way to connect the city through the occupation of the space under the freeway, which is the main transportation infrastructure in the United Sates. By analyzing these interventions and occupations under the railway viaducts, three typologies can be observed. They are the extension of the storefronts, the infill in the engineered structure, and the utilization of the inherent bigness. These typologies are the way of occupation that utilized the existing conditions of either the urban fabric or the space under the freeway. These are the intervention that informs a strategy for inhabiting under the freeway.

Figure 2.1 The Extension of Storefronts facing the Main Street

Type 1: The Extension of the Storefronts facing the Main Street.

In the dense area in Japanese cities, many storefronts are brutally continued under the viaduct of the elevated freeway. This type of intervention depicts an extremely strong sense of connection because it physically extends the conditions of surrounding buildings, especially the storefront conditions, and makes the space under viaduct as a place for human activities. The key element in this type is also the existing street under the railway connecting both sides of the city. The storefronts extending in and out the space under the railway usually face the existing main street which already provides the cross traffic, in other words, the existing connection in the city. A strong sense of connection is created because of this relationship to the existing linkage.

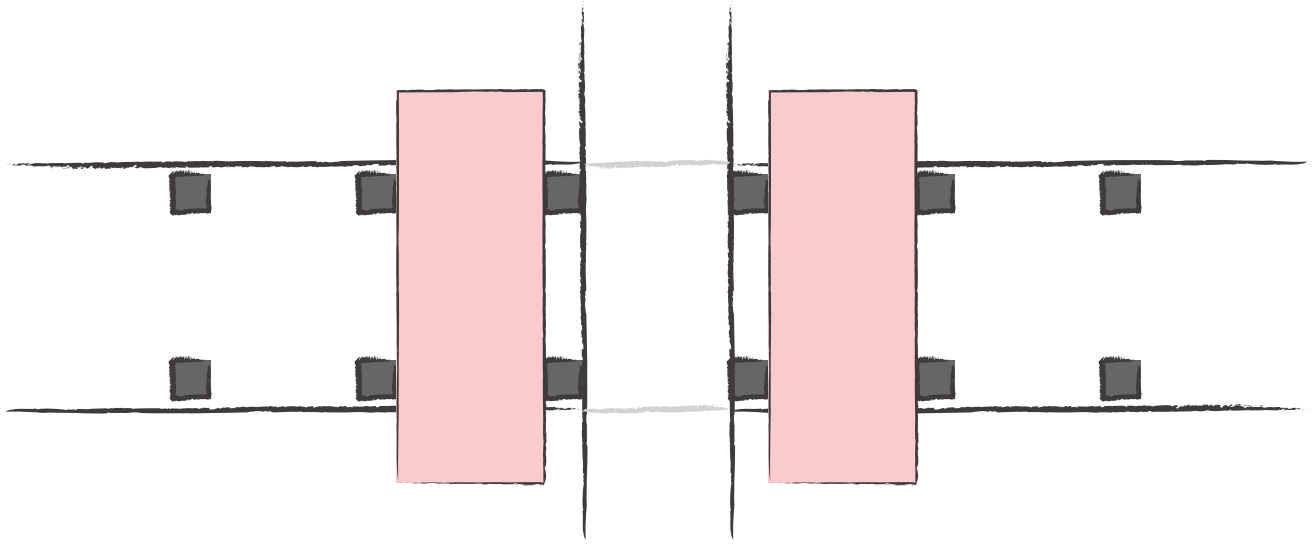


Figure 2.2. Type 1 Diagram

Figure 2.3 The Infill in the Engineered Structure

Type 2: The Infill in the Engineered Structure

The housing units which are inserted into the space under railways are one of a noticeable phenomenon under the Japanese viaducts. This is the intervention taking advantage of the existing order of the structure of the elevated railway. The insertion of two to three stories buildings under freeway is the site specific approach where human spaces adapt to the form of engineered infrastructures. Although it is not about the connection of the city, this type definitely depicts a high degree of coexistence of human space and the transportation infrastructure.

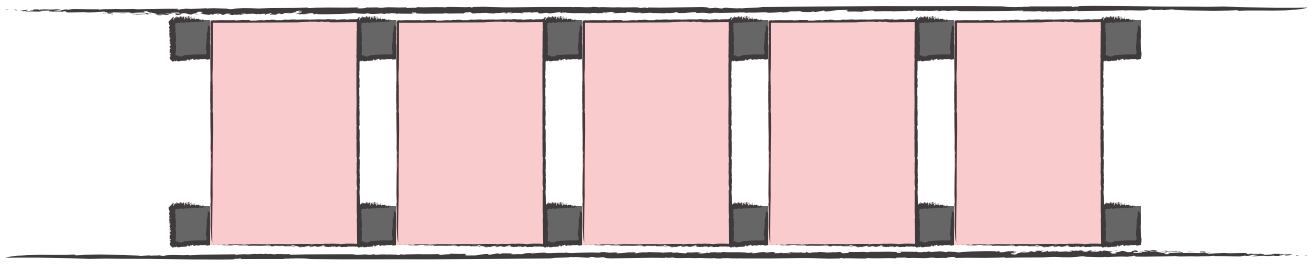


Figure 2.4. Type 2 Diagram

Figure 2.5 The Utilization of the Inherent Bigness

Type 3: The Utilization of the Inherent Bigness

Using the space under the elevated transportation infrastructure for the park can be found in many places in urban cities around the world. Skateboard parks, play fields, and basketball courts are among the most common and popular approaches. While they are not necessary the extension of the surrounding urban fabric and built environment, they are taking advantage of the inherent openness and existing bigness of the giant space under the viaduct. This is the empowering of the fundamental spatial quality of the space created by the elevated transportation infrastructure.

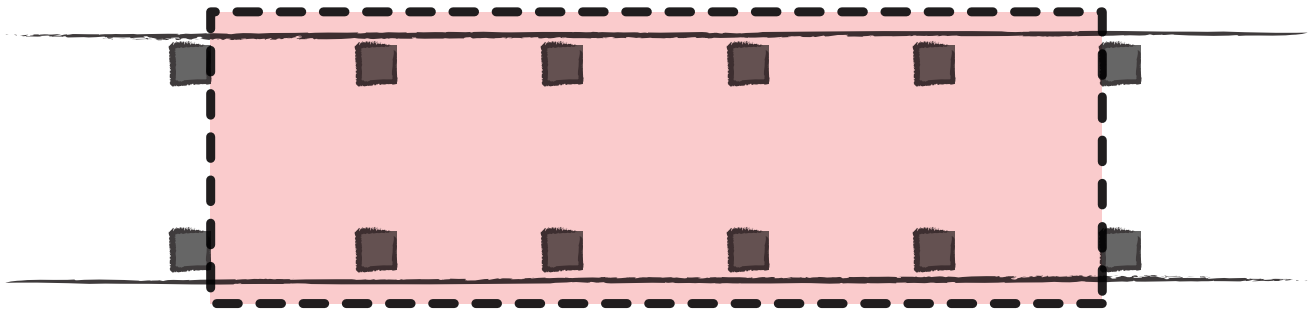


Figure 2.6. Type 3 Diagram

Type 1 + Type 2 + Typ3

The 3 ways of occupation have indicated the different degree of blends between human spaces and dehumanized space. However, in order to live in the void successfully, the intervention should not only connect the urban fabric but also correspond to the spatial quality of the space under the freeway. Such action respects the investment of materials and construction as well as history that have been involved in the creation of this massive work of the human being. Furthermore, as the city is the system about interdependencies, where characters of different elements are continuously renegotiated, the blend of two spaces indicates the evolution of cities. Therefore, the simultaneous accomplishment of all conditions in these 3 typologies is the ideal way to occupy and humanize the space. This coexistence between human spaces and dehumanized space are shown in the two case studies.

