

Junkgold:
The Collecting, Processing, and Archiving of Unwanted Goods

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Abstract

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Junk is a defining by-product of our current consumer society. It permeates the urban environment as an artifact and a site, linked to a global network of trade. But junk, like the other forms of waste it is often mistaken for, is in a state of constant flux, changing form and location. As a result of this, the junkyard, the primary site of collection, has typically been relegated to the periphery of cities in North America, resulting in the concealment of its contents. By locating junkyards on the periphery and concealing their contents, cities encourage the large, global scrap trade while discouraging community driven innovation and entrepreneurship. This thesis posits a divergence and an arrested circulation in the existing flow of scrap offshore, while recognizing that the global scrap trade will continue to exist so long as there is a market. In the decades following the Second World War, as consumption vigorously increased so too

did the ceaseless flow of junk from local urban markets in the United States to offshore sites. But as raw materials become increasingly scarce and expensive to mine, informal collectors at the local scale play an increasingly important role. This thesis proposes a series of small-scale, urban junk markets and scrap metal processors positioned throughout Seattle, with particular investigation of a site in the International District (formerly Chinatown). These junk markets will serve as hubs for the trading, storage and processing of these American artifacts, typically buried in landfills or dumped in junkyards. The project will thus act as a market and archive for junk, providing for its barter and repair, and its processing into scrap. Lastly, as commodities markets fluctuate and materials become more scarce, these depots will also act as scrap banks, preserving valuable metals for future use.

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To Nicole and Louisa, for their willingness and enthusiasm.

To My Parents, for their support and encouragement.

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Figure 1. Interior of Shed with Junk, King Salvage, Seattle, WA, 2015

CONTENTS

List of Figures	8
Introduction	11
Chapter 1:	
Examine the Worthless Thing	15
1.1 - A Piece of Junk	15
1.2 - Junk: Artifact to Scrap	18
Chapter 2:	
Marginal, Invisible, and Peripheral	20
2.1 - Junkyards	20
2.2 - The Junk Trade	20
Chapter 3:	
Prospecting a Site	34
3.1 - The City as a Junkyard	34
3.2 - Chinatown	39
3.3 - The Site	40
Chapter 4:	
An Architecture of Junk	45
4.1 - Program	45
4.2 - A Junkyard Turned Vertical	45
4.3 - Exchange, Shred, and Stockpile: An Iterative Model	50
4.4 - The Site Response	53
4.5 - The Architectural Response: Junk Market, Scrap Processor and Yard, and Hotel	55
4.6 - A Catalogue of Spaces	70
Chapter 5:	
Conclusion	74
End Notes	76
Bibliography	78

LIST OF FIGURES

All figures are by the author unless otherwise noted.

1. Interior of Shed with Junk, King Salvage, Seattle, WA, 2015.
2. Salvage Supermarket, Winnipeg, Canada, 2005.
3. The Office. Source: Lisa Kereszi, *Joe's Junkyard*
4. "Yard Sale" Sign with Junk, Media, PA, 2006. Source: Lisa Kereszi, *Joe's Junkyard*
5. Salvation Army Junk Shop, Hoquiam, WA, 1903. Source: University of Washington Digital Archives
6. Bales of Scrap Metal, Calbag Metals, Tacoma, WA, 2015.
7. Auto Wreckers #1, Edward Burtynsky, 2006. Source: *Burtynsky Oil*
8. Diagram of the Historical Junk Trade.
9. Diagram of the Proposed Divergence to the Junk Trade.
10. U.S. Scrap Metal Processing Facilities, 2015. (Adapted from *Economic Impact Study - U.S. Based Scrap Recycling Industry, 2015*, Institute of Scrap Recycling Industries, Inc)
11. International Ocean Freight Lines to and from the Port of Seattle and Tacoma.
12. Washington State Junkyard Distribution Along the I-5 Corridor. (Adapted from Google Earth)
13. I-5 Corridor and Junkyard Distribution Within the City of Seattle.
14. The Movement of Junk Through the City by Scrappers. Source: iStockphoto, <http://doinglifebeingtiff.com/?tag=picking>
15. Junkyard Typologies in Washington State. (Adapted from Google Earth)
16. Composition of a Junkyard, Calbag Metals, Tacoma, WA, 2015. (Adapted from Google Earth)
17. Sorting, Weighing, Baling, Bale Storage, Pile of Scrap, Pile of Junk. Calbag Metals, Tacoma, WA, 2015.
18. Scrap Metal Sorting Bay, Calbag Metals, Tacoma, WA, 2015.
19. Diagram of the Former Tidelands, Diagram of the Networks and Nodes Through Chinatown, Diagram of the Historic Hotels in Chinatown. (Adapted from Google Earth)
20. South Canal trestle; filling tideflats near Bay View Brewery, Seattle, 1901. Source: University of Washington Digital Archives
21. Storefronts as an Assemblage in Chinatown.
22. Proposed Field of Sites.
23. Aerial View of Chinatown with Bush Hotel, Hing Hay Park, Publix Hotel and Vacant Post Office 2015. Source: Google Earth
24. Aerial View of Chinatown, 1969. Source: Seattle Municipal Archives
25. Interior of Shed, King Salvage, Seattle, WA, 2015
26. Program Diagram
27. Organization Diagram
28. Conceptual Model Showing Three Iterations
29. Site Plan
30. Ground Floor Plan, Junk Market and Scrap Processor
31. Enlarged Ground Floor Plan, Junk Market
32. South Elevation, Junk Market
33. Enlarged South Elevation, Junk Market
34. Section Looking North, Junk Market

35. Enlarged Section Looking North, Junk Market
36. Enlarged Ground Floor Plan, Scrap Processor
37. Section Looking West, Scrap Processor, Phase 1
38. Section Looking West, Scrap Processor, Phase 2
39. Section Looking West, Scrap Processor, Phase 3
40. Aerial View of the Model, Scrap Processor
41. West Elevation View of the Model, Scrap Processor
42. East Elevation View of the Model, Scrap Processor
43. Scrap Bank
44. Sample Room
45. Sorting Bays
46. Feedstock Silos
47. Control Room
48. Gold Room and Bar
49. Hotel Rooms
50. Sorting and Baling
51. RV Park
52. Site Model



Figure 2. Salvage Supermarket, Winnipeg, Canada, 2005

INTRODUCTION

Junk is a defining by-product of our current consumer society. (Fig. 1) It permeates the urban environment as an artifact and a site, linked to a global network of trade. But junk, like the other forms of waste it is often mistaken for, is in a state of constant flux, changing form and location. As a result of this, the junkyard, the primary site of collection, has typically been relegated to the periphery of cities in North America, resulting in the concealment of its contents. (Fig. 2) By locating junkyards on the periphery and concealing their contents, cities encourage the large, global scrap trade while discouraging community driven innovation and entrepreneurship. This thesis posits a divergence and an arrested circulation in the existing flow of scrap offshore, while recognizing that the global scrap trade will continue to exist so long as there is a market. In the decades following the Second World War, as consumption vigorously increased so too did the ceaseless flow of junk from local urban markets in the United States to offshore sites. But as raw materials become increasingly scarce and expensive to mine, informal collectors at the local scale play an increasingly important role. This thesis proposes a series of small-scale, urban junk markets and scrap metal processors positioned throughout Seattle, with particular investigation of a site in the International District (formerly Chinatown). These junk markets will serve as

hubs for the trading, storage and processing of these American artifacts, typically buried in landfills or dumped in junkyards. The project will thus act as a market and archive for junk, providing for its barter and repair, and its processing into scrap. Lastly, as commodities markets fluctuate and materials become more scarce, these depots will also act as scrap banks, preserving valuable metals for future use.

The infrastructure of junk continues to expand at an alarming rate, facilitating its physical transportation and transformation from commodity to artifact to scrap. Nationally, the number of junkyards in the United States have decreased from 25,000 in 1951 to approximately 7,000 in 2012, with many consolidating into mega-junkyards to support the global trade¹. Their role is as vital now as it was in 1951, but these collection sites have increased in scale and importance to support the flow of scrap from the nation's borders to the ports of China. It has been said that the scrap "profession" is, "founded on an inviolable truth: almost all the metal that has ever existed in the world still exists, and always will exist."² As a result junkyards and landfills are being mined for metals and infrastructural systems are being stripped of their manhole covers, railroad lines and electrical equipment. When processed into scrap, junk provides

an inexhaustible and locally available source of these precious metals. In times of scarcity and economic hardship, local access to these metals ensures less dependence on foreign sources and costly mining operations.

Junk, like the other forms of trash it is often mistaken for, is matter out of place. As hard as we try to make junk disappear, it never really goes away. It gets hidden from view in trash bags, dumpsters, junkyards, and shipping containers. As Larry Fink observes, “[A junkyard] is not an end run for matter; it is the beginning of a new condition for the curious, cultured and coincidental mind.”³ Junk is the detritus that reminds us of our consumption and when made visible has the potential to stimulate creativity. The eight billion dollar current valuation of the scrap industry in the U.S. attests to the significant role junk plays in the American economy.⁴

But the significance of junk goes beyond the economic- it is a cultural artifact that continually flows through the urban networks of everyday life. (Fig. 3) As it shifts between states from commodity to artifact to scrap, it leaves traces on the patterns of the city. But as it moves from dumpster to truck to junkyard to shipping container, the process remains nearly invisible to most Americans. Architecture can play a role in clarifying and

extending the existing infrastructure that links the collection, processing and archiving of these overlooked objects. This thesis proposes a network of sites that will be both visible and parasitic, feeding into and off of the host network of junk.

“[A junkyard] is not an end run for matter; it is the beginning of a new condition for the curious, cultured and coincidental mind.”



Figure 3. The Office, 2002.



Figure 4. "Yard Sale" Sign with Junk, Media, PA, 2006

CHAPTER 1

EXAMINE THE WORTHLESS THING

1.1 A Piece of Junk

The noun *junk* dates back to the fourteenth century, when it was used to describe an old or inferior rope. By the mid-1800s, the ‘e’ had been dropped and the definition was broadened to include any discarded or waste material that could be put to some use.⁵ Today junk continues to be misrepresented as the same as trash, garbage and scrap, even though it is different. As Barry Allen, a philosophy professor at McMaster University writes, “Junk, like trash, is often clean, a matter of well-made paper, plastic, and metal. Like trash, junk includes the malfunctioning, failed, burnt-out, and obsolete. [But it] tends to be unwanted yet usable.”⁶ As a commodity that has lost its original function, junk sits at a critical junction between artifact and trash. It still retains the potential to be re-used but also to be deemed meaningless and discarded. (Fig. 4) As an object, a piece of junk is haunted by its past. Its valuation based not on what it is but rather on what it used to be. This object has been in constant flux both geographically and socially, throughout its history. This system of movement was made possible by a series of human players, from the collector to the dealer to the factory owner. The first gatherers of junk were the 19th century ragpickers and bone grubbers. But in the 1930s the term *junk collector* entered the American lexicon legitimizing it as a profession that still holds true today.⁷ Junk dealers were the middlemen who operated general stores and junk shops where objects would be sorted, bought, and sold to keep junk moving within the network of

trade. As seen in a photograph of 1903 in Hoquian, Washington, these dealers occupied shops, dating back to the late 1880s. (Fig. 5) These retail sites often served as charity organizations like the Salvation Army as seen here, but also functioned as legitimate businesses. Objects not worth reusing were sent to processing yards to be turned into scrap. With the advent of the automobile and the obsolescence of the first generation came the need for a junkyard capable of storing larger junk.

This network of moving junk produced a series of distinctive geographical sites. In the 1920s, as the first generation of automobiles approached their end of life, large junkyards began to appear on the periphery of the American landscape. They served as the collection site for wrecked automobiles that were disassembled to recover any usable parts. By the 1950s as cars were junked by the thousands, large tracts of land on the periphery of cities were being turned into mega-junkyards.

“Junk, like trash, is often clean, a matter of well-made paper, plastic, and metal. Like

trash, junk includes the malfunctioning, failed, burnt-out, and obsolete. If there's a difference, junk tends to be unwanted yet usable, while trash is used up, spent, exhausted, or obsolete.”

These vast, open-air landscapes of junk have been seen as emblems of the problems associated with the city. In his 1993 book *The Geography of Nowhere: The Rise and Decline of America's Man-Made Landscape*, urban planner James Howard Kunstler coins the term *junkscape* to criticize the forgotten, wasted spaces of North American suburbs.⁸ In 2001 architect Rem Koolhaas writes the essay, *Junkspace* to describe the interiorized version of these vast, anonymous spaces which he argues are found in today's shopping malls, airports and big box stores. With the same blank exterior, these junkspaces all contain versions of fast food restaurants, discount retailers and countless electronic stores selling the goods that define them. Koolhaas

states, “Continuity is the essence of junkspace; it exploits any invention that enables expansion, deploys the infrastructure of seamlessness: escalator, air conditioning, sprinkler, fire shutter, hot-air curtain... It is always interior, so extensive that you rarely perceive limits; it promotes disorientation by any means (mirror, polish, echo).”⁹ Like the junkscape and the junkspace, the junkyard exists on the periphery for the same reason; it is vast, open, and often endless.

As an artifact and as a site, junk is ever present in our society, reflecting the ebbs and flows of the economy. During times of economic hardship and material scarcity consumption trends decrease and consequentially fewer objects are discarded - with consumers choosing repair or reuse instead. During World War II for example, Americans reused jars, jugs, and aluminum foil while rubber bands, steel and other materials were donated to feed local industrial needs.¹⁰ The post-war years in the 1950s saw a return to, and a discernible increase in mass production and consumption. While the economic crisis at the start of the 21st century caused some abatement in its flow, this object continues to exist as artifact and scrap. Junk has become further engrained in our vocabulary to describe other marginalized commodities- as in *junk food* and *junk mail*.

In 2010 junk was declared the word of the year by the American Dialect Society due in part to the new term *junk shot*.¹¹ This



Figure 5. Salvation Army Junk Shop, Hoquiam, WA, 1903

was coined by petroleum companies to describe the process of stopping the flow of oil into the Gulf of Mexico after a major spill, by jamming actual “junk” into the broken pipe.