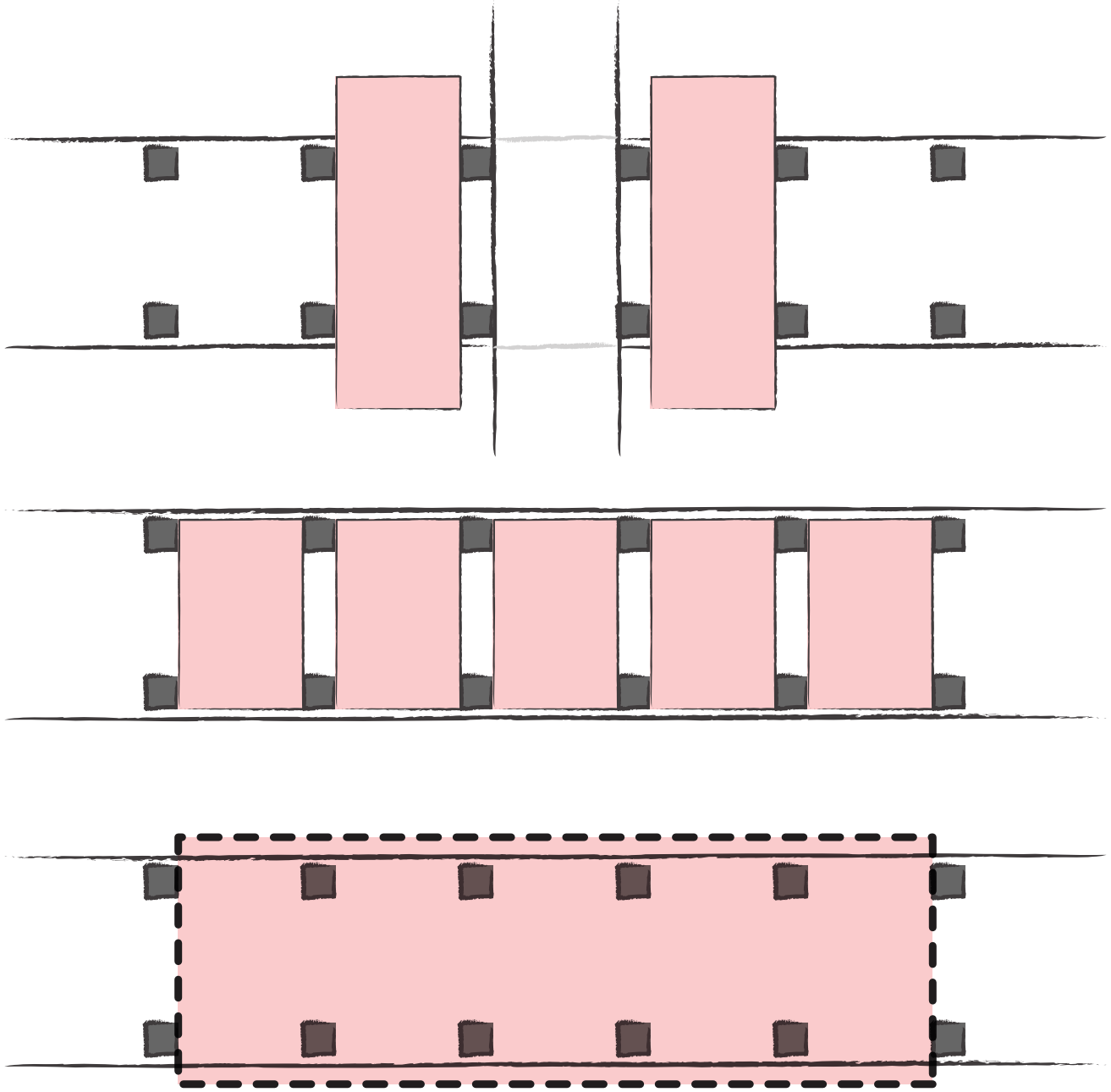


Figure 2.7. Type 1+ Type 2 + Type 3 Diagram

Figure 2.8 2k540 Aki-Oka Artisan (Entrance)

Case Study 1: 2k540 Aki-Oka Artisan

The project is an insertion of series of art and craft stores under the railway viaduct located in Tokyo, Japan. The space is located right in the middle of two cities, Akihabara and Okachimachi, which have been connected by a train line for decades. The stations of the cities are relatively close to each other within 20 minutes walking distance and have been the center for craft and arts in the communities. The project takes advantages of the vitality which already exists and further reinforces the local identity by drawing from the existing energy. As the result, two cities are not only connected by train but also connect by foot.

By taking advantage of the energetic activities of the adjacent neighborhoods, the space under the elevated freeway in the United States could also be able a link for the divided communities. However, unlike 2k540 Aki-Oka Artisan creating the sense of connection which is already provided by the structure of the railway, what needs to be done for the freeway is rather the reinforcement of the sense of connection created by the void under the elevated structure. In short, the humanization of the space under the freeway should not be the reinforcement of the sense of connection parallel to the figural scar. Instead it should be the reinforcement of the linkage parallel to the street through the void bridging what divided by the figural scar.

Figure 2.9 2k540 Aki-Oka Artisan (Street View)

Figure 2.10 2k540 Aki-Oka Artisan (Craft Stores)

Figure 2.11 2k540 Aki-Oka Artisan (Corridor)

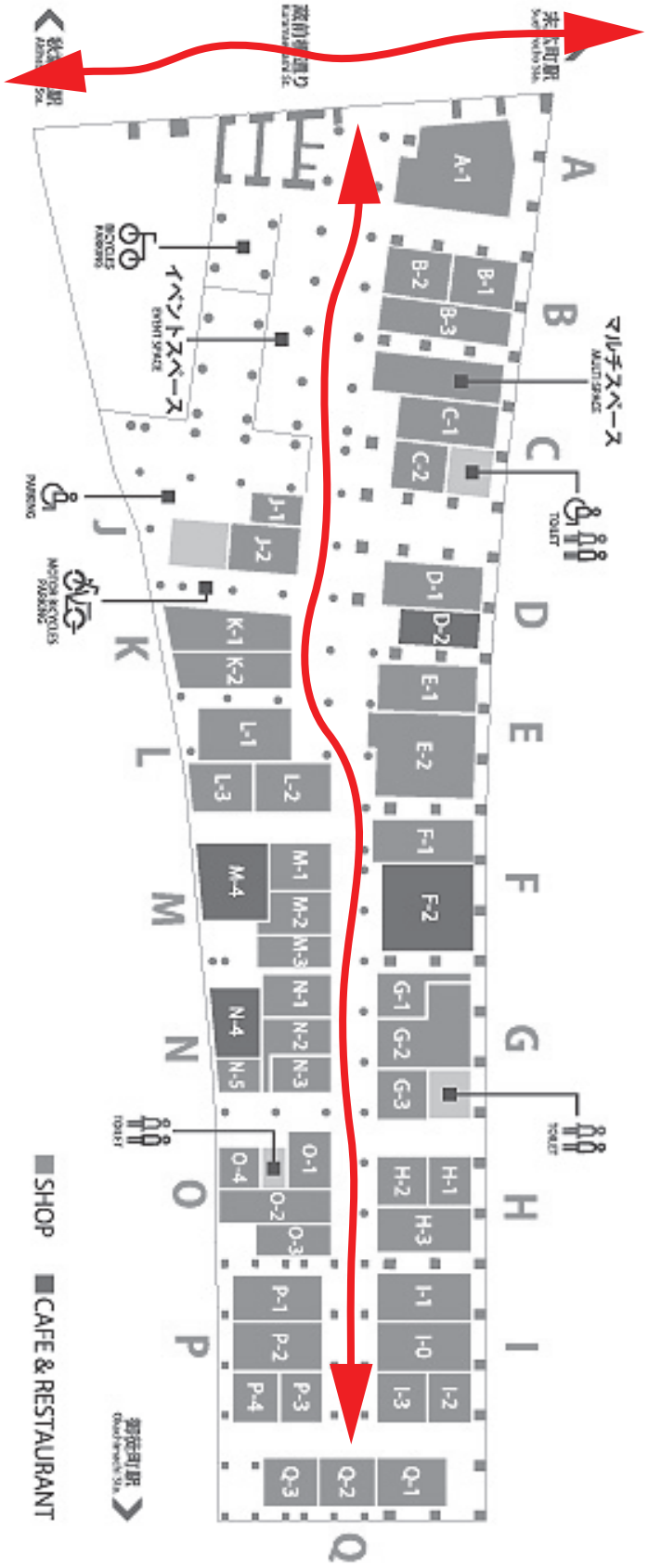


Figure 2.12 2k540 Aki-Oka Artisan (Plan)

Figure 2.13 Koganecho Bazaar (Street View)

Case Study 2: Koganecho Bazaar

This project is a community market and gathering place located in the south part of Tokyo, Japan. Like the previous case study, the project also consists of retail and work spaces for the artists and craftsmen. However, unlike the enclosed atmosphere of 2k540 Aki-Oka Artisan, Koganecho Bazaar is more about the seamless connection between inside and outside spaces, and of artists and residents. Especially at one end of the project, there is a manipulation of the floor surface creating the field platforms that allows the public to easily flow in. It is the ground plane that is powerful enough to redefine the sense separation created by the elevated infrastructure. What can be learned from this project is that the simple use of ground floor and the frame of infrastructure could create a space of public activities of human scale.

In order to connect of the urban land bisected by the freeway, it is important to extract the strengths of each case study. This is the way to extend the life of urban fabric while maintaining the power of the bigness of the space. The order of the city grid, the order of the freeway structure, the human scale space and the bigness of the space underpass are the qualities that need to be dealt with simultaneously in order to achieve a high degree of hybridization that allow the coexistence of both freeway and urban communities. The solution is inevitably the intervention that creates a space for human activities, urban landscape, and transportation infrastructure simultaneously. Such nexus is the key to the development of our city and the hint for a new urbanization.

Figure 2.14 Koganecho Bazaar (Community Market)

Figure 2.15 Koganecho Bazaar (Performance Stage)

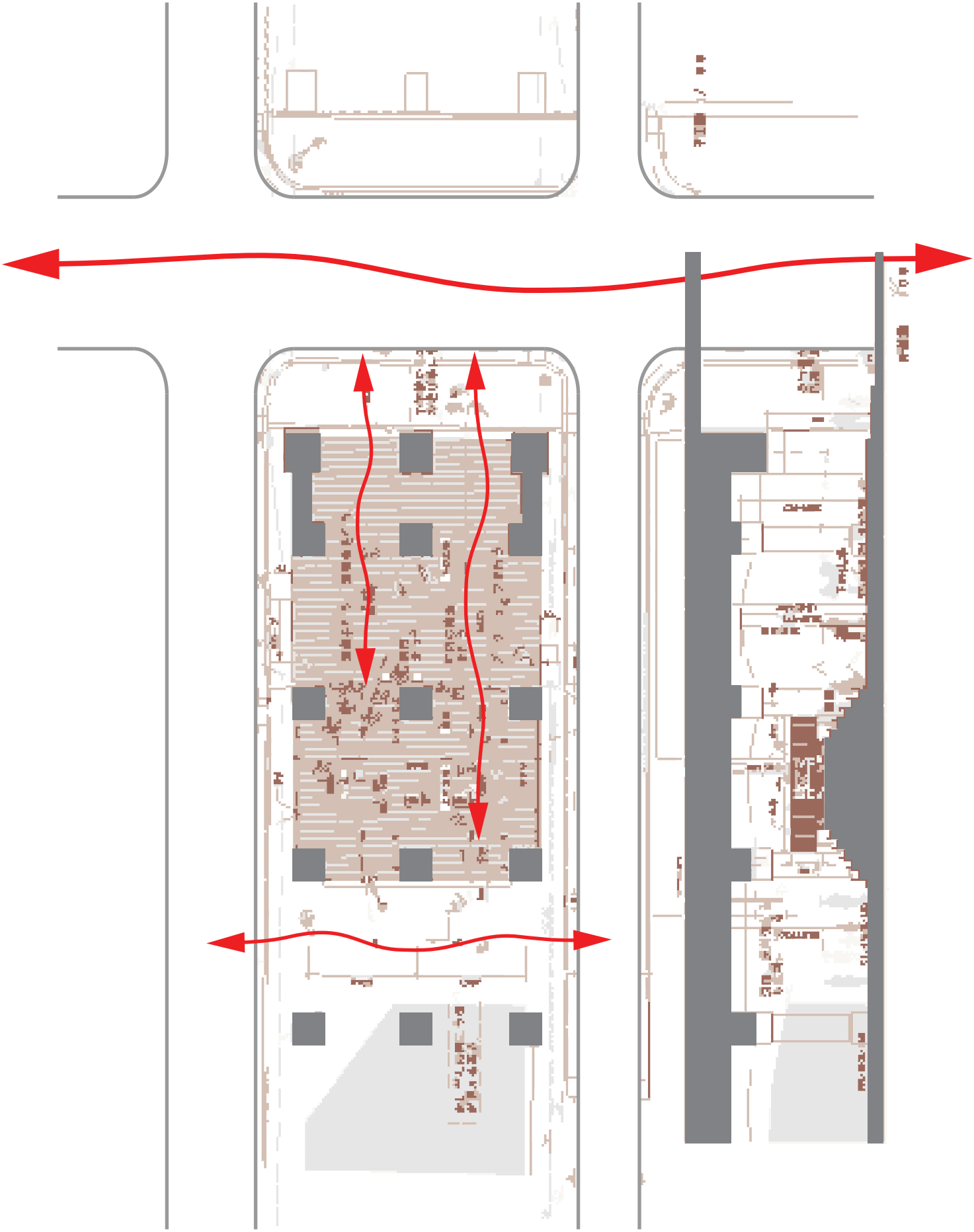


Figure 2.16 Koganecho Bazaar (Plan)

3. The Freeway and the Site

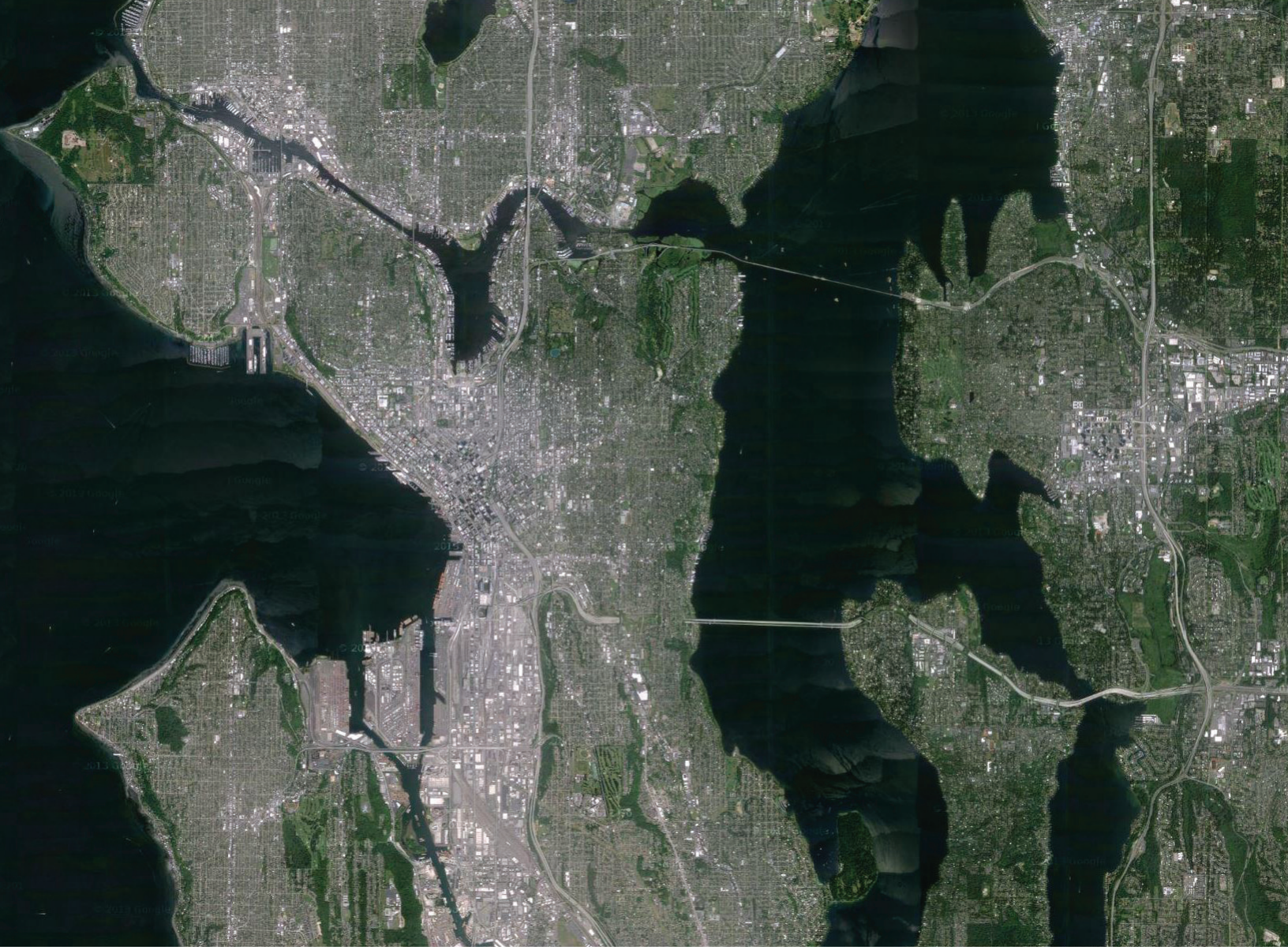


Figure 3.1 Seattle Satellite Map

Interstate 5 and the Elevated Freeways

The City of Seattle, like many other cities in the United States, is suffering from the rupture created by the freeway, and Interstate 5 is one of the major contributors. This Interstate runs north and south through Seattle and has divided city into east and west segments for more than half a century. Like every other freeway, the spaces under Interstate 5 are providing a possibility of connection but none of the urban neighborhoods are connected through this space. Even in the relatively dense area close to downtown, the city stops in front of the massive dead space which are either abandoned or used as parking lots under the freeway.

Possible Connection in the Seattle's International District

While the elevated freeway creates voids for the city to reconnect, several conditions need to be fulfilled in order to achieve a successful blend of urban fabric and the lost space. The first and most important condition is the existence of the cross traffic which works as the mean of transportation between the divided communities. Since the city arterials are the physical east-west linkages under the freeway, the proximity to these linkages is necessary to reconnect the

Figure 3.2 Interstate 5 Cutting the CIty

neighborhoods on both sides. When adjacent to this linkage, the space beneath the freeway has a much higher chance to achieve the sense of connection. The second condition relates to the spatial quality of the space under the freeway. In order to use the space under the freeway, there has to be enough space so that we can occupy it, because not all the void is suitable to be occupied. Some freeways are just elevated from the street and do not have enough adjacent land for occupation. Some freeways are too low and any occupation is impossible. Some have too high head rooms, which is hard to be perceived as a possible space for extension of surrounding human scale activities. Therefore, the structure needs to be the height of the surrounding environment while having enough area underneath it to be used. The third condition is the connection to the urban core or density. As indicated in the case studies, the proximity to dense development or human activities is the key for the space under the freeway to be utilized as a connecting element. Without any nearby human occupation or density, the intervention under the freeway is unnecessary. Building in the underpass of less dense environment is simply the creation of another edifice which provides a stronger divide instead of a linkage for surrounding communities.

In Seattle, the intersection of Interstate 5 at Cherry Street, James Street and Jackson Street in the downtown area are

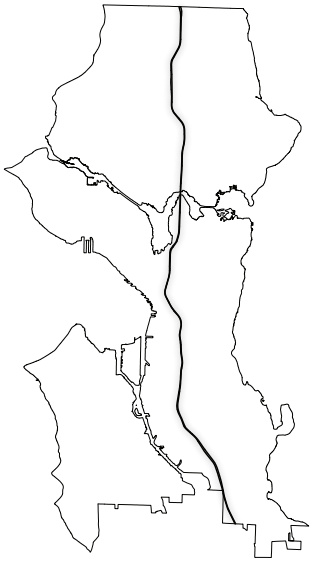


Figure 3.3 Interstate 5

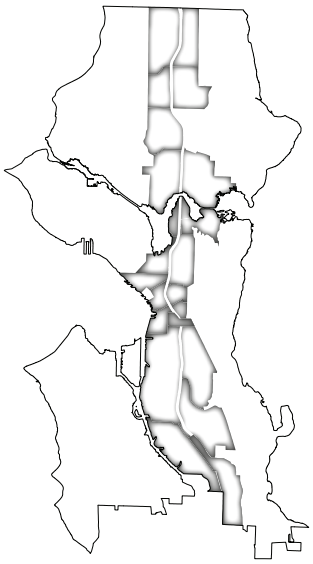


Figure 3.4 Neighborhoods

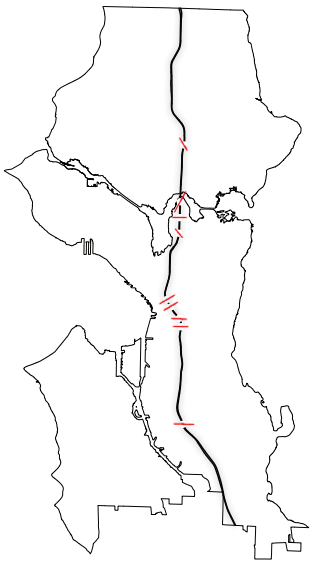


Figure 3.5 Elevated Freeway

the few locations that satisfy all these above requirements for hybridization. Among them, the Jackson street intersection in the Seattle International District is one of the most powerful spaces which have a high potential to be utilized as a space that reconnects the divided communities. Moreover, the International District is the community needing the necessity of reconnection due to the external forces that is impacting the culture and communities in the area.