1.2 Junk: Artifact to Scrap

Though often used interchangeably, the terms *junk* and *scrap* connote categorically different things. For collectors, dealers and scholars of junk, these distinctions are critical. As anthropology professors Joshua Reno and Catherine Alexander write, “The naming and categorization of stuff affects what can be done with it and where it can go. Accordingly, as materials move between categories (now waste, now scrap,...now commodity), as well as through exchanges, it can become hard to track, quantify and accurately represent mass material movements.”¹² Junk describes an object that has lost some of its commodity value but that still has a distinguishable identity. When that piece of junk undergoes a process that might include crushing, shredding and baling, it is transformed into scrap, feedstock material for manufacturing. (Fig. 6) This mixed material becomes *feedstock* for manufacturing, its price often an indicator of the state of the economy as a whole. In its varying states as artifact and scrap, junk can be categorized according to its consumer function and physical properties. For example, junkyards often do separate automobiles from *white goods* or household appliances, in order to make processing more efficient. But if classified as cultural artifacts that assumes that they require care and attention. As Barry Allen observes, “...we care for them. When we trash them, we withdraw care. To withdraw care from something for which we are responsible is a moral act, and it is a moral problem because artifacts don’t stop needing care just because they can’t be used.”¹³ Scrap, on the other hand, becomes more anonymous and loses its cultural significance as an object; its identity is now defined by its material composition and subsequent categorization. The *Institute of Scrap Recycling Industries (ISRI)*

currently identifies categories for both ferrous and non-ferrous scrap metal, as well as scrap paper, plastics, electronics, and tires.¹³ In the 1950s as the scrap metals industry was growing in size and variety, owners developed a language of four to six letter words to describe their inventory of non-ferrous materials. Because the primary means of communication at the time was the telegraph, the expense of transmitting correspondence was calculated by the letter, not by the word. As a way to cut costs junkyards developed codewords such as *Candy*, *Honey*, *Zorba*, and *Tesla* to describe what they currently had available or what they were looking for. An automobile, for example, is composed of both ferrous and non-ferrous metals as well as *fluff* (upholstery and carpeting), so its scrap falls into many categories. Once shredded, the ferrous materials of an automobile are classified under the category of 210 and 211 Shredded Scrap or if presented as cut slabs, they fall under the category of 224 and 225 Auto Slabs. The cast aluminum engine blocks are considered *Trump* while the pistons fall under category *Tarry*, aluminum radiators are called *Tally* and aluminum wheels are referred to as *Troma*. The terms *Twitch*, *Tweak*, and *Twire* are also used to indicate the different forms of fragmentizer aluminum scrap after shredding. Unsweated (unmelted) auto radiators of mixed metals are called *Ocean*. As of today, ISRI relies upon eight major categories of non-ferrous metals and 149 subcategories to describe the various types of scrap metal.

Moving through the streets and ports of the city, junk is often hidden from view, in dumpsters, junkyards and shipping containers. But as these sites of collection demonstrate, junk is the detritus of the past that holds memories of our consumption. As Larry Fink observes, the junkyard can be, “the beginning of a new condition for the curious, cultured and coincidental mind,” inspiring creativity.¹⁵ By digging into the existing network of junk, this thesis seeks to uncover and reveal its significance as a commodity and artifact through architectural means.



CHAPTER 2

MARGINAL, PERIPHERAL, AND INVISIBLE

2.1 Junkyards

In 1951 there were 25,000 junkyards in the United States, all of which were used exclusively for storing the millions of junk cars that Americans were disposing each year.¹⁶ (Fig. 7) At this time as the cost of the labor involved in scrapping cars increased, steel mills stopped buying scrap metal from junkyards, that consequently stopped buying cars from American consumers. This trend would continue until the invention of the automatic automobile shredder in the 1960s. The automobile shredder could quickly and economically convert junk into scrap, linking junkyards to the larger commodities trade. Metals could be separated and baled by type based on the ISRI classifications and sold directly to a steel mill; increasing the purity of the scrap while reducing the amount of labor required. Through the expanded networks of rail lines, the interstate highway system, and ocean freight transportation, junkyards were no longer limited to the local trade. New markets for junk opened up from across the country and overseas, as far as East Asia, especially China.

2.2 The Junk Trade

In the late 1800s, with limited transportation and materials, the household junk trade often performed as a barter economy as

peddlers went house to house collecting rags, bones, and metal pieces. Rags were used in paper production, bones for making glue, and scrap metals, the most treasured form of junk, were used for the manufacture of new kitchen items. The peddlers, often on foot with open-backed carts or backpacks, would collect junk and return it to the general store of the nearest neighborhood or town where it would be deposited and sorted. The process was fully visible and offered a clear representation of the cycle of consumption and reuse. The general store acted as a depot for sorting and baling junk that was then sold to a middleman junk dealer who eventually sold it to a manufacturer.¹⁷ (Fig. 8) The weight of the material and the cost of shipping at the time kept this trade necessarily local. The market for junk relied on the physical proximity between the original manufacturer of these household goods and the local general store, connected by the mobile peddler.

As manufacturing continued to shift offshore so too did the demand for scrap metals. By 2012, the number of metal processing junkyards in the U.S. was reduced to 7,000 with many having gone out of business or disappeared by being absorbed into mega-junkyards. A 2015 map shows the distribution of these scrap processors across the U.S. (Fig. 10) These remaining



Figure 7. Auto Wreckers #1, Edward Burtynsky, 2006

facilities were nevertheless responsible for transforming 135 million metric tons of recyclable waste into raw materials.¹⁸ These scrap materials have increasingly become incorporated into the massive traffic of goods travelling between the ports of the U.S., like Los Angeles and Seattle and the rest of the world. (Fig. 11) The imbalance between the manufacture of goods in the U.S. and in China means that ocean freighters traveling to the U.S. often return to China mostly empty. The highly profitable solution has been to use these empty freighters to ship scrap metals back to China, thus referred to as the *backhaul*. China's demand for raw materials for manufacturing paired with America's demand for consumer goods has created a natural flow of junk as commodity. In the first decade of the twenty-first century, the largest export from the world's biggest economy (the United States) to the next biggest economy (China), was scrap.¹⁹

This new global market encourages junkyards, operating on the periphery of a city, to furtively load up anonymous shipping containers with scrap, to be shipped to unknown distant destinations. But more recently, economists have argued that the surplus of U.S. junk is disappearing and that China has imported too much.²⁰ As scrap metal prices remain high, junk collectors have sought other sources of metal. In some cases the illegal collection of manhole covers, sections of rail line, and copper electrical wire has caused major system interruptions and even human fatalities.

This global scrap trade has resulted in a disconnect at the scale of the local built environment. The junkyard in the U.S. sits as a marginalized, anonymous site at the edge of the city. This thesis posits a divergence and an arrested circulation in the existing flow of junk offshore by diverting junk from the known global networks and flows to a local economy. (Fig. 9) In addition, this thesis uses architecture to reveal the cultural meaning of junk as commodity and artifact. Local depots will be positioned as barter and repair markets into which junk can enter, be categorized, and exit, either stored in the archive or in the scrap vault, utilizing the principle of the backhaul applied to a local condition. In addition, processors and shredders will convert junk into scrap, stockpiling feedstock materials for use in local manufacturing. This architectural intervention seeks to subvert the existing system of junk not by rejecting it but by tapping into it and redirecting its energy to the scale of the city and its occupants.

In Washington State, junkyards tend to be concentrated along the Federal Interstate 5 (I-5) corridor stretching from the Canada-U.S. border down to Portland. (Fig. 12) This highway connects these junkyards to the ports of Seattle and Tacoma and ultimately offshore to ports in China. While located near major cities, these junkyards still exist on the periphery collecting the detritus of the city and shielding its citizen from the realities of mass consumption. As Joshua Reno writes, "Margins, in this sense, operate at a number of different levels, each servicing the

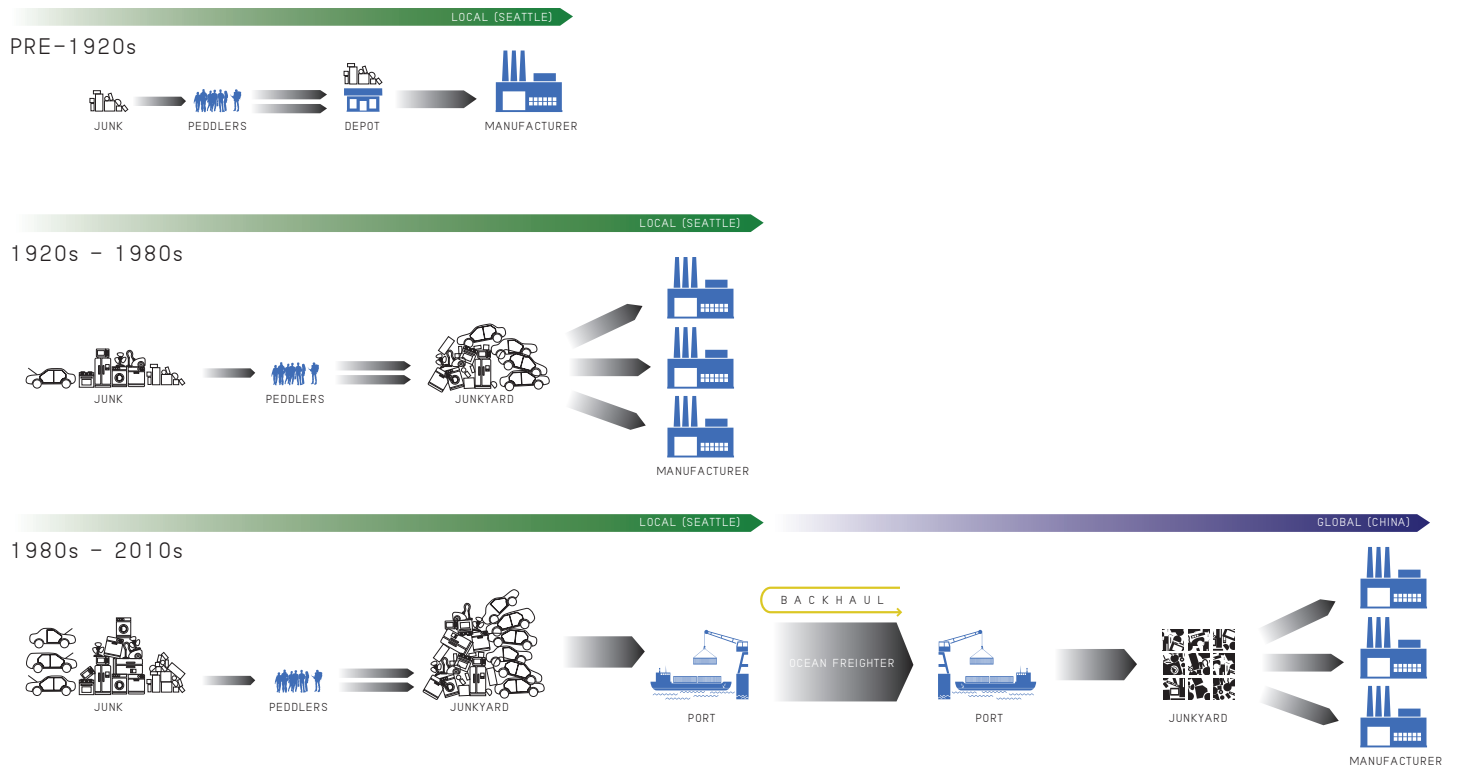


Figure 8. Diagram of the Historical Junk Trade

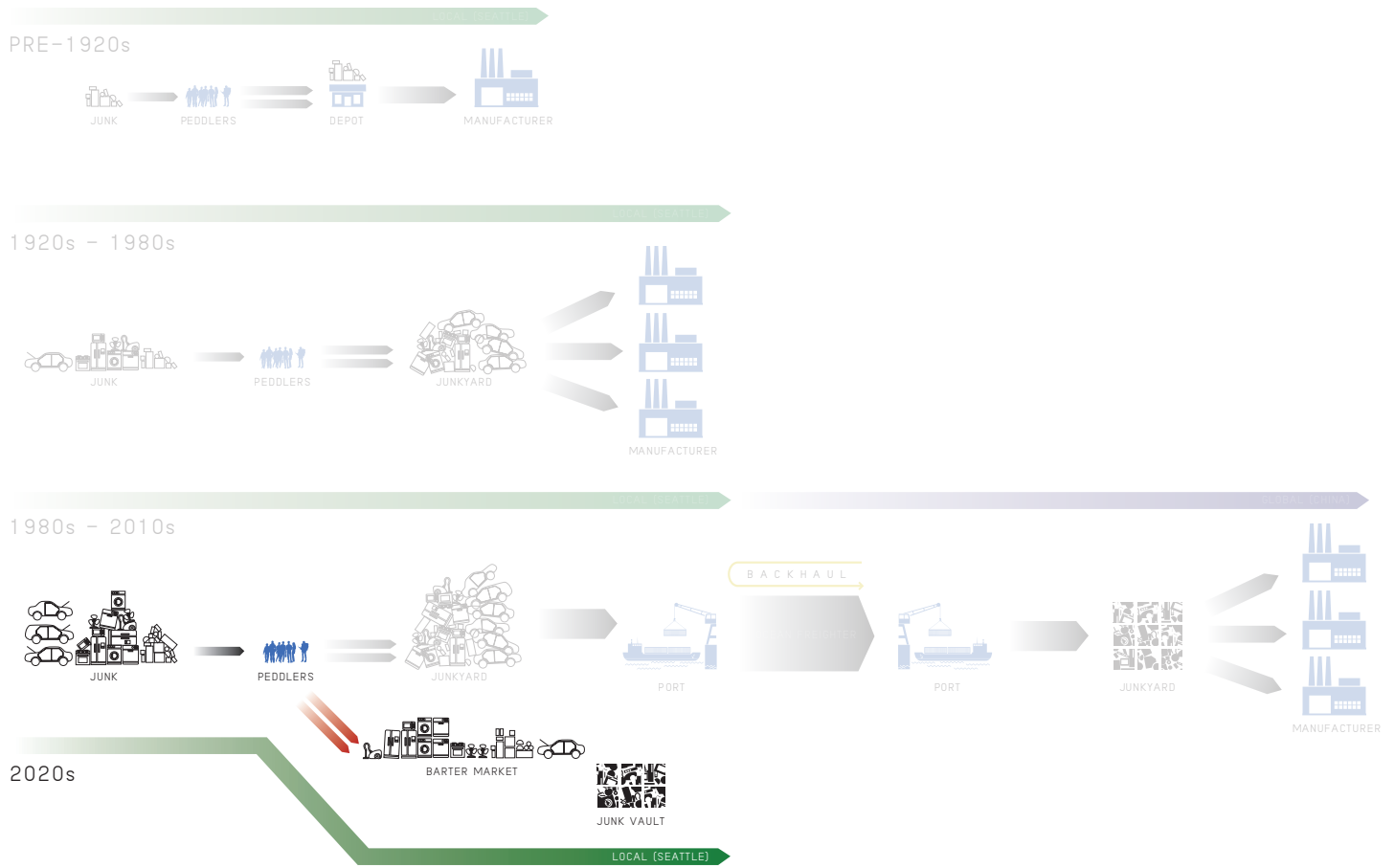


Figure 9. Diagram of the Proposed Divergence to the Junk Trade.



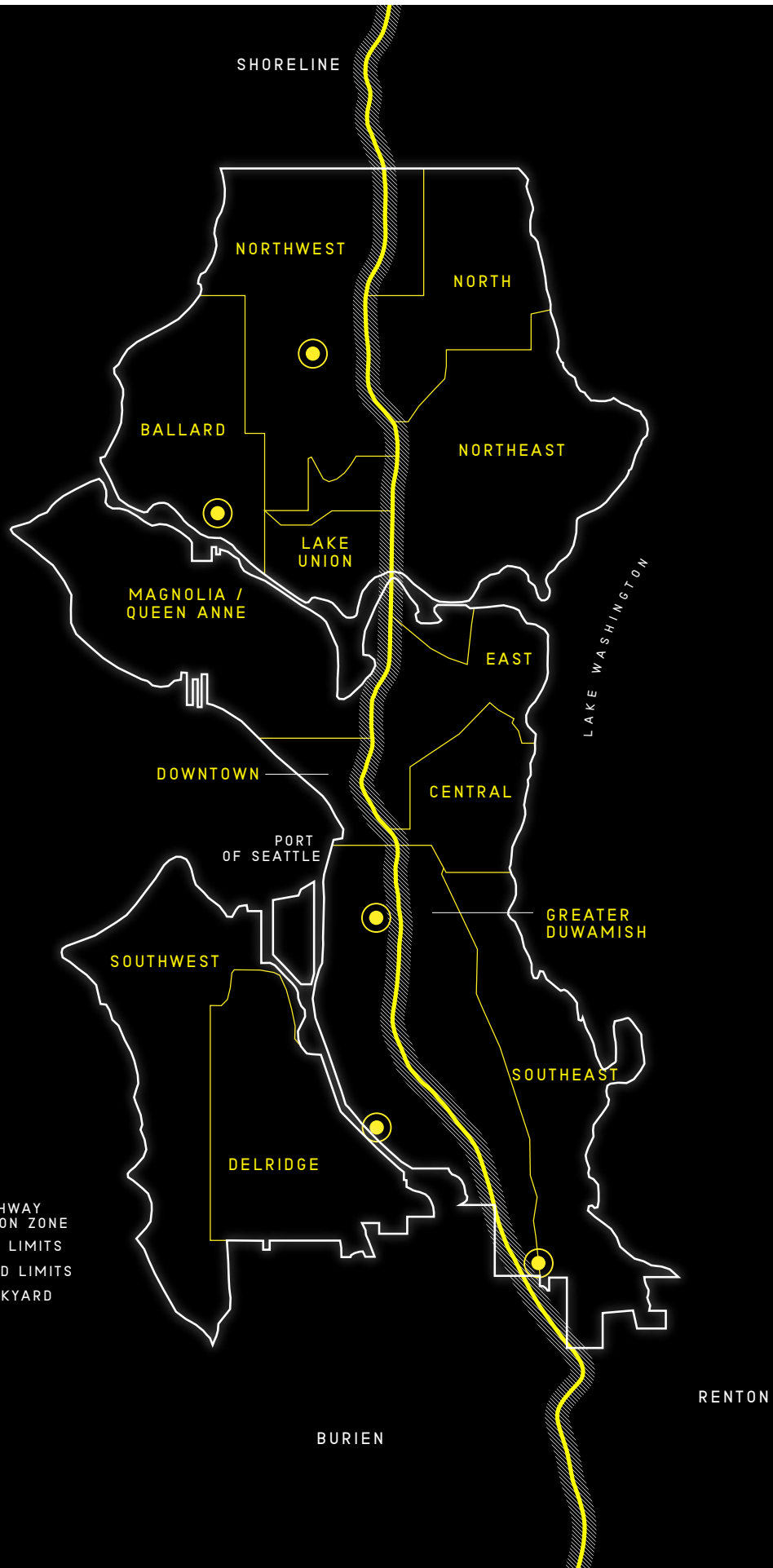
Figure 10. U.S. Scrap Metal Processing Facilities, 2015



Figure 12. Washington State Junkyard Distribution Along the I-5 Corridor.

open-air yards were not just for the storage of vehicles but also for their processing. The junked cars had value in the recoverable parts and materials that could be removed by hand by anyone with a toolbox. Teams of these odd-job men were required to slowly break down the carcass of the car in this time consuming process. But as both labor prices and the supply of junk cars continued to increase through the 1930s, it became less profitable for a junkyard to disassemble cars by hand. Concurrently, as American steel technology evolved, mills were becoming less interested in buying junk cars for potentially contaminated scrap metal.

Today in the United States, the peddler, also known as the picker or scrapper, operates as an informal collection network. Often operating on bicycles and pickup trucks, these modern peddlers have mastered the pile. Their vehicles, and the piles they carry, offer one of the few opportunities for the movement of junk through the city to be truly visible. Fewer trips to the junkyard means less energy expended and thus increases profits, so often these vehicles are piled beyond capacity in a seemingly random fashion. There is a structural logic to the pile; heavier pieces at the bottom, retaining walls of sheet metal and wood along the sides and cables in tension holding the whole thing in place.



- INTERSTATE 5
- FEDERAL HIGHWAY BEAUTIFICATION ZONE
- SEATTLE CITY LIMITS
- NEIGHBORHOOD LIMITS
- EXISTING JUNKYARD



Figure 14. The Movement of Junk Through the City by Scrappers.

Beyond a structural logic, the assemblage of wood, metal, and plastic starts to suggest an architectural language of its own. (Fig. 14)

Margins, in this sense, operate at a number of different levels, each servicing the more beautiful and exposed parts of a society; markets, waste dumps, cemeteries, and carnival were all traditionally linked to urban edges - socially subversive, troubling and essential.

2.3 Junkyard Typologies

Having been pushed to the periphery, junkyards have embraced a certain anonymity and autonomy. While some have thrived in this environment, this marginalization has caused the demise of many others. The family run junkyards that I contacted were less receptive or entirely non responsive to having me on site.

One in particular, was supportive of my research but reluctant to have me on site for fear of the release of sensitive information to competitors. A large junkyard, *Calbag Metals*, at the Port of Tacoma was receptive actually permitting me on site for a guided tour of their operations. Upon arrival, I entered through a secured door into the administrative area where I was greeted by Lois Young who coordinated the visit. I was then fitted with a hard hat and safety vest and introduced to J.T. Temple, one of the operations people, who escorted me through the facility.

Calbag Metals began operation in Portland, Oregon under the name *Northwest Junk*. At that time they were repairing and reselling the burlap sacks that were used for the transport of fruit, back to the farmers.²³ The company started collecting metals in the late 1920s under the name *California Bag and Steel Company*. By the 1960s, the company took on the name *Calbag Metals Company* and in 2001 expanded to Tacoma.

In total, I examined ten junkyards in Washington State but conducted the bulk of my research on the ground at *Calbag Metals* (Fig. 15). Within the boundary of each junkyard, I identified three common architectural typologies: the *shed*, the *yard*, and the *pile*. (Fig. 16) From my fieldwork at *Calbag Metals*, I observed that the shed is typically the point of exchange where peddlers check in with their junk so it can be weighed, photographed and sorted. (Fig. 17) Junk that can be immediately sorted by ISRI classification is separated into metal drums and cardboard bins while the remaining items are set aside for further processing. (Fig. 18) Within the shed exists the equipment needed to crush raw feedstock into bales as well as secure storage for higher value metals and those that are sensitive to the weather. In the shed I observed unidentified metals from Boeing

and the Department of Defense as well as copper, and aluminum being stored indoors. *Calbag Metals* does not have a automatic shredder and thus does not accept automobiles. Any cutting operations are done by torch outdoors in a controlled area.

The yard is by far that largest component of most junkyards. This open piece of land is where junk and scrap is stored in piles, where bales wait to be shipped, and where containers are loaded. There is a constant movement of trucks and machines in the yard with clearly defined circulation paths. While typically hidden from the public behind a fence, from above the yard and its piles

are the most visible component of a junkyard.

As a typology, the pile is defined by a formlessness based on accumulation and quantity. As Rem Koolhaas writes in his essay *Junkspace*, “But formlessness is still form, the formless also a typology ... take the dump, where successive trucks discharge their loads to form a heap, whole in spite of the randomness of its contents and its fundamental shapelessness...”²⁴ The pile at the junkyard represents the end of a period of transition from the household to the scrapper to the dealer. At this junction point, scrap steel is readied for transfer to local manufacturing,

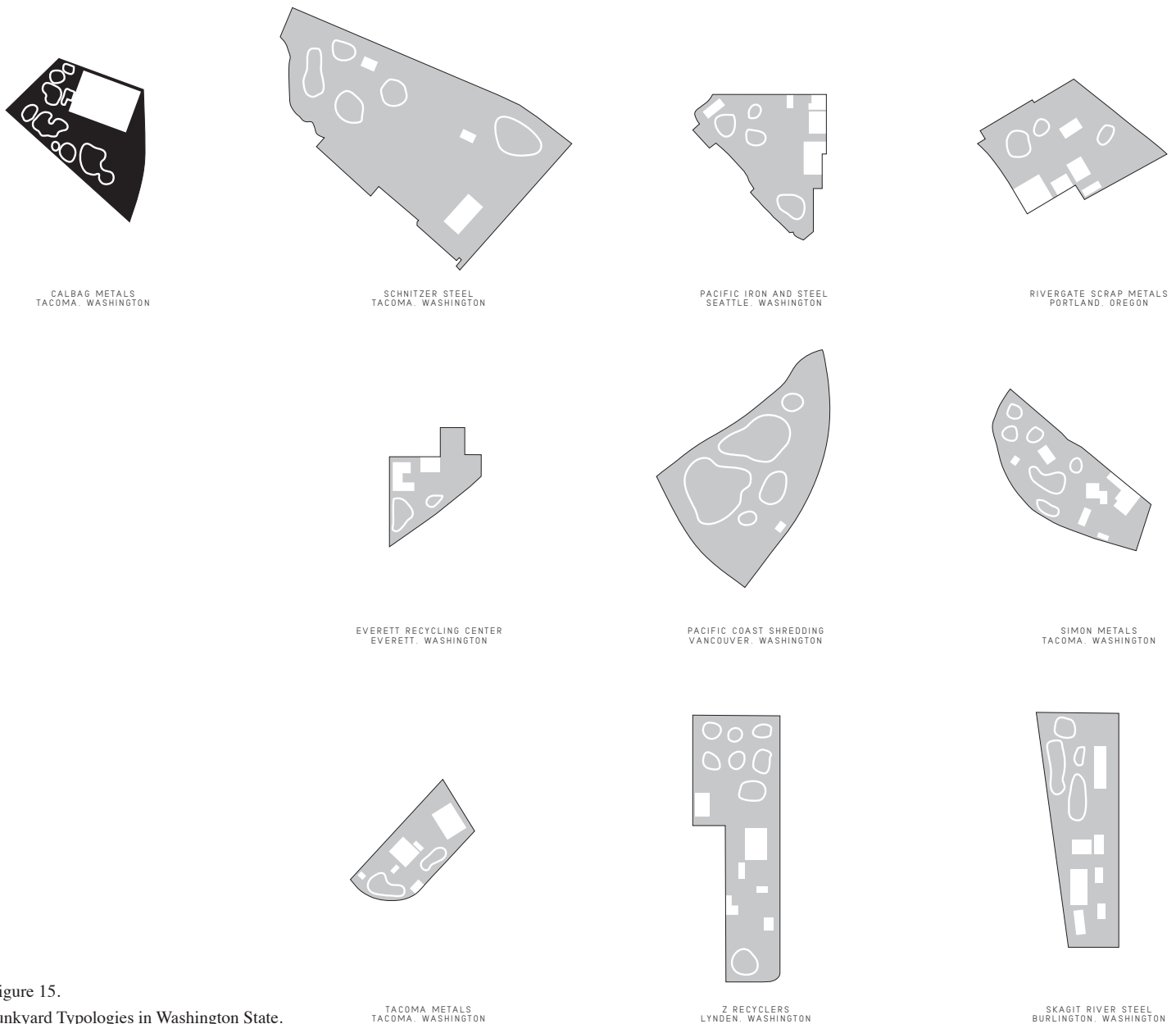


Figure 15. Junkyard Typologies in Washington State.

aluminum to domestic smelters, and most else to junkyards in Asia. The pile also reveals just how much junk Americans produce and its concealment is perhaps the greatest reason why society remains so disconnected from its consumption.

These three architectural typologies are defined primarily by the presence of static physical elements within the site but at the same time contain more dynamic elements of transition. Systems of *accumulation*, *movement* and *transience* intersect within and extend beyond the site. As best demonstrated by the pile, junkyards are sites of accumulation. This accumulation of scrap

metals is supported by a network that allows for its movement both to and from the junkyard and within the site itself. The vehicles within the junkyard include loaders, forklifts, pickup trucks, and bicycles all with the sole purpose to move junk from one area to another. Given the vastness of most junkyards, the movement of junk is primarily horizontal and ideally a junkyard should be in a constant state of transience. This also holds true for the object itself that shifts states from a artifact to a commodity. A strong market translates to a constant flow of junk. With a weak market and fewer buyers scrap becomes static and junkyards struggle to maintain relevance.



Figure 16. Composition of a Junkyard, Calbag Metals, Tacoma, WA, 2015

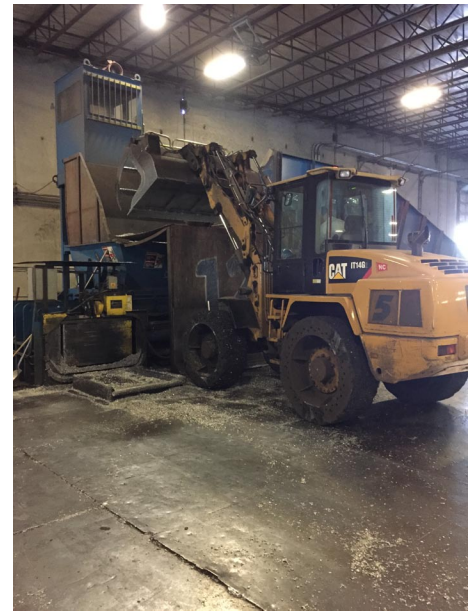
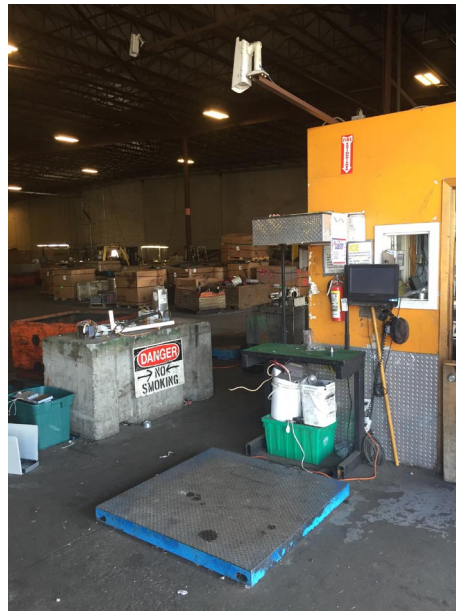


Figure 17.
(Clockwise from left) Sorting, Weighing, Baling, Bale Storage, Scrap Pile,
Junk Pile. Calbag Metals, Tacoma, WA, 2015.