4. Seattle’s International District

Figure 4.1 International District

International District as the Home for multi Ethnic Group

Seattle's International District is the city's most multicultural neighborhood, which has been divided by Interstate Freeway I-5 for several decades. Located to the south of downtown, the neighborhood is the center of the Asian communities. This Pan Asian district was first born in the early 1900s after the Jackson Street Regrade that filled the vast tide flats covering the area.[15] [16] The immigrants who first came to Seattle were the Chinese who were recruited as labors for canning, lumber, and railroad industries.[17] Other immigrants from Japan and Philippine were soon attracted by inexpensive housings and storefronts, and settled in the area alongside the Chinese community. The first Chinatown was located in what is now known as Pioneer Square, but the Chinese immigrants gradually established their community along King and Washington Streets, which are the central area of Chinatown today.[18] By the late 1930s, the Japanese community became a distinct neighborhood and formed the West Coast's second largest Japan Town to the north and east of Chinese community. [19] The Philippines also rapidly increased by this time, and like their Chinese and Japanese predecessors, they were mainly employed in the canning and lumber industries.[20] During World War II, large numbers of African Americans arrived in this area for military duty. They settled in the former homes of Japanese American residents around Jackson

Figure 4.2 Chinatown

Street near 12th Ave. South which is the east side of today's International District. This area then became developed as an African American neighborhood marked by numbers of jazz and blues clubs.[21] In mid-1970s following the end of the Vietnam War, the wave of new immigrants from Vietnam and other Southeast Asian countries came to Seattle. The majority of these immigrants settled in areas once the home of African Americans. Today, the area on the east side of International District is referred to as Little Saigon and Vietnamese community is the third most populous group in the area next to Chinese and Filipinos.

The District and the Development of the City

Over the past several decades, the International District experienced vast scale city projects impacting the character and culture of the district. In the mid-20th century, the construction of Interstate 5 bisected the area and destroyed numbers of homes and businesses. A further challenge to the communal continuity was the construction of Kingdome stadium on the western edge of the International District from 1972 to 1976. The establishment of King Street Historic District in the mid-1970s is the city's response to the potential stadium impacts on the area.[22] The King dome was then demolished

Figure 4.3 Chinese New Year

in 2000 and Safeco Field replaced it with new stadiums. While these developments brought new visitors to the area, they also introduced problems of traffic congestion and land speculation. Together with these developments, many other development on the west fringe of the International District including construction of the downtown transit tunnel, waterfront streetcar, restoration of Union Station, and other new offices as well as housing have heavily affected the neighborhoods.[23] Although such developments have created an influx of new visitors into the area and rejuvenated the International District economically, the problems of land speculation and the resultant traffic congestion cannot be ignored.

Today, the International District is facing the wave of new development that challenges the cultural and social endurance of the community. It is the urban planning by the City of Seattle aiming for greater density and transit-oriented development. The proximity of the International District to the many different active neighborhoods in all directions and its location next to the city's main arterials has made the area attractive for such development. Especially the eastern part of the district, which is the home for Vietnamese community, is extremely attractive for the developments in line with Seattle's Comprehensive Plan. These include Livable South Downtown Plan, Yesler Terrace Re-Development, and First Hill Streetcar.

While the urban planning and the associated development indicate the advancing of the city, there is also a potential harm

Figure 4.4 The Elevated Freeway

to the International District. In the city's initiated developments, the Livable South Downtown Plan, which has introduced the upzoning of the eastern part of the district, the home for Vietnamese community is the emerging issues that challenge the community. According to study in 2007, up-zoning will likely have "moderate to high harm to existing businesses, and potentially displace them altogether through increased rent and increased property value if the influx of commercial spaces attracts significant activity."[24] In the meantime, the Yesler Terrace Re-developments transforming the public housing project to mixed-income housing to the north of the International District also involve the City's goal toward higher density and the increase of land value in the district.[25] Furthermore, various studies also agree that the area is going to experience a significant development within the next twenty years.[26] This can also be expected from the number of developments discussed above. Such amount of developments, however, put another challenge to the community as the neighborhoods have to balance the agendas and city's interests while maintaining their own voice. Especially the small business and community in Little Saigon are vulnerable to external forces and policies impacting their culture and society.

Figure 4.5 The Parking Lot under the Elevated Freeway

The Need for Connection

Confronting the transformation of the International District and the vulnerability of its eastern part, the introduction of the linkage under Interstate 5 become the ideal solution. The reinforcement of linkage between the Vietnamese-American community and its immigrant allies, Chinatown and Japan Town on the western part of the district creates a stronger interrelationship which helps the entire community to retain its character and voice against the massively scaled urban transformation. The improvement of different neighborhoods' relationship in the area is a sensitive approach empowering the cross cultural interaction and interdependency which have long been the district's fundamental value. Since the International District has been home to multiple ethnic groups, it is the spiritual and historic touchstone for various immigrants living next to each other. Although they may live or work in other neighborhoods, many Puget Sound Asians visit the district for special holidays and events, as well as to shop and eat.

Creating a strong connection between the east and west sides along the elevated freeway not only strengthen the unity between different communities and generations, but also contribute to the urban connection which the city of Seattle has

longed for. According to the “Stadium District Study” in Seattle’s Department of Planning & Development (DPD), the city has created strategies and objectives to create the pedestrian oriented linkages between the International District and Union Station, which is one of the transportation hubs in the city, as well as Pioneer Square, which is the entertainment district adjacent to the water front development.[27] The direct spatial connection to the Jackson Street, which is the main arterial working as the vehicular and pedestrian corridor, enables the space under the freeway to be a part of this linkage. Thus, occupying the space under the elevated structure, which is adjacent to the Jackson Street connecting these areas, is the approach engaging the neighborhood and community with current developments of the city of Seattle. A seamless connection of recreational and commercial activities between the waterfront and this multicultural neighborhood is what can be achieved in the city.

The connection under the elevated freeway is also the salvation of space once belonging to the prosperity of the community. The space which is now underneath the elevated freeway was once the land for home and retails of the International District. The city government then bought the land in order to make the construction of this engineering structure possible. In 1971, the land was sold to Interim, the private real estate company specializing in the development of the International District.[28] The void space underneath the freeway was then transformed into a parking lot and became a private property for public use. From an economic point of view, the space serves not only as revenue for Interim to help develop the area but also as the main parking for the visitors of the restaurants and shops in the International District. However, from a social and cultural point of view, the misuse of the land beneath the elevated structure has created a gash, preventing the east-west connection of the entire community. Therefore, regaining the land which was used for human activities is the important part of the scheme

5. Humanization of the Freeway

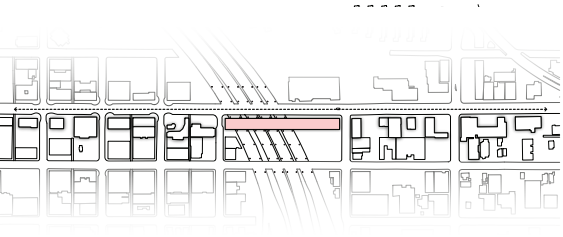


Figure 5.1 The Extension of Storefronts

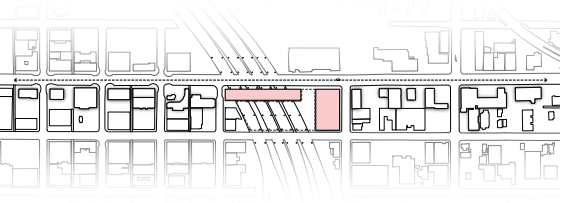


Figure 5.2 Extending out to the Adjacent Space

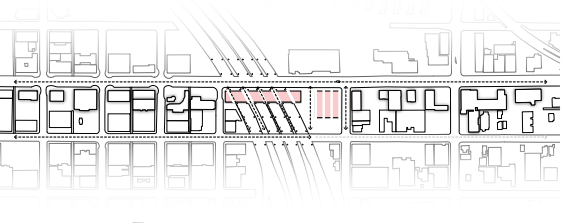


Figure 5.3 Utilizing the Existing Geometry

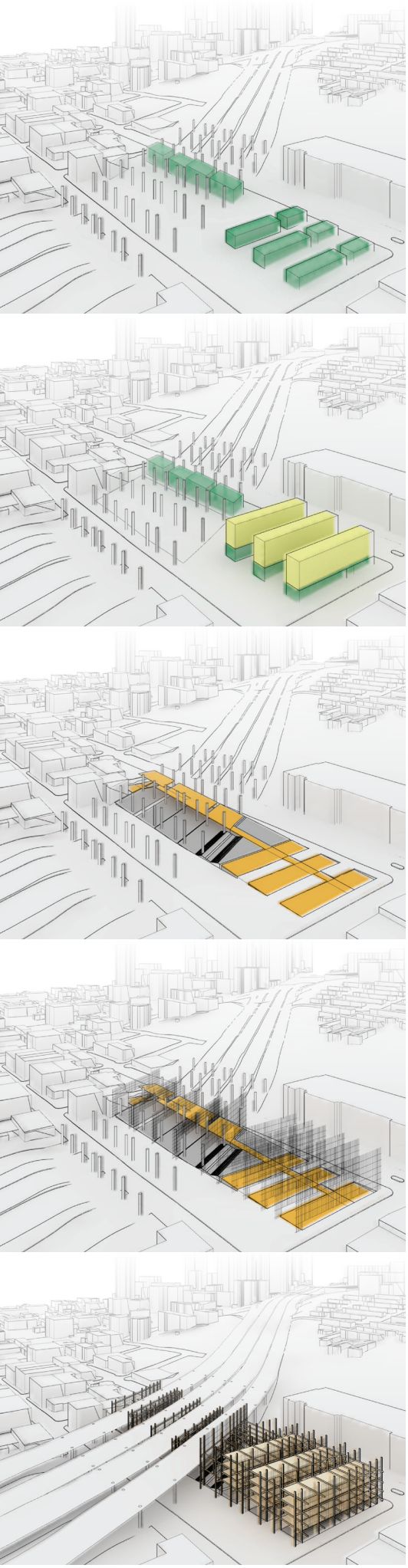
The Programs for Hybridization

The proposed scheme takes the form of a series of retail storefronts, artist studios and a sculpture garden that reinforces International District's east-west connection through the blend of the existing urban fabric and the void under Interstate 5. The intervention further reaches out into the adjacent space and creates a residential community as the cure for the extremely low density of the east side of the International District. This intervention not simply seeks to transform these otherwise lost spaces below Seattle's freeway into a place for fostering vibrant communities, but utilizes the inherent bigness of such lost spaces in order to provide an urbanistic spatial solution.

The first step of the intervention is the extension of the existing urban fabric along Jackson Street under Interstate 5 in order to create a strong east-west connection. As Jackson Street is the main arterial connecting the east and west sides of the International District, it is important to bring the urban condition along this axis into the space under the freeway. Currently, the buildings along this street are mainly commercial including numbers of Asian restaurants and retails. Therefore, extending the line of such storefronts under the freeway is the essential step which culturally and economically benefits International District. The storefronts under the freeway further reach out to the adjacent space on the east side where the Vietnamese community begins. This area on the east side of the freeway is the least vibrant place along the lines of restaurants and retails along Jackson Street. Thus, the storefront line extended into this area is not only a simple bridge providing an east-west connection, but a beacon of light connecting the Vietnamese community which is facing the lack of unity to the west side on International District where the degree of activities and densities are much higher.

In order to further deal with the lack of population and unity in the Vietnamese community, housing is provided over the storefronts extending out to the space on the east side of the freeway. As the Vietnamese community consists of numbers of small business, it is easily impacted by the potential rising of land value as well as infrastructural transformation around the area. Therefore increasing the numbers of residents in the area will help flourishing the community as the residents will be the social and economic contributor to the small businesses and communities in the area. The housing on top of the storefronts indicates such interaction between the community and new coming residents.

While taking energy along the Jackson is the main focus of the scheme, the King Street on the south of Jackson is equally important feature for the intervention. King Street is a secondary arterial providing the east-west connection in the International District. Although it is not as major as Jackson Street, it is the central street for the Chinatown. The Chinese Gates, Hing



Hay Park, and Wind Luke Asian Museum are all major cultural hotspot in Chinatown and they are all standing along King Street. On the day of celebratory events such as the Chinese New Year, King Street is packed with numbers of people even from outside of community. The energy along this street, however, stops in front of the freeway and does not continue on the east side. There are cultural facilities such as a Baptist Church and an Asian Resources Center on east side, but the King Street on the east side of the freeway is never as vibrant as the west side. The character of King Street on the east side of the freeway is heavily associated with warehouse type building and lower density.

As King Street is the central street for events and public gatherings in the Chinatown, it is necessary to utilize the big space under the freeway for public gathering which extends the energy of King Street on the west side to the less vibrant east side. Thus, the sculpture garden facing King Street is introduced as a new public plaza for the entire community. The sculpture garden locates directly behind the proposed storefronts along the Jackson Street, so that it works as the threshold connecting Jackson Street and King. Furthermore, it also plays the role of a courtyard for the proposed residential community on the east side of the freeway. In this sense, the scheme is not only the blend of the urban fabric into the big void under the freeway, but it is the introduction of various human lives and activities that become a new infrastructure for community connection.

Figure 5.4 3D Diagrams of the Interventions

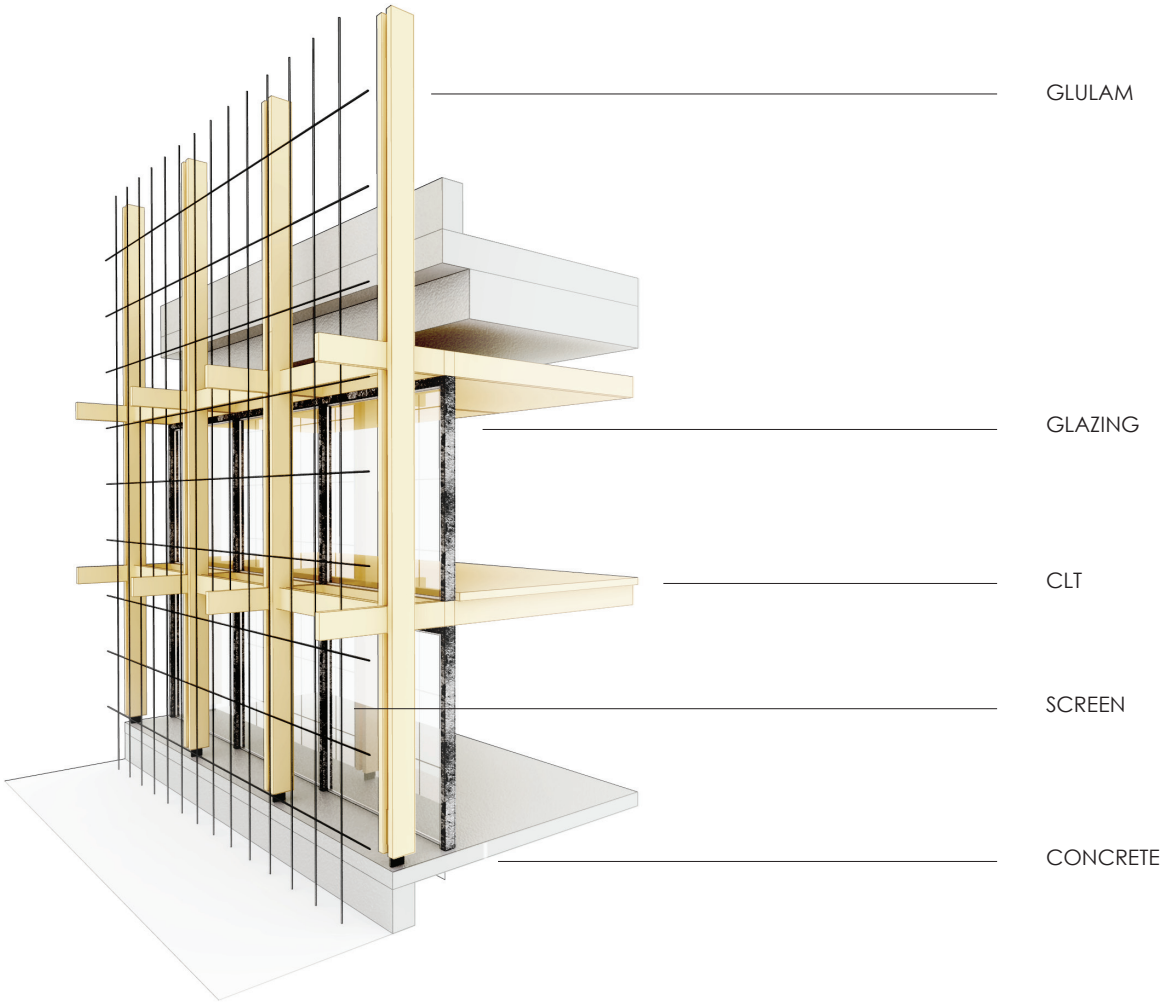


Figure 5.5 Tectonic Diagram

The Building System for Hybridization

The blend of humanized urban fabric into the dehumanized giant void under the freeway needs to be a solution that maximizes the order of the existing city fabric and the inherent bigness of the void. By doing so, the community which is divided by the freeway is not only connected but coexist with the space under the freeway in a new manner. Such hybridization, therefore, needs a flexible system that both adapts to the city grid and the freeway structure. This leads to the selection of a scaffolding system which is flexible and easily adapts to the geometry of the freeway structure as well as the city. Scaffolding is usually considered as a temporary structure which is used to support and facilitate the construction of buildings. However, the emphasis is put on the symbolic meaning of scaffolding. The scaffold represents a space experiencing transformation or a site undergoing construction. Therefore it is an ideal system to build under the freeway. It represents the transformation of the dead space which needs to be humanized to connect the separated urban communities.