“But formlessness is still form, the formless also a typology...take the dump, where successive trucks discharge their loads to form a heap, whole in spite of the randomness of its contents and its fundamental shapelessness...”



CHAPTER 3 PROSPECTING A SITE

3.1 The City as a Junkyard

This thesis proposes a new series of spaces for junk, that operate at the scale of its larger urban network and within the city itself. Operating at the scale of the community, these small scale flexible urban nodes will serve as market, archive and vault for this object in its multiple forms as commodity, artifact and scrap. Thus the first task is to analyze the existing infrastructure of junk in a particular urban context in order to determine viable sites for an interruption. The objective here is not to identify one site but rather a field of sites throughout urban Seattle. The architectural response will focus on one, the catalyst site, with the premise that this site feeds into the next. To narrow the focus requires a definition of the parameters for site selection. A key component is reversing the trend of disconnection between society and its junk. By relocalizing and reurbanizing junk collection, it can become approachable and visible. As American junk has been shipped overseas to feed the global economy since the 1980s, relocalizing junk collection can act as a catalyst to relocalize manufacturing.

The second objective is to recognize that proximity to major networks throughout the city is vital. With its networks of freeways, rail lines, and port terminals, Seattle's infrastructure has enabled junk collectors and junkyards to move junk and scrap efficiently, with little visibility. Proximity to the I-5, major truck routes, the light rail, and the Port of Seattle are important as relocalizing the junk trade does not mean abandoning global

trade. As stated earlier, this is a divergence that feeds into and off of the existing host network.

The third objective is to repurpose an existing vacant building and redefine a civic architecture. The post office, with its rich history as a symbol of growth and progress, has now reached near obsolescence as communication methods evolve from the analog to the digital. In 2011, the *United States Postal Service* (USPS) announced that it would be shutting down nearly 3,700 locations across the U.S. with many others vacating their current buildings in search of lower cost real estate.²⁵ For Seattle, this has meant the potential closure of four locations and the relocation of three others; in particular the Chinatown location. In the early 1900s many post office buildings across the U.S. were designed and constructed as multiple story buildings built in urban locations, utilizing an expanding network of rail lines. For example, the Chicago Post Office built in 1932 is a nine-story building that utilized elevators and conveyor belts to move mail from the base to the top and gravity to move it back down again.²⁶ Verticality and advanced technology were seen as the solution for urban sites with constrained footprints. In the 1960s, the one-story post office building in Seattle's Chinatown represents a shift in attitudes of the postal service from a model of vertical distribution to horizontal as technology continued to evolve and labor costs continued to increase. This thesis proposes to investigate how the principles of early multiple-story post office

Figure 19. (Opposite, Clockwise from Left)
Diagram of the Former Tidelands,
Diagram of the Networks and Nodes Through Chinatown,
Diagram of the Historic Hotels in Chinatown



buildings to sort and distribute mail, can be applied to a new civic building typology designed for the exchange of junk. As Lydia Kallipoliti writes,

“Spanning scales from that of obsolete objects to that of obsolete buildings and cities, a mundane reality of big defunct objects - displaced building parts - is overwhelming the contemporary city. Techno-junk is an emerging city-born condition; defunct oil tanks, air-conditioning tubes, advertising billboards, containers, and other apparatuses articulate a new urban language that violates the building envelope or attaches itself to it as an outgrowth.”²⁷

As previously discussed junkyards in the U.S. have become invisible places relegated to the periphery of cities. But at the same time they have become embedded in our urban environment, absorbed into them as sites of accumulation, movement and transience. So what if the city itself is examined as a junkyard? By looking more closely at the city of Seattle it becomes evident that this condition is not new. (Fig. 19)

Sodo, Pioneer Square, and most importantly for this thesis, parts of the International District (formerly Chinatown) all sit on former tidelands, filled in the early 1900s with junk. (Fig. 20) This new land was intended to be for industrial uses and to act as a dump site for major infrastructural projects in Seattle at the time that included the dredging of the canal and city street regrades. Much like junkyards, the tidelands were an ideal place to dump unwanted material as David Williams notes, “It was an ideal location: flat, isolated, easy to expand (just dump your waste on the tideflats).”²⁸ Archeological digs have unearthed sawdust, stucco, slag, charcoal, bricks, and domestic garbage of all sorts.²⁹ Before the flats were filled, the tidelands were home

to a variety of people including the peoples of the Duwamish, transient settlers from the gold rush, and Chinese workers. Ironically, it was these same marginalized people who worked on the major infrastructural projects that would lead to the filling of the tidelands. As it would turn out, the same people who were displaced would return to settle on the new land that was stigmatized by the wealthy as unsuitable to inhabit because of the stench of the rotting fill. This site of accumulation is defined both by land itself and by the movement of new immigrant families, workers and other transients that established themselves there.

Like junkyards, cities are dependent on networks of rail, road, and water to move people. Since the eighteenth century, rapid urbanization has been attributed to the people’s ability to move about.³⁰ Efficiency is best achieved in the interconnectivity and convergence of these networks. Airports and shipyards are connected by rail, train stations connected by bus. The growth of the city has always been associated with its ability to move people and goods efficiently. In the early 1900s it was proximity to rail and the expansion of this network that contributed to the growth around King Street and Union Stations. These areas became concentrated with shops, warehouses, and hotels. In the 1950s, with the prevalence of the automobile and the Interstate freeway network, cities grew on the periphery far from the sites of accumulation in the urban core. Highway beautification pushed junkyards to the new periphery farther from the suburbs in an increasing attempt to hide and disconnect residents from their junk. Today, people are returning to the city and Seattle’s Chinatown is seeing a resurgence as historic hotels are being

“Techno-junk is an emerging city-born condition; defunct oil tanks, air-conditioning tubes, advertising billboards, containers, and other apparatuses articulate a new urban language that violates the building envelope or attaches itself to it as an outgrowth.”



Figure 20. South Canal trestle; filling tideflats near Bay View Brewery, Seattle, 1901



Figure 21. Storefronts as an Assemblage in Chinatown

renovated and open spaces are expanded. Associate Professor of History A.K. Sandoval-Strausz writes, “The growth of cities...and the exceptional transience of urban populations meant that city dwellers increasingly found themselves surrounded by people whom they did not know.”³¹

Hotels have facilitated human mobility by serving travelers and strangers with the familiar goods normally found in the home. Hotels provide privacy and anonymity and represent a separation of people from place, whereas a junkyard represents a separation of people from their things. The act of staying in a hotel is a transient one. For the first settlers to Chinatown and Pioneer Square, hotels offered goods and services typically found in the American home.³² Today based on my fieldwork and observations, evidence of only eleven of the approximately 65 historic hotels in Chinatown remains, identifiable by their signage.

3.2 Chinatown

The first recorded Chinese immigrant arrived in Seattle in 1860. Like many of the new residents to the city, Chinese immigrants came to the west coast of the U.S. in search of the ‘mountain of gold’ of the California gold rush.³³ Unfortunately, like many, they would not find the gold and thus would end up working remedial jobs as laborers for the massive infrastructural projects underway at the time. This new workforce received low pay and thus was reliant on low cost housing on less desirable land. The newly filled tidelands, originally considered not fit for human inhabitation by the elite, became the place where the Chinese and other marginalized people ended up settling.

During the gold rush years, Chinatown’s growth was defined by the construction of many hotels and the presence of transients. Hotels and brothels housed the new transient population in the upper stories while ground floor retail became an amalgamation of American, Chinese, and Japanese businesses. Here, one could get a watch repaired, clothes laundered, and a suit tailored. Most of these original businesses have since disappeared, but evidence of their existence still remains through the presence of signage and architectural remnants. Many of the buildings constructed in the early 1900s still remain, but most no longer function as hotels. The American Hotel and the Panama Hotel are exceptions, as they still operate as places of transience, while most others have been converted into apartments or single room occupancies.

Modern day Chinatown is a further agglomeration of Chinese, Japanese, Vietnamese, Filipino, Korean, East Indian, Indonesian, and Laotian people. According to census data, Chinese is the dominant nationality represented in the neighborhood with Japanese and Vietnamese being the next two respectively.³⁴ In 1999, the name of the area was changed from Chinatown to the Chinatown-International District (CID) to more accurately represent the diversity of cultures represented. For the purposes of this thesis, I refer to this area in its original title Chinatown.

The architectural character of Seattle’s Chinatown, like many across the U.S., is a milieu of markets, restaurants, gift shops, travel agencies, herbal shops, offices, and residences. Architecturally this is most obvious in the use of signage. Like billboards for pedestrians, signage in Chinatown is as much informational as it is its identity. Building facades are often an assemblage of three dimensional objects with turn of the century

architecture acting as the canvas for a mixture of neon signs, fluorescent lights, bright colored awnings, air conditioners, exhaust ducts, security screens, clay roof tile, and electrical conduit. (Fig. 21) This agglomeration becomes its own unique architecture language that evolves over time. The original brick hotels act as the host framework to which a parasitic process feeds off of. What was once a chop suey restaurant is now a cell phone store, what was once an opera house is now an office. This architectural fabric is a result of necessity by a population whose history is rooted in survival, adaptation, and transience.

3.3 The Site

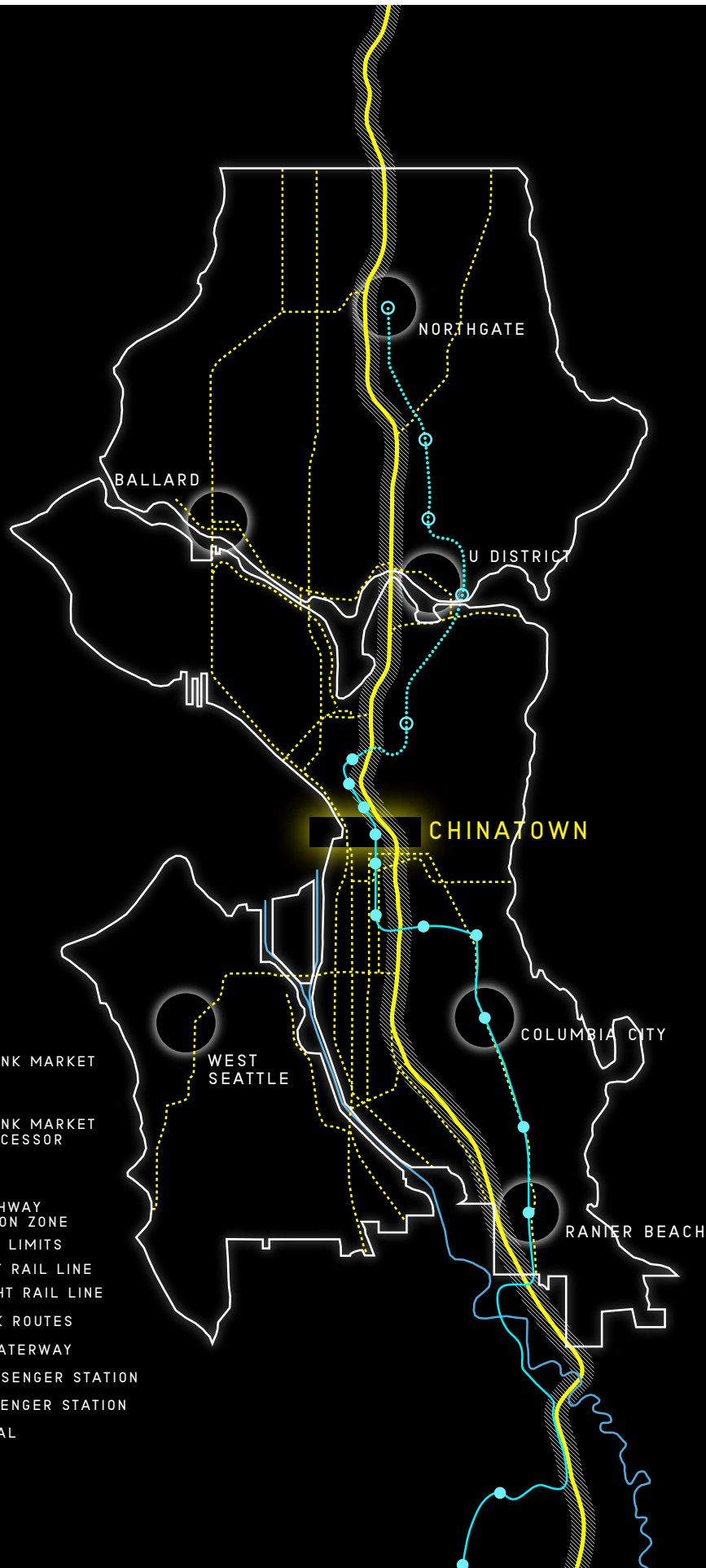
The selected site for the junk market and scrap processor in Chinatown is one of seven identified for Seattle. (Fig. 22) The site chosen is actually two plots of land at the corner of 6th Avenue South and South King Street. (Fig. 23) On the northeast site, three existing buildings were demolished to make way for Hing Hay Park and an existing post office building is slated for demolition. The Bush Hotel sits to the north of the site and the Alps Hotel to the south across South King Street. On the southwest site stands the Nagomi Tea House and a surface parking lot. To the west of the parking lot exists the Publix Hotel, to the north across South King Street is the American Hotel and to the south across South Weller Street is the Uwajimaya Apartments.




Hing Hay Park, translates to a “park for pleasurable gatherings” and dates to 1970.³⁵ Previous to this three buildings stood on the site and all were demolished. (Fig. 24) Evidence of these buildings can be found on the Bush Hotel in the form of a mural that follows the outline of where the existing building intersected the hotel. In 1974, the Grand Pavilion, built in Taiwan, was

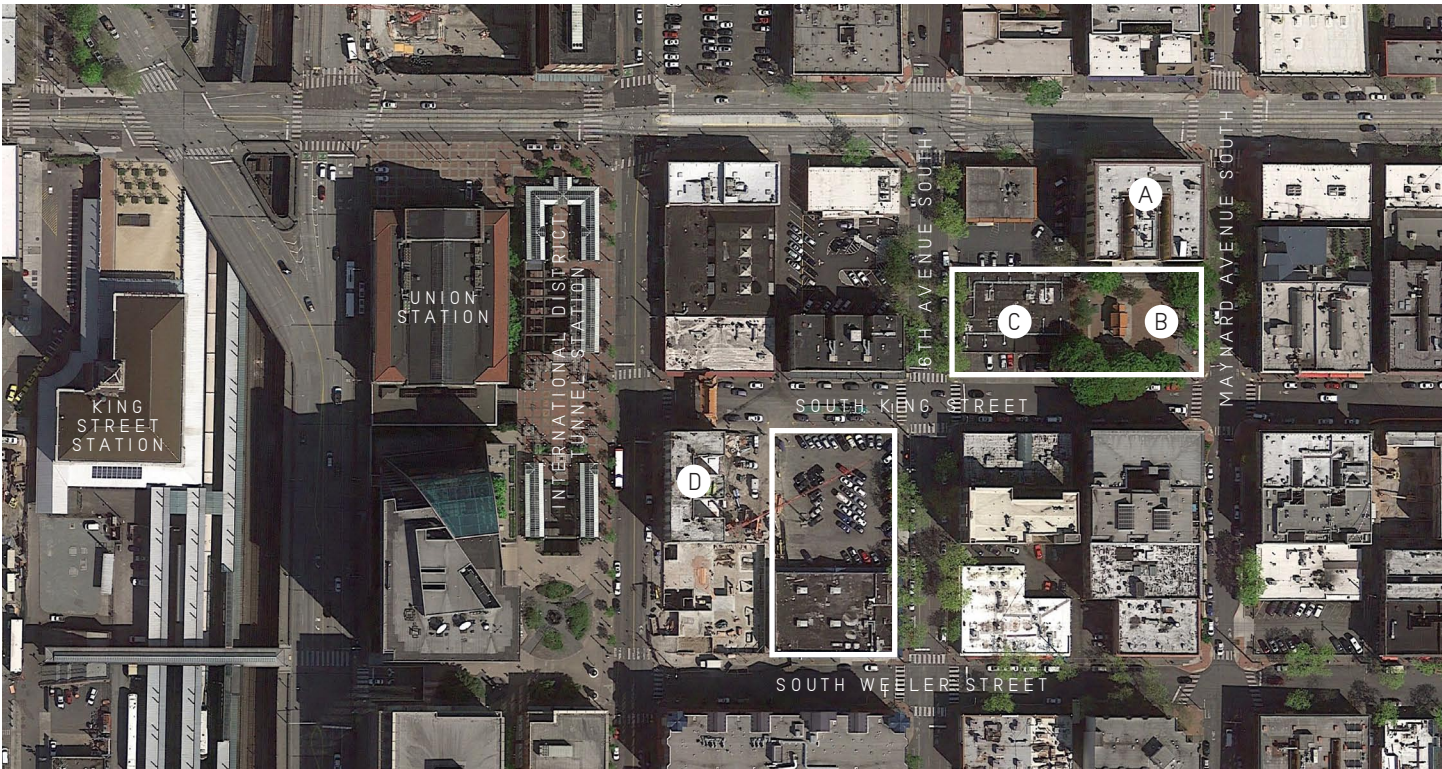
installed and to this day remains as a symbol of Chinatown. Hing Hay Park is an important open space in Chinatown where families are known to gather during the summer. However, in all my visits to the park, it felt underutilized often with more birds present than people. There were small attempts made to enliven the space by the introduction of a ping pong table, movable cafe tables and chairs and a mobile chess board. The Grand Pavilion provides some shelter from the weather but the majority of the park is unprotected. The entire surface is hardscaped with brick and concrete and trees circle the perimeter.

The existing post office building has been vacant since 2014 when it was sold to Seattle Parks and Recreation for the expansion of Hing Hay Park. There were no readily available drawings of the existing building so conclusions were drawn based on a survey of what was visible from the exterior. Truck bays are located on the south along South King Street and the retail frontage faces west at the lowest point of the site. From this point to the property line between the post office and Hing Hay Park is an eight foot grade change. There are no access points to the post office from Hing Hay Park. So the assumption is that the floor slab on the interior of the building is primarily flat, as is common in other single-story post office buildings, and steps up to address the loading area only.

The Bush Hotel now operates as a single room occupancy and the south facing rooms having views to Hing Hay Park. The ground floor businesses include a co-working space for freelancers and startups, a dim sum restaurant, a food market, and the relocated post office. The Publix Hotel is currently under renovation and expansion into market rate apartments with ground floor retail. East facing windows have views of the project site.



-  PROPOSED JUNK MARKET
-  PROPOSED JUNK MARKET & SCRAP PROCESSOR
-  INTERSTATE 5
-  FEDERAL HIGHWAY BEAUTIFICATION ZONE
-  SEATTLE CITY LIMITS
-  FUTURE LIGHT RAIL LINE
-  EXISTING LIGHT RAIL LINE
-  MAJOR TRUCK ROUTES
-  DUWAMISH WATERWAY
-  EXISTING PASSENGER STATION
-  FUTURE PASSENGER STATION
-  PORT TERMINAL



A. BUSH HOTEL



B. HING HAY PARK WITH GRAND PAVILION



C. VACANT POST OFFICE



D. PUBLIX HOTEL

Figure 23. Aerial View of Chinatown with Bush Hotel, Hing Hay Park, Vacant Post Office and Publix Hotel Keyed

DEMOLISHED. NOW NAGOMI TEA HOUSE

DEMOLISHED. NOW HING HAY PARK

POST OFFICE. NOW VACANT

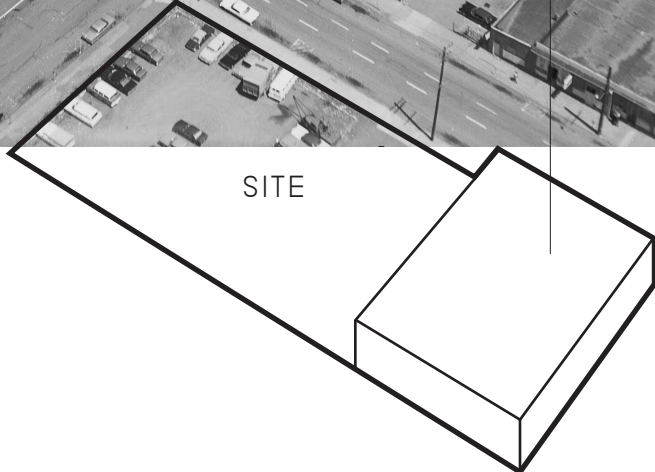


Figure 24. Aerial View of Chinatown, 1969



Figure 25. Interior of Shed, King Salvage, Seattle, WA, 2015

CHAPTER 4 AN ARCHITECTURE OF JUNK

4.1 Program

The program delineates three major areas, the *Junk Market* that includes exchange and repair, the *Scrap Processor and Yard* that includes the industrial processing operations and a *Junk Hotel* that stands as a representation of the domestic and transient. (Fig. 26)

The Junk Market is where there is the most vibrant area of public interaction where junk will be collected, sorted, repaired, and bartered. Based on the precedents of junk markets in Asia and imagined markets depicted in the films *Blade Runner* and *Labyrinth* this will be the area of most human interaction. In the *Labyrinth*, the junk city is described as, “a part-market, part-junkyard. There are piles of rubble and junk everywhere, and between them are tents from which people hawk objects of all kinds.”³⁶ The Junk Market is informal in that it consists of a range of kiosks of various shapes and sizes arranged with circulation in mind. Within the Junk Market exists The Archive which is for the storage and care of the mundane artifacts not found in any museum. It acts as a record of the obsolescence of junk. The Archive is composed of a series of shipping containers, anonymous and homogenous but with an organizational logic.

Objects that remain in the Junk Market for extended periods of time become fodder for the Scrap Processor and Yard. The Scrap Processor and Yard does not discriminate against the junk it will accept, but what it produces through shredding, cutting, sorting, and baling is organized based on ISRI classifications. While less public than the Junk Market, it is still open to public view at the ground level and via the Junk Hotel. Depending on the commodities market, scrap is either sold into the larger scrap trade (both local and global) or is stored in the Scrap Vault for future use. The Scrap Vault is a tightly controlled area much like a treasury. Scrap is currency; too much and it weakens its value but in times of scarcity not enough can lead to hardships.

The Junk Hotel responds to its context. Chinatown’s history as a place of transience continues but most of the historic hotels have been converted to single room occupancy. In fact it has become difficult to find a place to stay in Chinatown. The reintroduction of the hotel ensures that people are always on site. The first several floors are dedicated to private rooms while the upper four floors are constructed in the manner of a parking garage to support a park of recreation vehicles (RV).

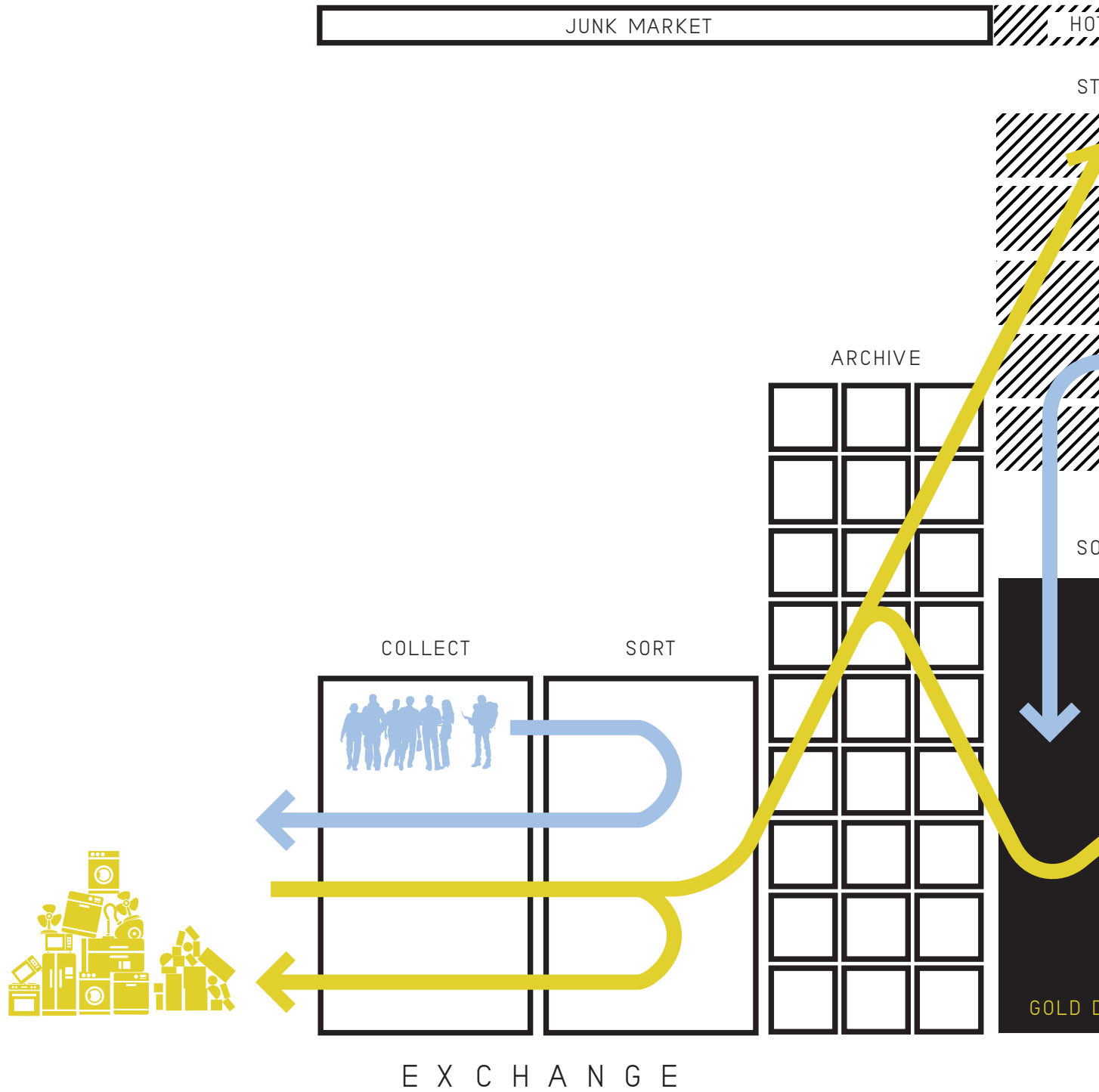
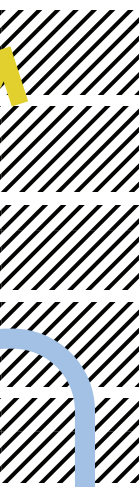


Figure 26. Program Diagram

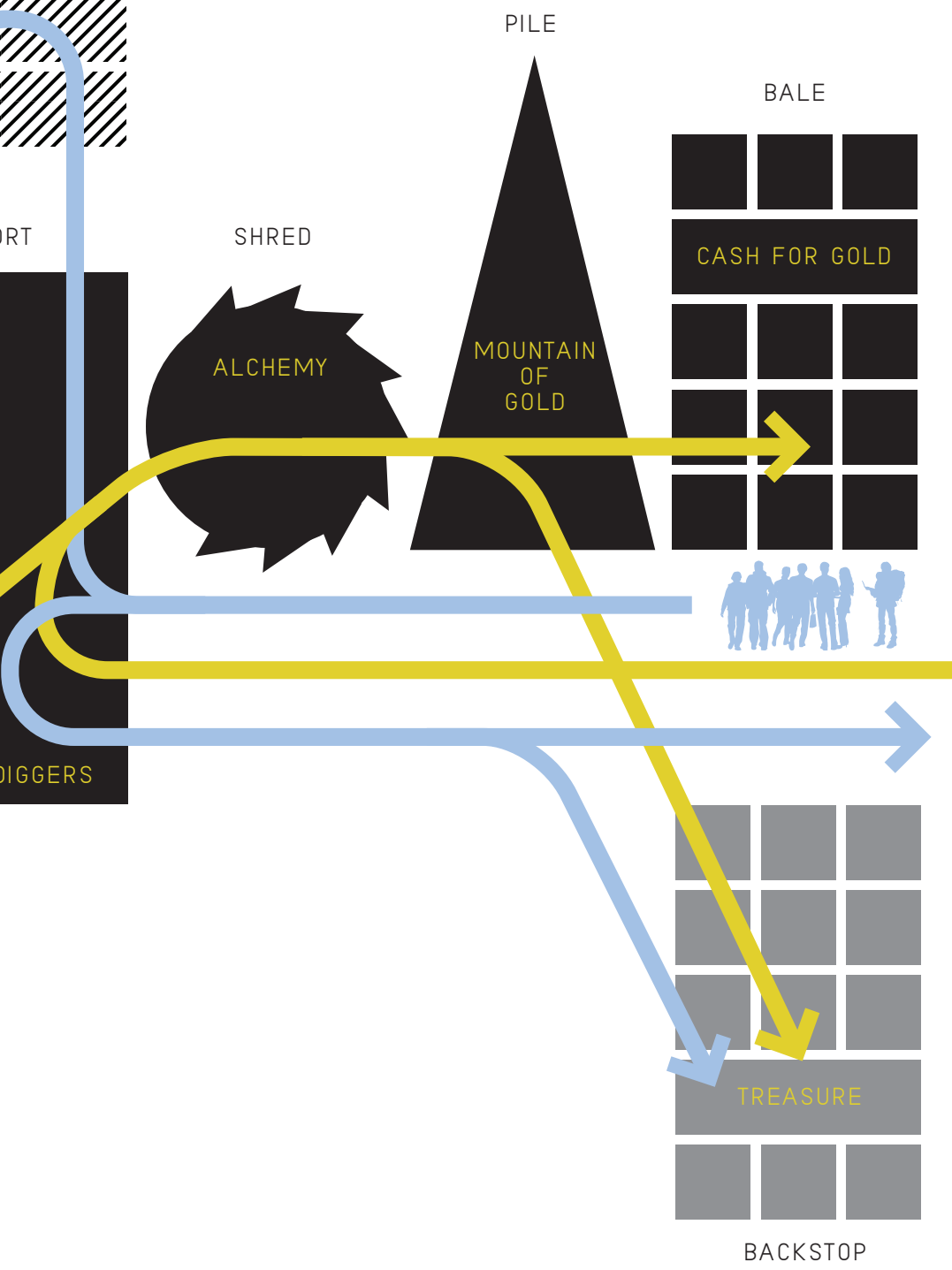
TEL

SCRAP PROCESSOR & YARD

AY



P R O C E S S I N G



S T O C K P I L I N G

BACKSTOP

4.2 A Junkyard Turned Vertical

The typical junkyard is a vast horizontal site of unwanted goods, existing on the periphery and concealed from view. Deconstructing the existing junkyard type and rearranging its common elements reveals opportunities for three new architectural expressions: vertical lift, porosity, and gravity feed. (Fig. 27)