Besides its flexibility that can adapt to two foreign systems, the city grid and the freeway grid, the scaffold works as the frame work that tie the entire proposed programs which are otherwise separated. The lines of storefronts, residential complex and community plaza are the programs which are derived based on the existing urban conditions, but they need to be connected in order to achieve a strong east-west connection for the International District. The scaffold frame which is flexible to various types of geometry is the ideal system that easily ties the commercial, residential, and park under and beyond the freeway. In addition, as the system that facilitates the construction, it exists as a flexible element for the future expansion of those programs as well.

The scaffold system employed in this intervention is a wood frame scaffolding. Wood is an ideal material for the humanization of the space under the freeway. It is a natural material that brings a sense of warmth and domestic atmosphere to the cold concrete covered space under the freeway structure. Besides such visually warm appearance, it also contributes to mental comfort of the building occupants. A recent joint research of the University of British Columbia and FP innovations has shown that the visual appearance of wood surface in a room can lower activation of sympathetic nervous system which is responsible for physiological stress in a human body.[29] Therefore, it is the ideal material to eliminate the sense of anxiety and unsafety and create a welcoming and comfortable environment under the dehumanized space of the freeway.

Tectonically speaking, the wood frame scaffold system fundamentally reverses the relationship between building structure and façade. In a typical setting, the structure of the buildings is covered by a façade or an enclosure. However, building in a non-typical site, such as the space under the freeway, requires a different approach. By doing so, the proposed program can work as a part of the void under the freeway, rather than a completely new organ abruptly squeezed in the space under freeway. The scaffold reversing the structure and façade manifest itself as the system defining the space for the proposed program based on the given spatial order within the structure of the freeway. The enclosure for the proposed programs is plugged in within the gird defined by scaffold structure which is constructed within the columns grid of the freeway. The enclosures are glass façade with light steel frame, enhancing the transparency in all directions. Such degree of transparency is necessary in order to deal with the connection of Jackson Street and the freeway void as well as the east-west connection in the area. Unlike the storefront conditions, the residential units require certain degree of privacy. Therefore, cross laminated wood panel is used as the enclosure instead of glass there. Like the glass enclosure, it is plugged into the wood frame in order to create a harmonious balance between commercial and residential spaces.

Figure 5.6 The Storefronts along Jackson Street

Hybridization 1: The Storefronts under the Freeway

The construction of storefronts into the space under the freeway is the attempt to break the massive void into smaller spaces. The space under the elevated freeway at this site is actually not entirely covered by a single plane. The freeway is consists of 4 individual lanes gradually stepping up the slope. There are gaps vary from 10 feet to 20 feet between each lane. The wood frame take advantages of these gaps to divided the void into four different smaller spaces for the storefronts. The frame further extends above the freeway to emphasize the gap as the entrances to the sculpture garden behind the storefront and the connection to King Street to the south.

The storefronts are two-story constructions that easily fit under the 35 feet tall structure of the elevated freeway. The ground level is reserved for restaurants and markets where small businesses in the International District can rent and use the spaces as extension or for new spaces for their businesses. The new comers are also welcome but the businesses have to fit in the context of the International District. These spaces are simple open plan that are flexible to various types of use. The second level of this building are reserved for artist studios, as art is the activity that gradually increase and

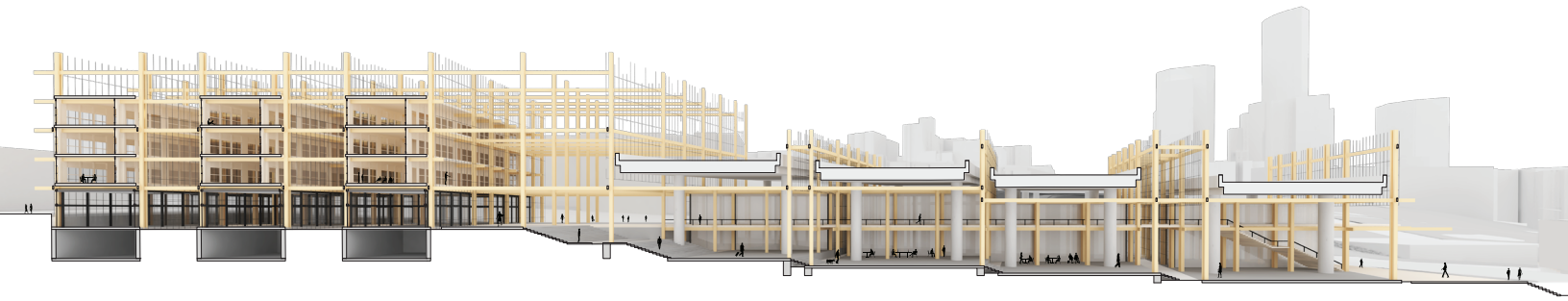


Figure 5.7 Section of Storefronts

Figure 5.8 The Market in at Ground Level

starts to add more value to this community. The art studios are suitable choice for occupying the space under freeway as well because many of their activities require relatively big spaces. All of the Artist studios are open to the Sculpture Garden/ public Plaza in the back so that artists can use it as a place for exhibition.