If the first step is to move the junkyard from a suburban periphery to the urban core, where land values are higher and plots are smaller, then the logical solution is to build vertically. Taking precedence from early 20th century post offices, the vertical movement of junk can be facilitated through a series of cargo elevators that move junk and scrap through the building for further processing and stockpiling. The height limit in Chinatown is restricted to 75 feet with a 100 percent incentive if the additional 75 feet is used for residential or hotel.

Loading and unloading functions are the only ones that are limited to a ground floor condition as this is directly linked to rail, road, and water networks. As the programmatic diagram has illustrated, the processing of junk is not a linear one so the proximity of one processing operation to the other are less prescriptive. Sorting, shredding, and baling all exist in close proximity while stockpiling can be independent of these operations as long as the pile connects back to loading and unloading.

“a part-market, part-junkyard. There are piles of rubble and junk everywhere, and between them are tents from which people hawk objects of all kinds.”

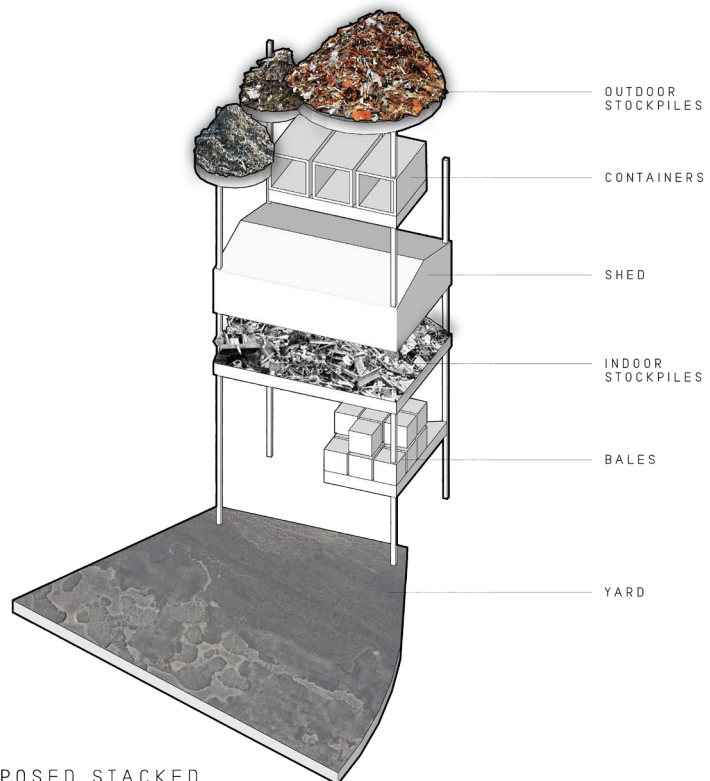
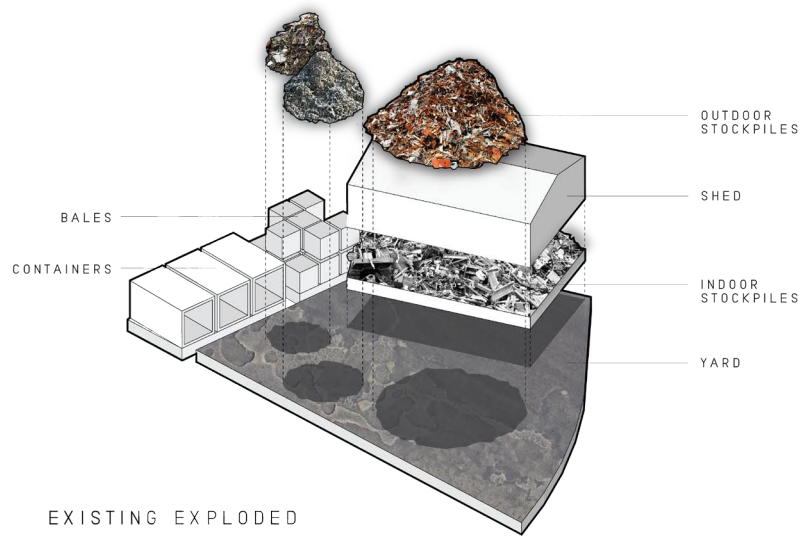
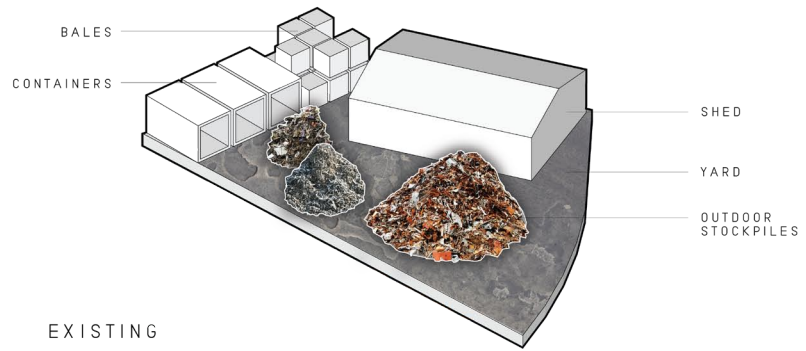


Figure 27. Organization Diagram

PROPOSED STACKED

4.3 Exchange, Shred, and Stockpile: An Iterative Model

The intent of this thesis was to create three separate conceptual models that represented the most essential junkyard processes to be investigated further: exchange, processing, and stockpiling. As this process evolved, the realization was that three independent models did not best represent the intentions so that focus shifted from three models to one iterative model that I would revisit over the course of ten weeks. (Fig. 28) The model was constructed out of found material, scraps from my own collection, and remnants from visits to second-hand stores.

The first iteration represents the process of collection and exchange as seen through a rickshaw-like assemblage. The research for this thesis inevitably exposed me to junk collection

processes around the world in the in the developing world, it is common to find peddlers collecting junk on rickshaws and bicycles. The scale of the rickshaw and the method of movement relies on the power of the individual.

The second iteration represents the processing the process of shredding junk into scrap. The shredder changed the way in which junkyards operate.

The third iteration represents stockpiling. The interest here was in the opportunities for the storage of material not unlike the water towers and grain silos. Liked to this are the vertical lift and gravity feed.

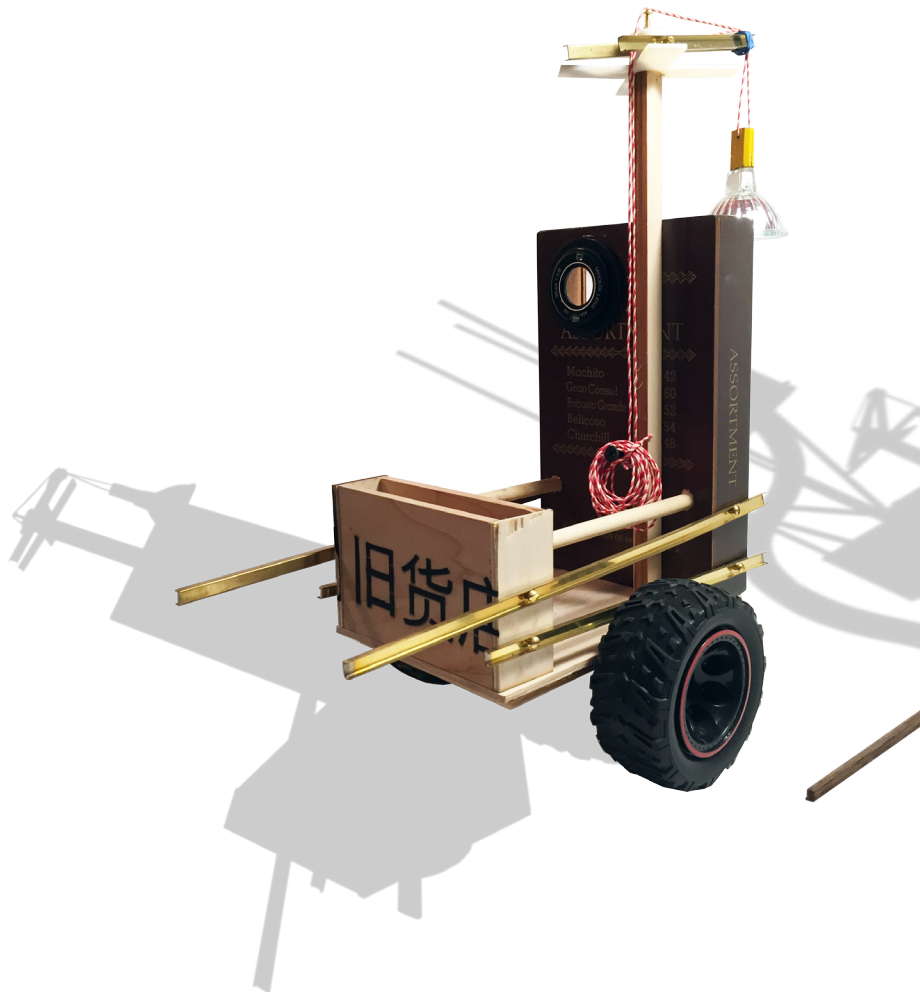


Figure 28. Conceptual Model Showing Iterative Process

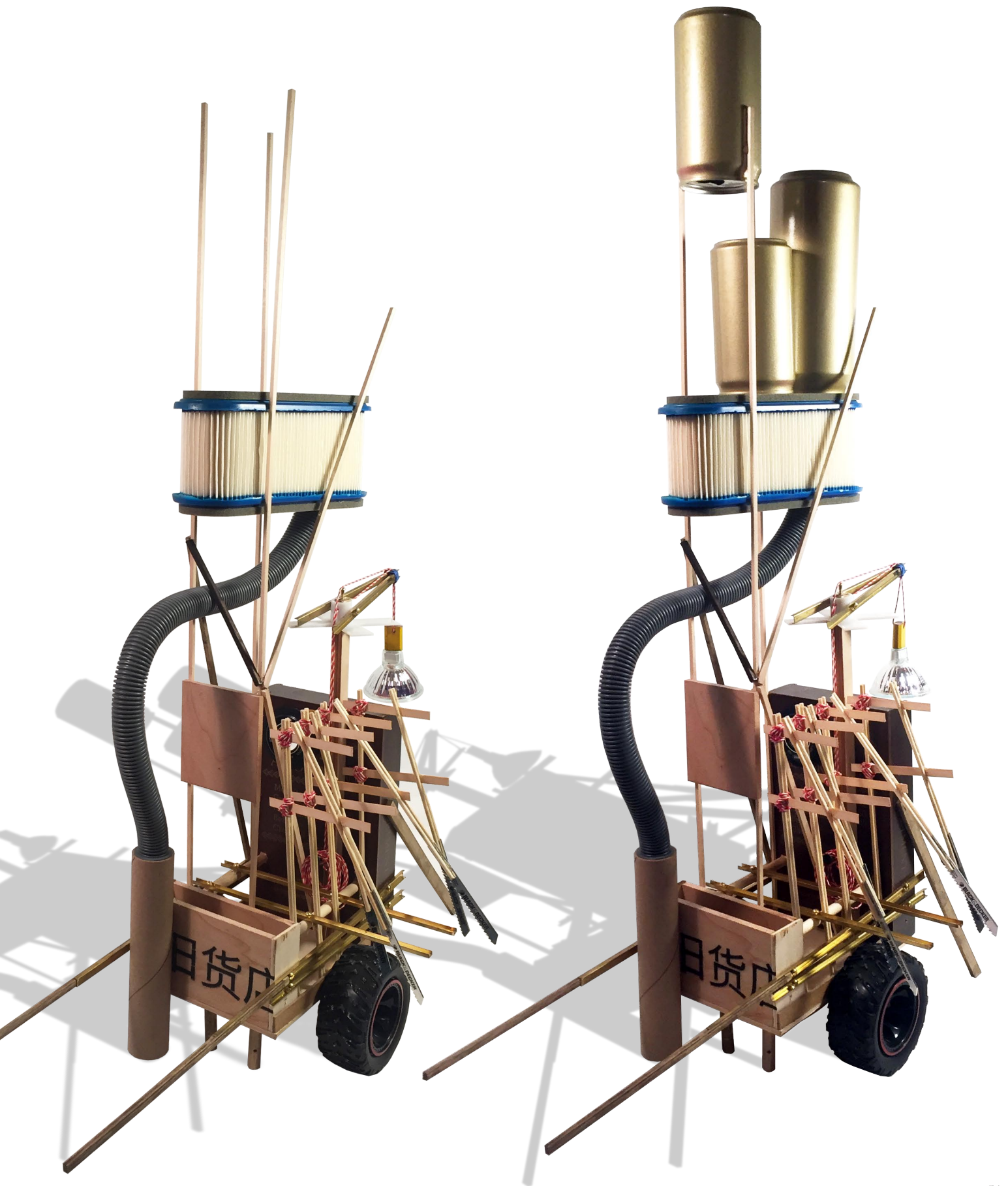
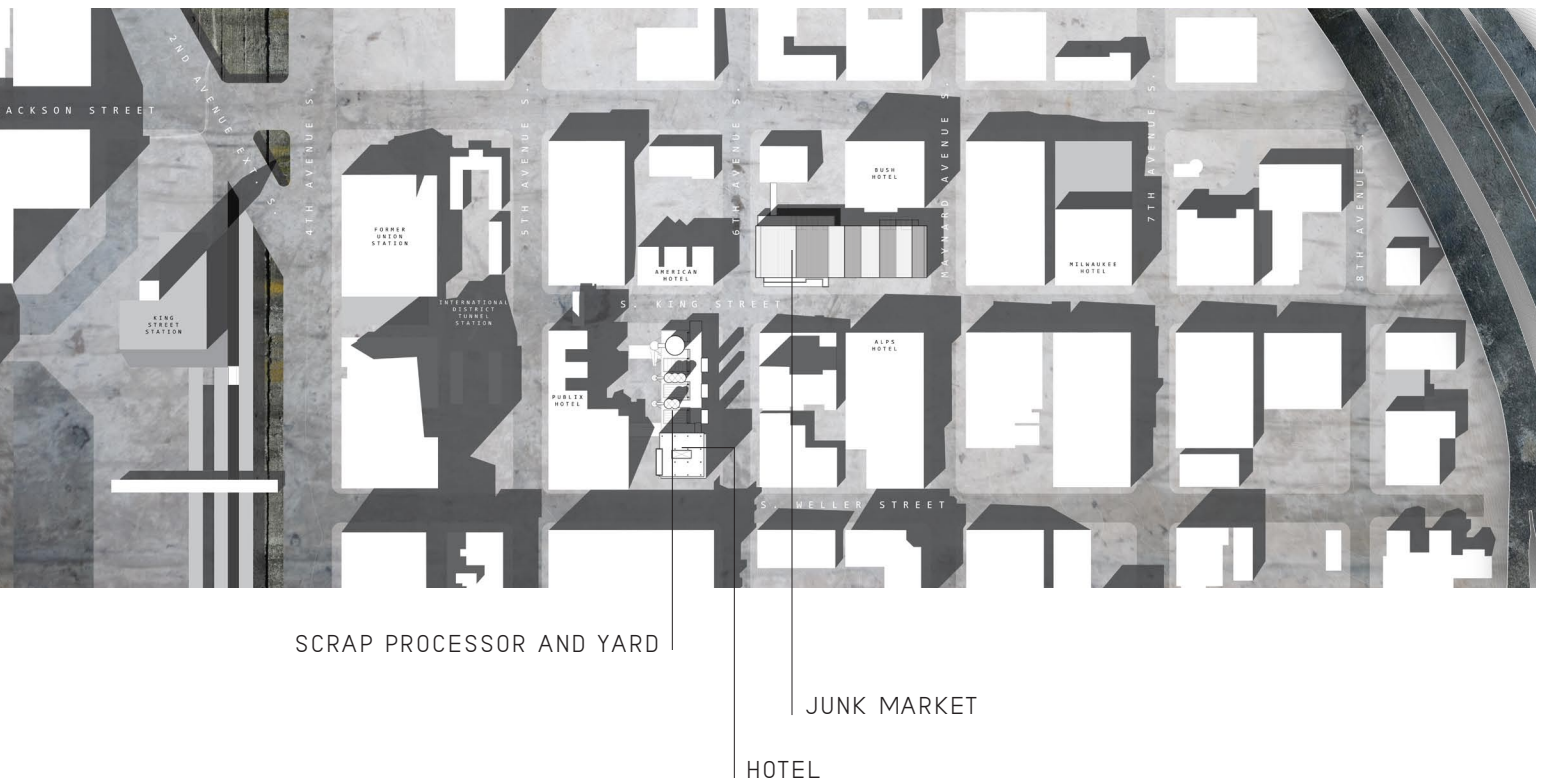




Figure 29. Site Plan





4.4 The Site Response

As mentioned earlier there are three major architectural elements in this design proposal: the Junk Market, the Scrap Processor and Yard, and the Hotel. (Fig. 29) All are within a five minute walk from King Street Station, a three minute walk from the International District Tunnel Station and a one minute walk from the soon to be open streetcar station on South Jackson Street. Trucks with more than two axles would enter the site from the south via the South Dearborn Street truck route and access to Terminal 46 at the Port of Seattle is a ten minute drive. Access to the site via the I-5 freeway is possible by taking Exit 164 at which point it is a two minute drive.

From an aerial perspective, the Junk Market is defined by a shed roof that covers both the repurposed post office building and

Hing Hay Park including the Grand Pavilion. By covering the entire site with one large roof, the market is defined in its totality but at the scale of the pedestrian is still a sum of all its parts. The contents define the architecture. Peddlers accessing the Junk Market site by vehicle would do so via 6th Avenue South where all vehicles check in to have their junk inspected and photographed. This process ensures accountability for the junk and assists in discouraging the trade of junk acquired through theft; a problem prevalent at junkyards especially in times of economic hardship. Peddlers on foot or bicycle would also enter through 6th Avenue South via a pedestrian only lane connected to the sidewalk. The market is open to pedestrian traffic on 6th Avenue South, South King Street and Maynard Avenue South all three of which maintain the existing access to points to the post

Figure 30 (Opposite). Ground Floor Plan, Junk Market and Scrap Processor

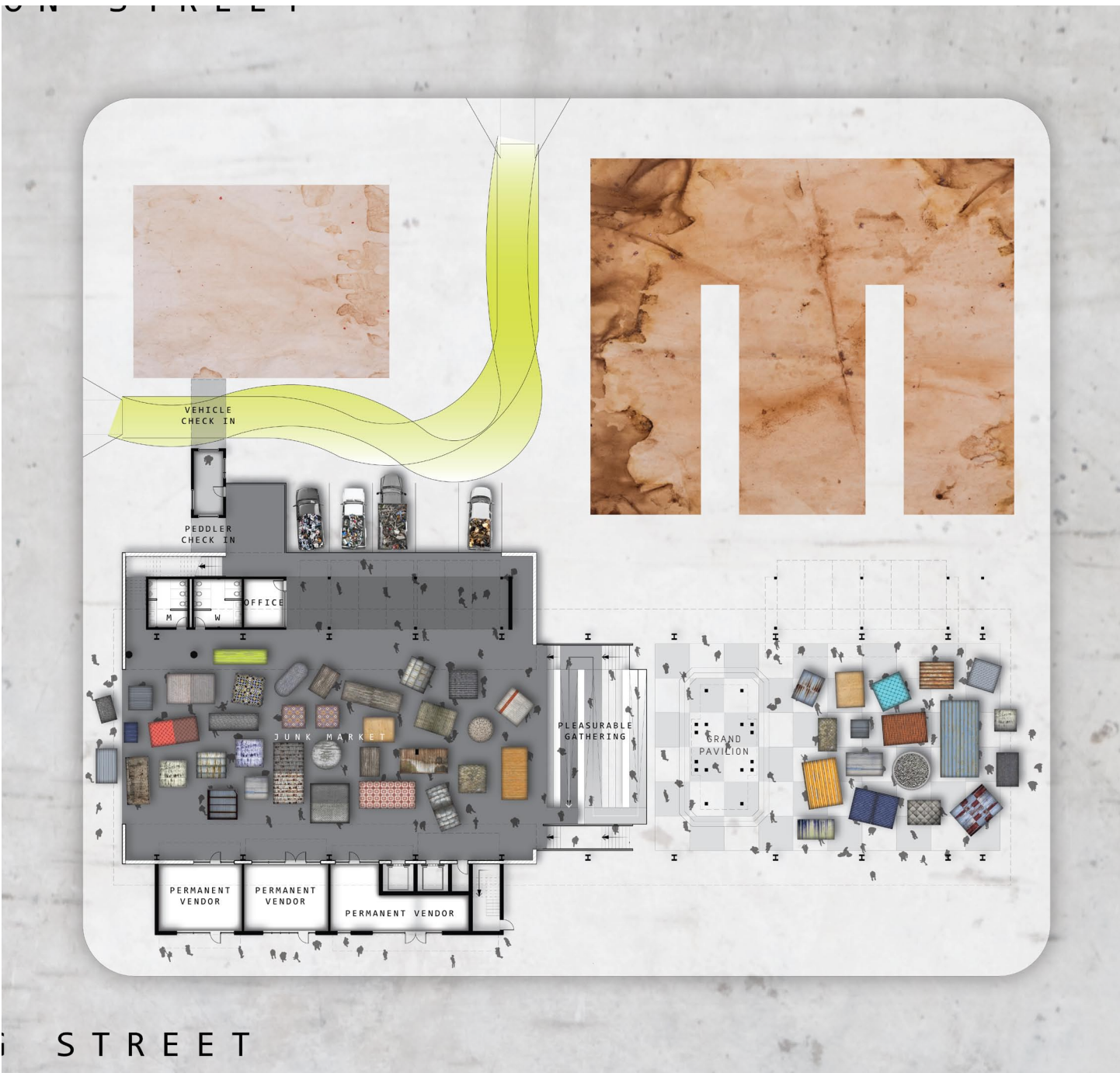


Figure 31. Enlarged Ground Floor Plan, Junk Market

office building and Hing Hay Park.

The Scrap Processor and Yard is designed as a machine turning junk into scrap. Like the iterative concept model it is an agglomeration that grows over time like the neighborhood itself. The yard exists both in the horizontal and vertical plane. Access to the site for vehicle bound peddlers and trucks with more than two axles is via South Weller Street. Peddlers on foot and bicycle can access the site at the southwest corner of 6th Avenue South and South King Street. This separation ensures that there are not dangerous conditions where peddlers on foot are navigating through a field of trucks and loaders. Both the peddler on foot and the large truck are vital to the future of the scrap industry.

The Hotel is constructed under the third iteration, building upon the history of the neighborhood, building height incentive and the opportunity to draw more people to the site. It is a reminder of the domestic nature of most of our junk. It stands as a container for the transient.

4.5 The Architectural Response

The Junk Market

Architecturally, the Junk Market is a process of subtraction and addition. A slice is cut through existing post office building to create a terrain that is continuous through to Hing Hay Park. (Fig. 31) An eight foot grade change is addressed through the introduction of a Pleasurable Gathering area which includes

areas for sitting as well as stairs and ramps to navigate the grade change. This Pleasurable Gathering area signifies the transition between yard and shed. Sections of the post office roof are removed, opening the market up to the new shed roof and effectively creating a grand hall atmosphere with a floor to ceiling height of 50'-0".

The process of addition begins with the introduction of a new roof over the existing post office building and extending over Hing Hay Park. (Fig. 32) This provides a sense of enclosure and weather protection allowing for the market to continue through Seattle's traditionally wet winter. Loading for the post office has been relocated to the north in an existing parking lot and in its place is the inclusion of permanent vendor locations. I use the term "permanent" here loosely to delineate the difference between this and the informal arrangement of kiosks that setup and take down everyday. These permanent vendors are an agglomeration of junk architecture such as convenient stores, laundromats, pawn shops, and so forth. (Fig. 33) The concept here is not to "facadomize" these junk architectures but to use them in their totality. The convenience store remains a convenience store. Convenience stores, laundromats, pawns shops all serve a community.

The Junk Market also has the capacity to archive items, both as a record as a surplus storage. By utilizing the same method of containerization that is used to move both wanted and unwanted goods, junk moves from the specific to the anonymous. Containers are stacked adjacent to the market areas and are



Figure 32. South Elevation, Junk Market



Figure 33. Enlarged South Elevation, Junk Market



accessed using the same methods employed at a shipyard; forklifts and cranes. (Fig. 34)

The structural framework of the Junk Market is entirely steel. Columns and beams would be a combination of reclaimed materials and virgin steel from local manufacturers. However, even virgin steel is composed of a high percentage of recycled content. This framework is one of the determinate elements of the architecture and it enables the assemblage process to take place. The structural elements would be oversized to allow for the unknown. A secondary steel frame supports the storage and archive containers and provides lateral support. (Fig. 35)

The profile of the roof is a result of a desire to use a tile roof - a reference to the clay tile roofs of traditional Chinese architecture and an architectural element that has been imported to make

Chinatown reflect the traditions of its occupants. In this, the tile roof would be composed of the junk tablets (for example: the iPad, Nook, Kindle, and so forth). The materials and proportion of the tablet make it a suitable building component. It would take approximately 40,000 iPads to cover this entire roof surface. To put this into context, in 2014 Apple alone sold an estimated 68.3 million iPads worldwide.³⁷



Figure 34. Section Looking North, Junk Market

Figure 35. Enlarged Section Looking North, Junk Market





The Scrap Processor and Yard

The Scrap Processor and Yard processes the junk that can not be traded at the Junk Market. The architecture is an assemblage of building components arranged purposefully to express both permanence and porosity. The structural system is steel with regular bay intervals of 20'-0" in the north-south direction and a 60'-0" span in the east-west. The standardized grid allows for a framework to which less determined building components and materials can be applied to. This also allows for expandability as foundations could all be poured at once and structural steel added later as needed without compromising the system. The 60'-0" span ensures that the processing areas, with multiple operations occurring at once, kept free of any columns for the safe movement of equipment.

The building itself has been designed to expand over time in response to both the current development of Chinatown and the increasing volume of junk that will produce. The building itself acting as a signifier of the state of the economy as a whole as its growth is directly tied to consumption.

At the ground floor, the building offers many opportunities for public engagement. (Fig. 36) Located off of South King Street are The Sample Room and peddler entrance to the sorting bays. The Sample Room provides a retail experience, offering an insight into the current inventory of scrap metals, while the peddler entrance offers a safe access point to scrap metals to enter the site by pedestrians. The Sorting Bays for both vehicle based scrapers and pedestrian peddlers are serviced by three cargo elevators capable of moving scrap vertically through the building

to subsequent processing and storage operations. These elevators are expressed on the exterior of the building as a part of the architecture, making the operation of moving scrap fully visible. Scrap is moved through the building by machines so circulation paths are scaled to the size of trucks, forklifts and loaders.

Along South Weller Street are the public access points to the Hotel and Scrap Bank as well as the vehicle entrance to the Yard and Sorting Bays. The Scrap Bank represents a shift in attitude about the value of scrap. Banks have traditionally been linked to a the safeguard of tangible objects like paper currency and gold but in recent years new types of banks have emerged. For example, in Svalbard, Norway is the Global Seed Vault buried deep inside a mountain preserving a seed bank for future generations. A scrap bank would exist in a similar way preserving scrap metals for future use in manufacturing and trade. The lobby to the Scrap Bank is located at ground level and this is where the Scrap Vaults would be accessed. The vaults themselves are subterranean and accessed via a gradual descent into the earth via a series of ramps. This descent is meant to remind the visitor of the subtractive process of the mining practices that led to the existence of the metal in the first place. The ramps double as accessibility for all and also facilitate the movement of scrap metals by cart.