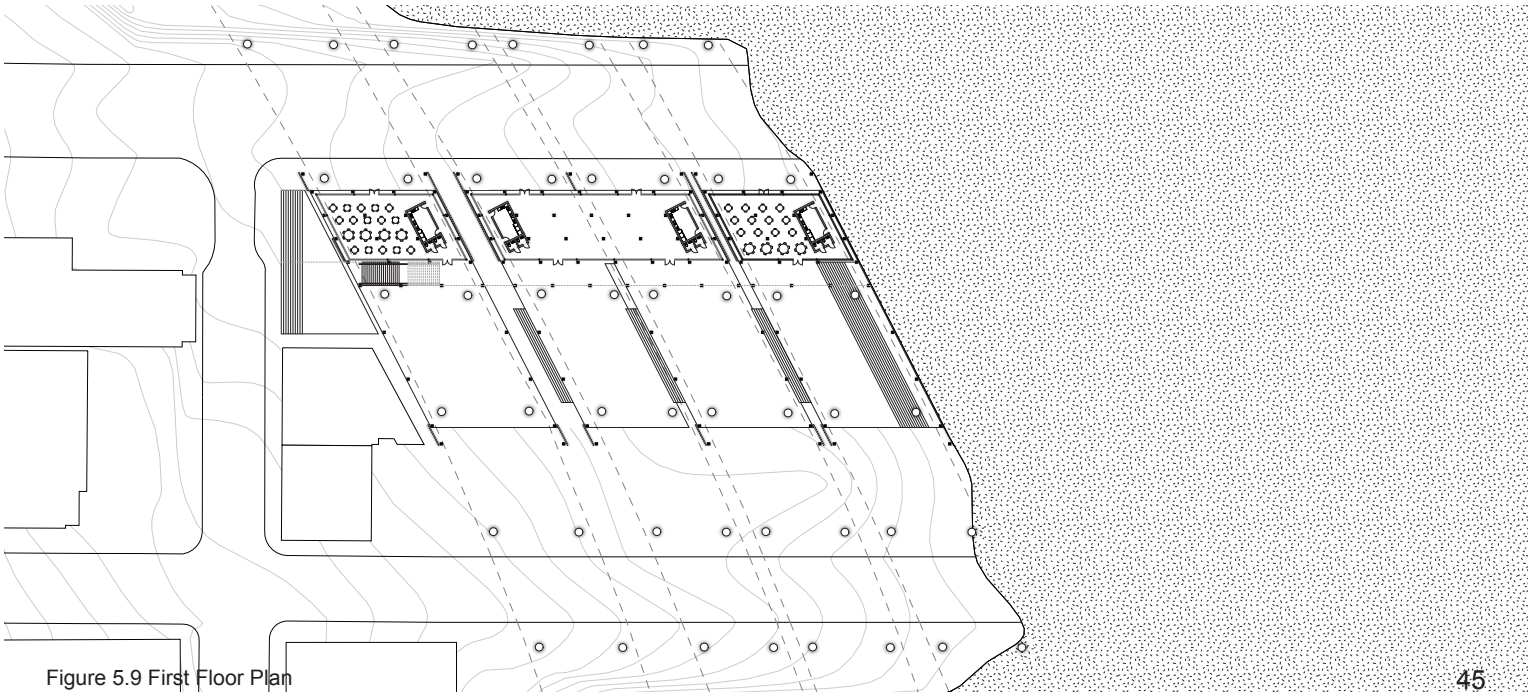


Figure 5.9 First Floor Plan

Figure 5.10 The Walkway along the Artist Studio

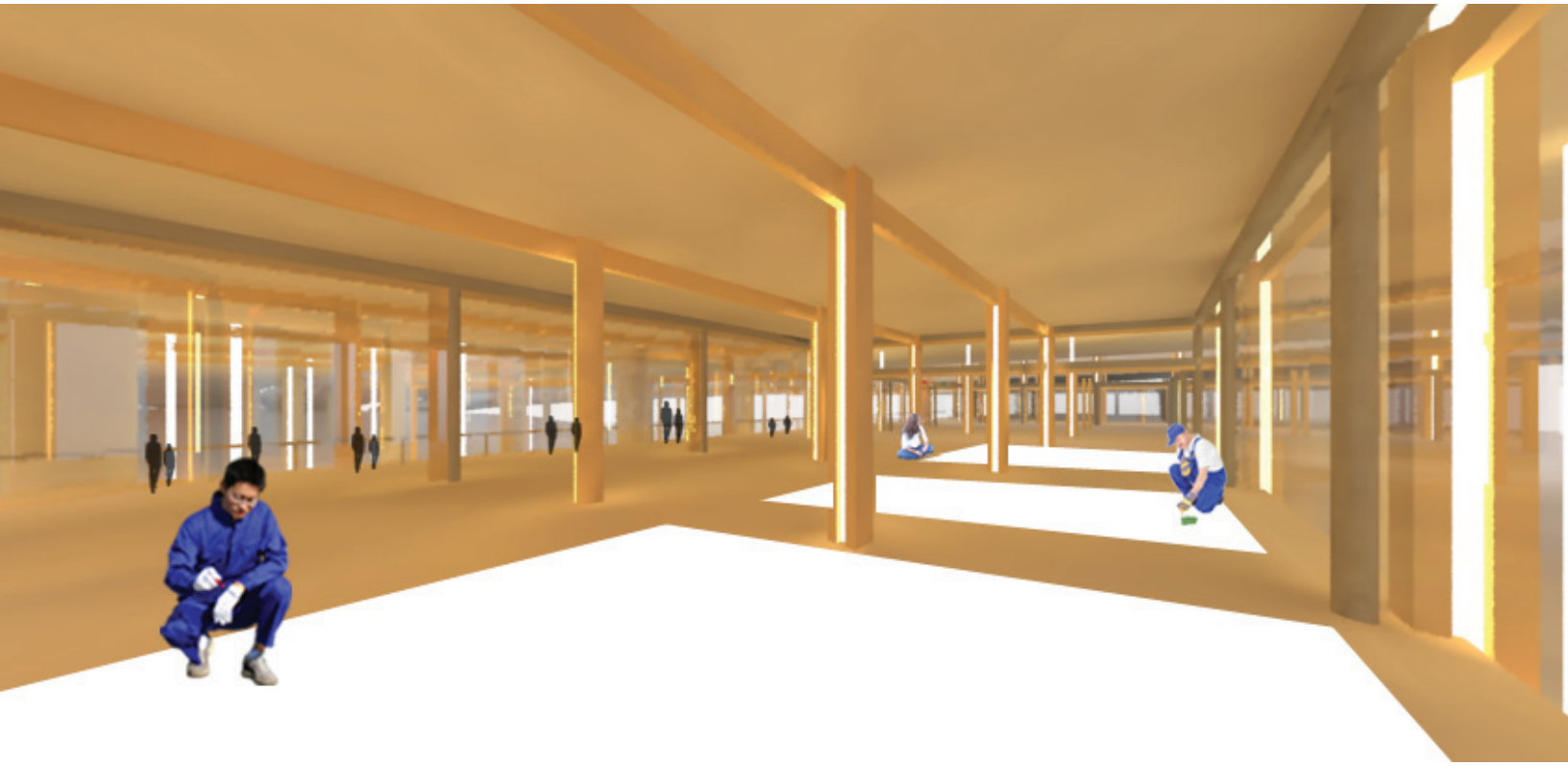


Figure 5.11 The Artist Studio

Figure 5.12 The Public Plaza

Hybridization 2: The Sculpture Garden under the Freeway

While the construction of the storefronts is the breaking down of the void into small scale for businesses and human scale activities, the construction of the public plaza is empowering the bigness of the void for public gathering. In the plaza, the wood frame which works as the gateways leading public from Jackson, now works as the lighting fixture illuminating the giant space. The light transforms this otherwise dark and unsafe space into a beacon of light representing the tie of the community. The wood frame and the lines of colonnades are both lit so that the east-west connection of the community is emphasized. The combination of wood frame and the columns also indicate the coexistence of the urban fabric and the freeway structure.

This public plaza is a series of concrete plat form stepping up the slope and working as an exhibition hall for artists as well as the sculpture garden for the restaurants in the storefronts. Many restaurants in the International District provide delicious meals but few of them are connected to the street life. The only time when they are connected to streets are during the events such as the Chinese New Year or the Japanese Street festivals. The proposed programs are the engagement of business to the street life which not only benefits the business under the freeway but also enhances the connection between the business and communal activities in the area.

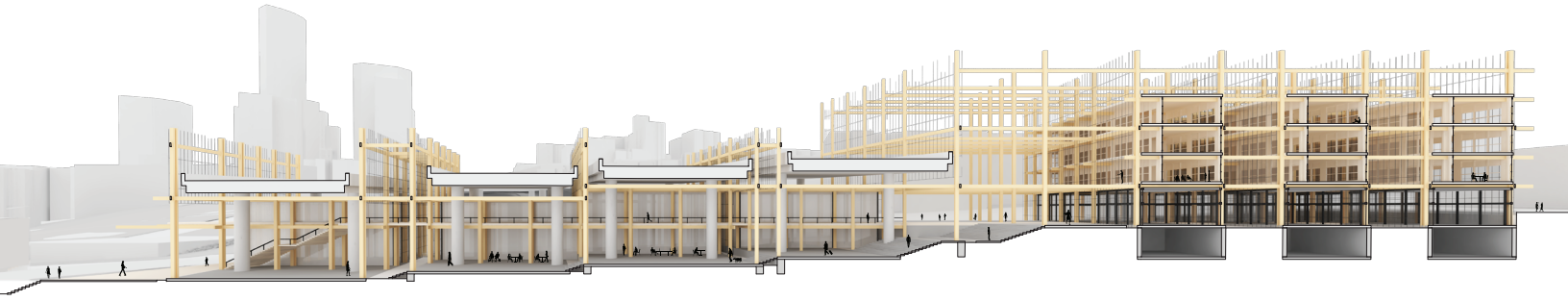


Figure 5.13 Section of Public Plaza

Figure 5.14 Lighting under Columns

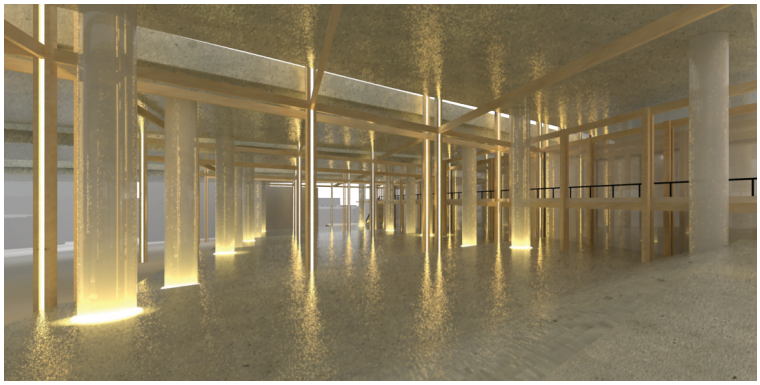


Figure 5.15 Lighting for Public Plaza

Figure 5.16 Lighting between the Gaps

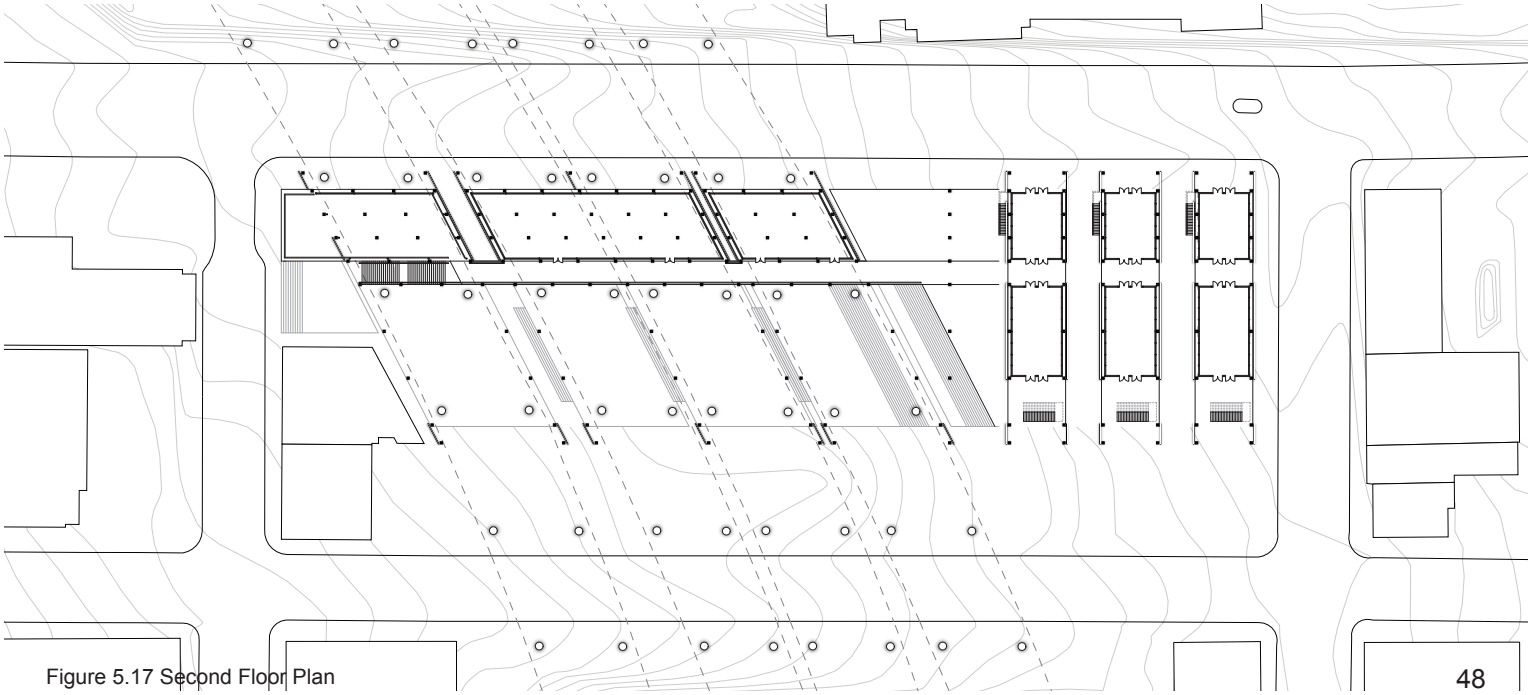


Figure 5.17 Second Floor Plan

Figure 5.18 The Gallery Between Housing and the Freeway

Hybridization 3: The Residential Life and the Space under Freeway

The last hybridization is residential life next to the freeway. In a typical city, the residents adjacent to freeways are blocked with sound barriers that completely separate the world of urban fabric to the world of freeway. It is the functional and reasonable approaches to withstand the noise created by massive amounts of vehicular traffic. However, instead of creating an opaque wall visually separating the connection between city and the freeway, the exterior art gallery is created as the buffer between the residential units and the freeway. This gallery work as the extended program for the artist studio and public plaza but it also works as the main courtyard for the residential complex. In a sense, the entire plaza under the freeway is extending out to the adjacent residential community and the public and residential life is blended in this gallery in between. Furthermore the gallery extending above the freeway is a 3 dimensional representation of the vibrant life in the International District. As the International District locate south to the downtown, the building works as the signage welcoming the public arriving to Seattle from the south as well. By doing so, the space under and adjacent to the freeway is no longer the marginal areas that are abandoned from the community. Instead, it is now the urban center where communities are connected not only to the other side of the freeway but also to the public running of the freeway.

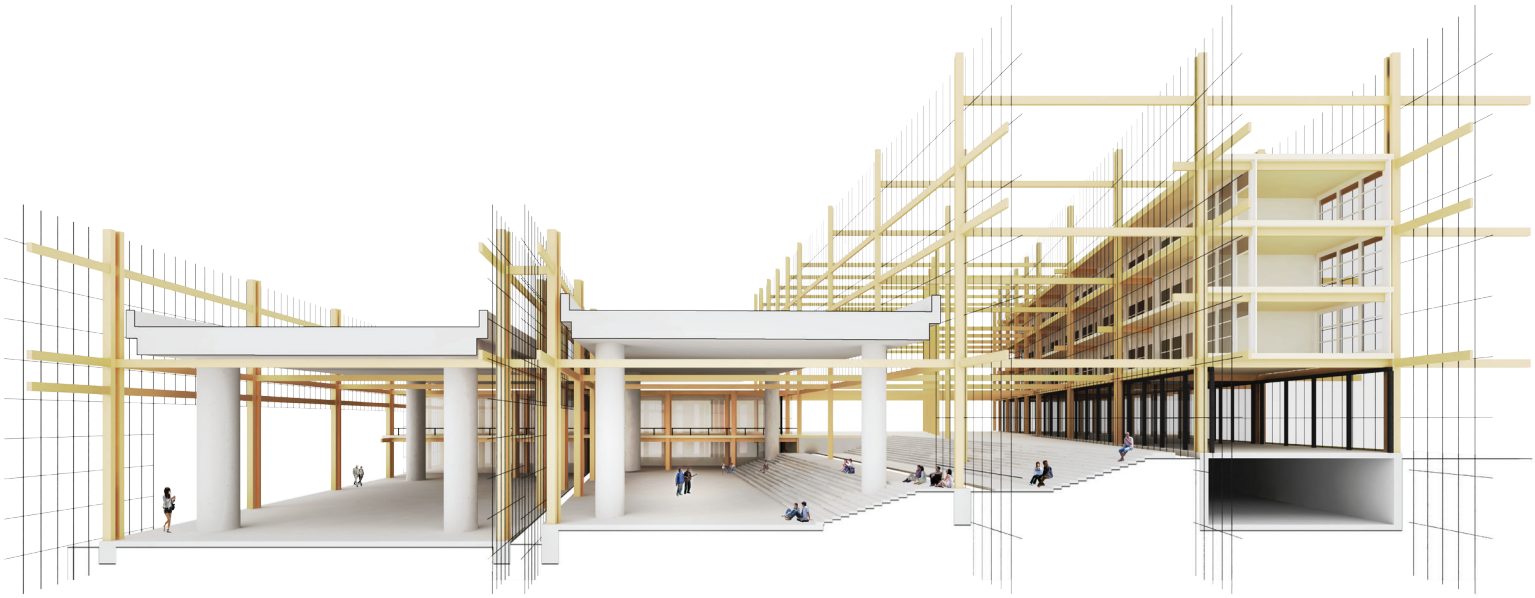


Figure 5.19 The Section Perspective of Gallery Between Housing and the Freeway

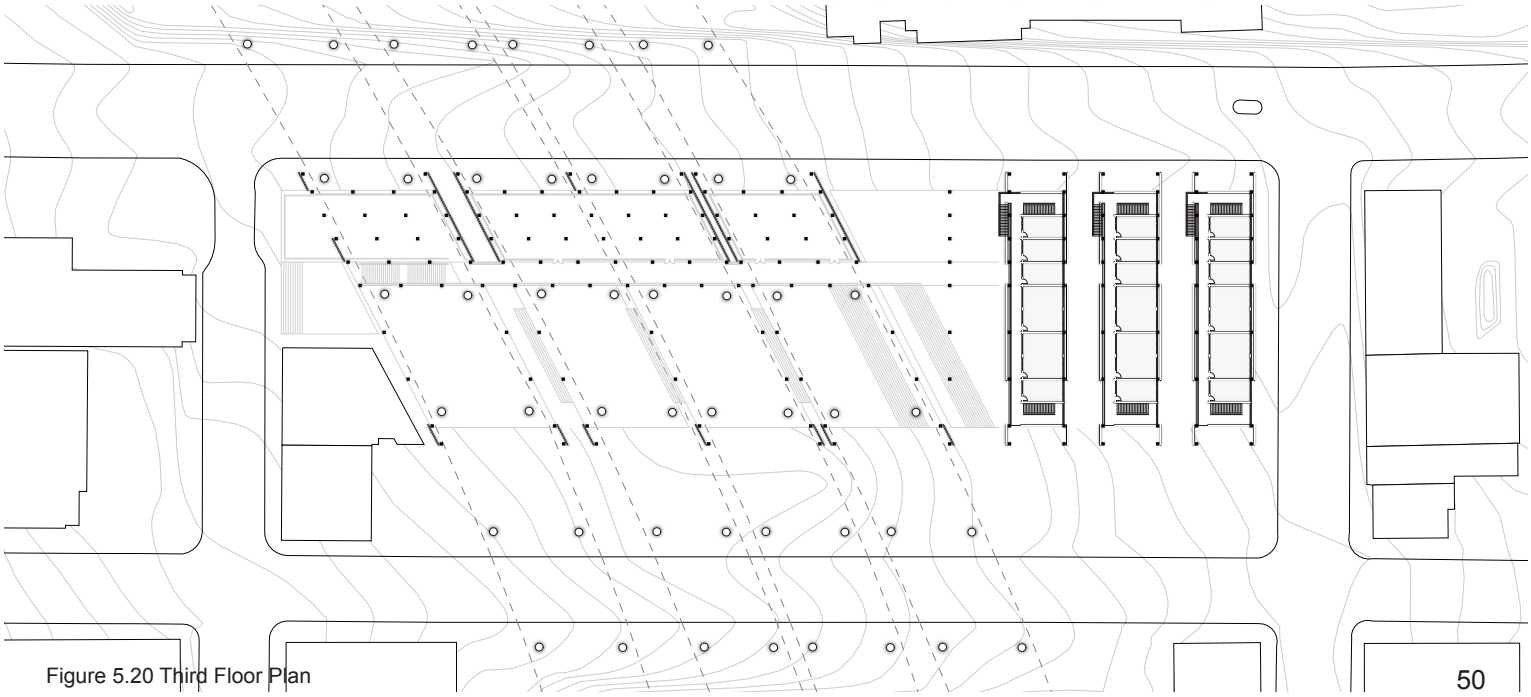


Figure 5.20 Third Floor Plan

Conclusion

How the contemporary city can further evolve after being cut by the massive infrastructure of the freeway is the fundamental theme of the thesis. The contemporary city and human culture is the rapidly changing phenomena where things are continuously renegotiated. The pre-established conditions of any entity including the transportation infrastructure should adapt and be adapted in order to change and evolve with the city as well as society. Therefore, the proposed humanization of the space under freeway is not only providing a way to connect the neighborhoods divided by city, but also establishing the conditions where freeway and urban fabric are spatially interrelated. As transportation infrastructure consumes a great deal of resources in energy and land, this is the reasonable approach for the advancement of the city. The rupture created by freeway has been an avoidable reality which will not go away in near future. Therefore, proposing the way to coexist with this infrastructure is the action that respects the vast amount of materials and construction as well as the history that have been involved in the development of the city. In this sense, this thesis has indicated a post freeway evolution of human society.

Through the investigation of this post freeway evolution, it gradually becomes apparent that the transformation of the space under the freeway is not always enough for the urban communities to overcome the giant rupture created by the freeway. The implication of what needs to be done is the further transformation of the area around the space under the freeway. The introduction of the residential community into the adjacent space has indicated the beginning of such larger intervention, but further expansion might as well necessary in the near future. Therefore, the sense of incompleteness created by the resultant design intentionally represents a space experiencing transformation. It represents the expansive programs and architecture that keep developing under freeway. In a sense, the intervention has been looking for the future expansion, which will help city to develop beyond the rupture created by the freeway.

Endnotes

(Endnotes)

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