The Yard is for the movement of junk and scrap into and out of the site. Trucks of various sizes check in and are assigned a Sorting Bay. Movement in the yard is limited to the horizontal plane and is coordinated by spotters in the Control Room. Trucks



Figure 36. Enlarged Ground Floor Plan, Scrap Processor

utilizing the backhaul would be loaded from above by gravity-fed chutes connected to rooftop Feedstock Silos.

As seen in the conceptual model, the process of construction for both the Junk Market and the Scrap Processor is an iterative one. The first phase of the Scrap Processor includes the Sample Room, four Sorting Bays, and secondary sorting and baling. (Fig. 37) In addition to this are the first three Feedstock Silos and the construction of the Scrap Bank and vaults. Lastly, this phase would also include the initial paving and striping for the Yard. The second phase includes an expanded processing area with the inclusion of a shredding operations and additional staging capacity. (Fig. 38) A fifth sorting bay is added at this phase and the Operations and Control Room are added. On the roof, two additional Feedstock Silos are added and on the ground the Yard is expanded to double its capacity of vehicles. The third phase includes the construction of the Hotel up to the maximum height

of 150'-0". (Fig. 39)

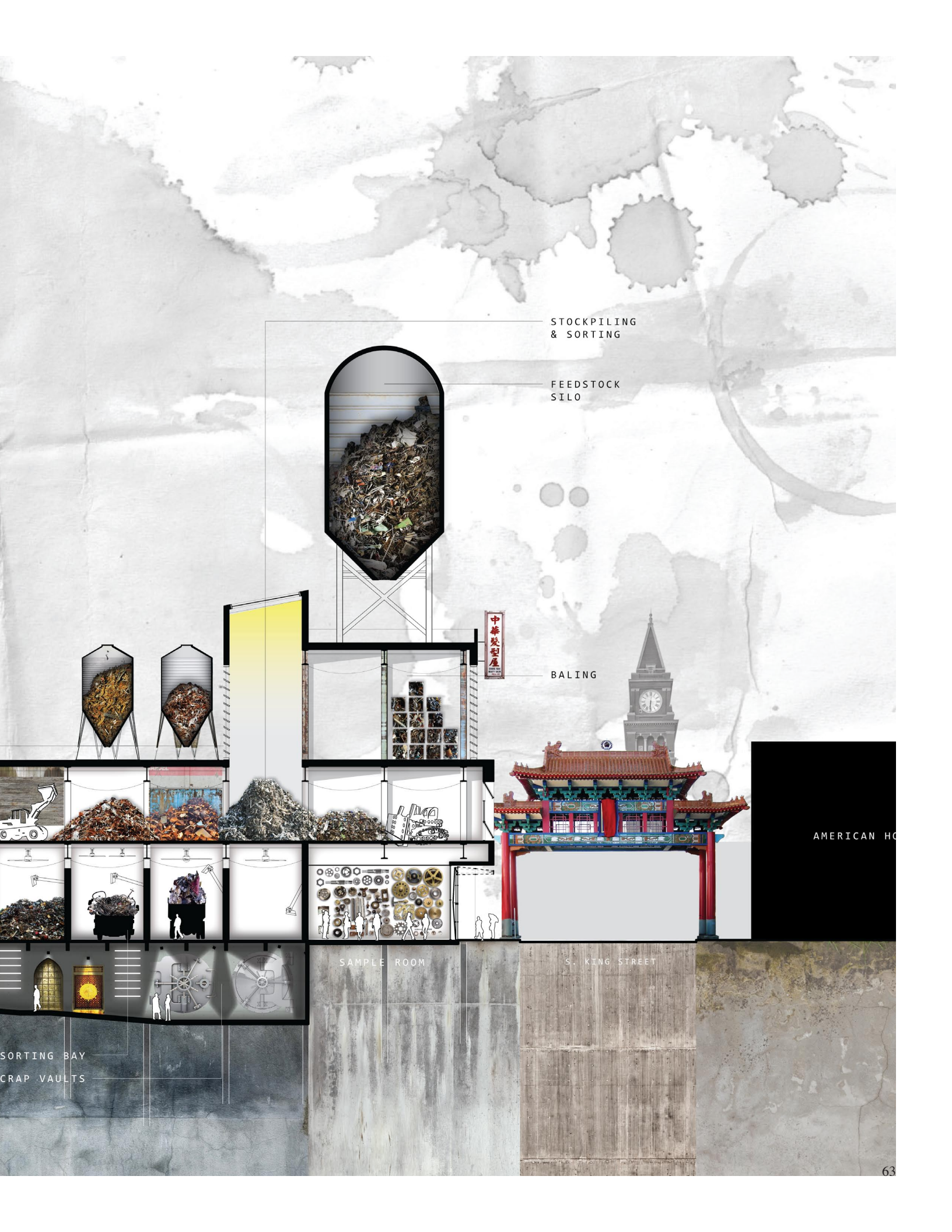
Conceptually, the massing and materiality of the Scrap Processor is a direct relation to the iterative process. (Fig. 40) While the structural framework would remain constant, each programmatic element would be expressed in a different architectural language. (Fig. 41) The visibility of junk is achieved both through the porosity of the building with the ability to see in and also through the direct connection between the collection of junk and its reuse expressed through architecture. A further reading would reveal that the architectural expression also responds to the program and the phasing of construction. (Fig. 42)

The Hotel

The Hotel stands nine stories and maximizes the height limit at 150'-0" tall. The structural system changes from steel at



Figure 37. Section Looking West, Scrap Processor, Phase 1



STOCKPILING
& SORTING

FEEDSTOCK
SILO

BALING

SAMPLE ROOM

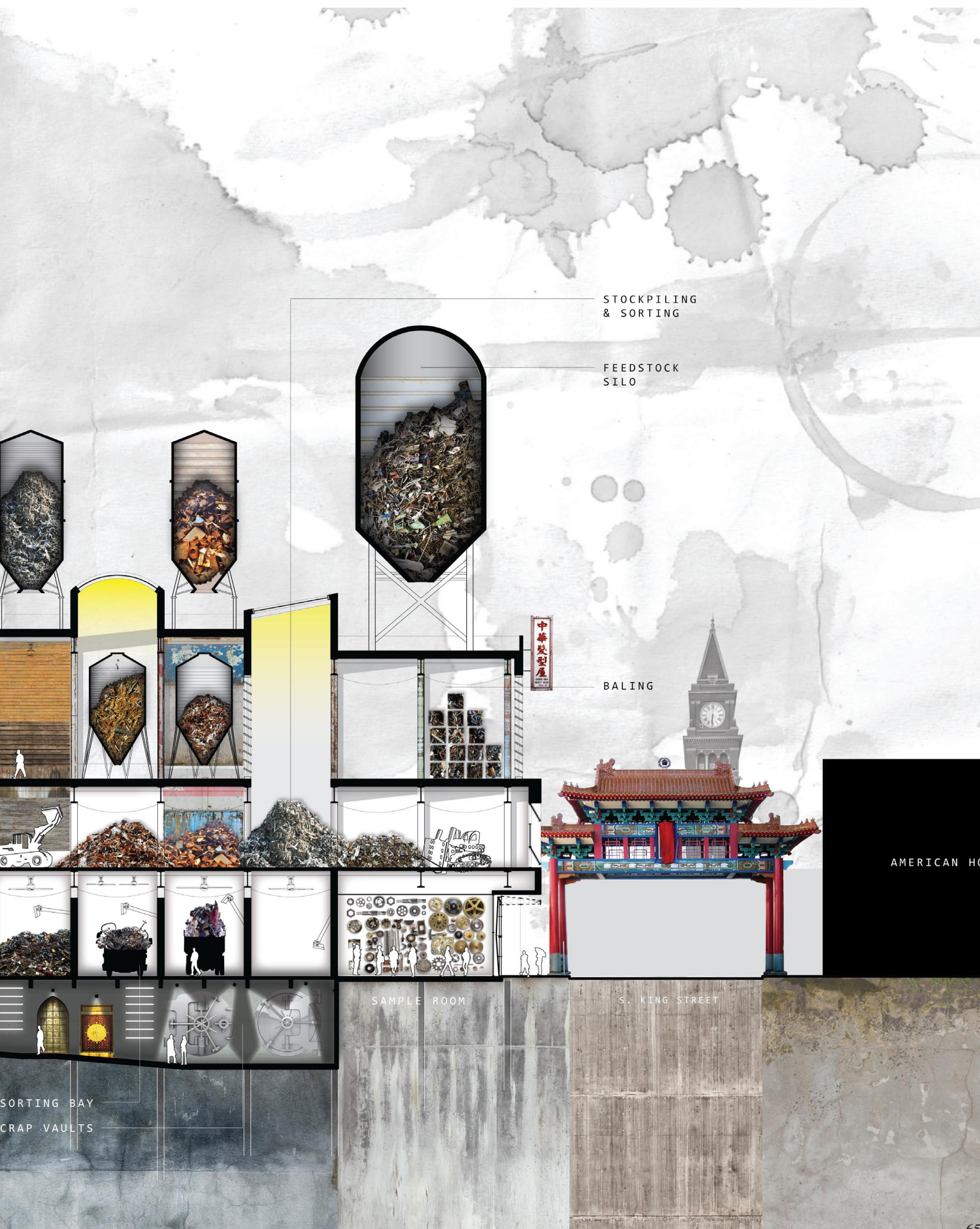
S. KING STREET

SORTING BAY
CRAP VAULTS

AMERICAN HO



Figure 38. Section Looking West, Scrap Processor, Phase 2



STOCKPILING
& SORTING

FEEDSTOCK
SILO

BALING

中華製型屋

AMERICAN HO

SAMPLE ROOM

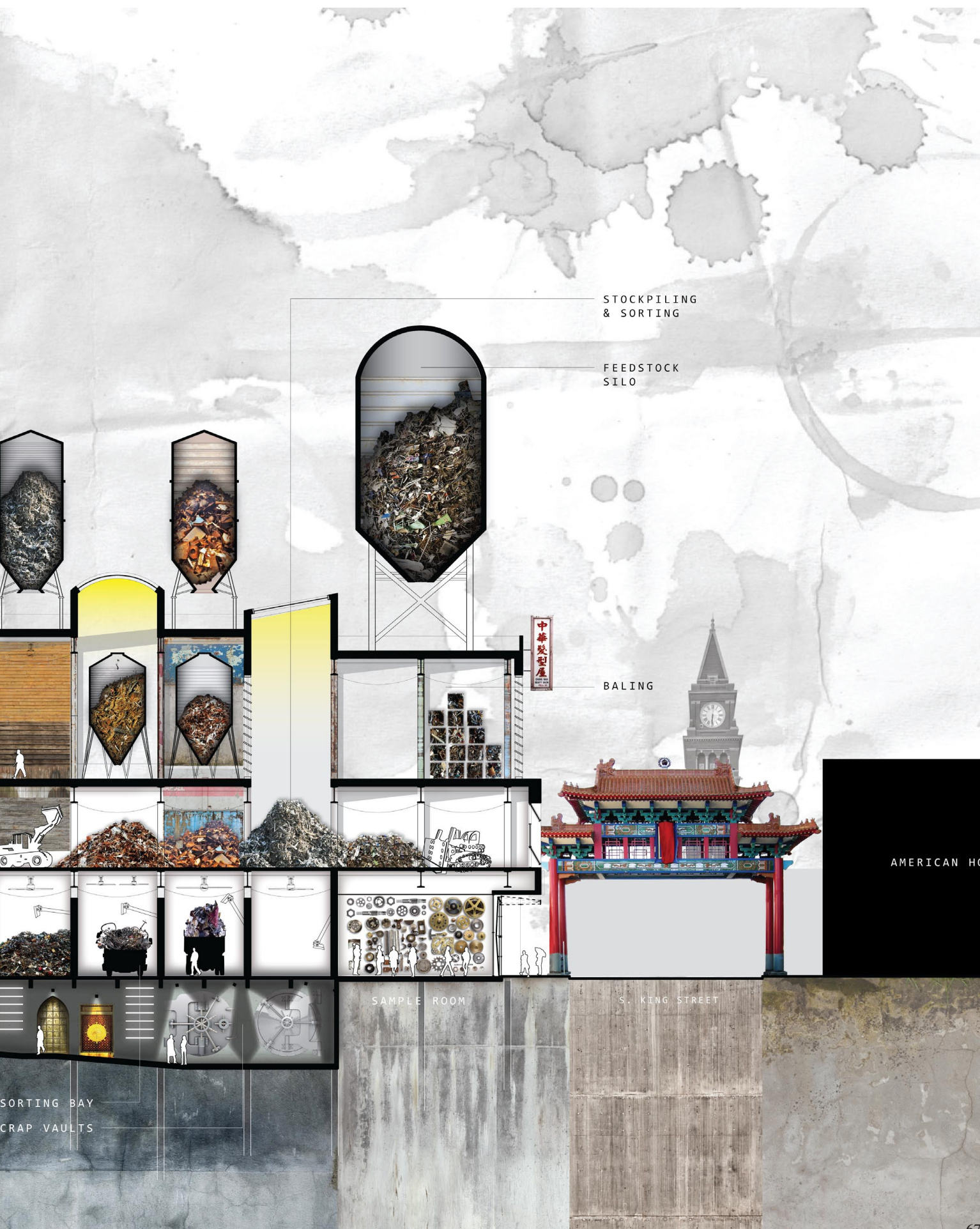
S. KING STREET

SORTING BAY
CRAP VAULTS

the Scrap Processor to concrete. The lobby at the ground floor handles check-in and the Hotel Rooms and RV Park on floors two through nine are accessed by vertical conveyance systems. On the third and fourth floor are the Gold Room and Bar, both of which overlook the scrap processing operations. The rooftop is accessible in two locations, once at the Bar and once at the ninth floor Hot Tub Deck. Like a hotel spa, the Hot Tub Deck offers

calm and relaxation via an array of repurposed hot tubs. The RV Park offers a different hospitality experience. Utilizing the architecture of an existing parking garage and its prefabricated components, junk recreation vehicles are parked and readied for occupancy. Each RV is unique and each offer a private interior exterior experience and the opportunity for collective interaction on the exterior.





STOCKPILING
& SORTING

FEEDSTOCK
SILO

BALING

中華製型屋

AMERICAN HO

SAMPLE ROOM

S. KING STREET

SORTING BAY
CRAP VAULTS

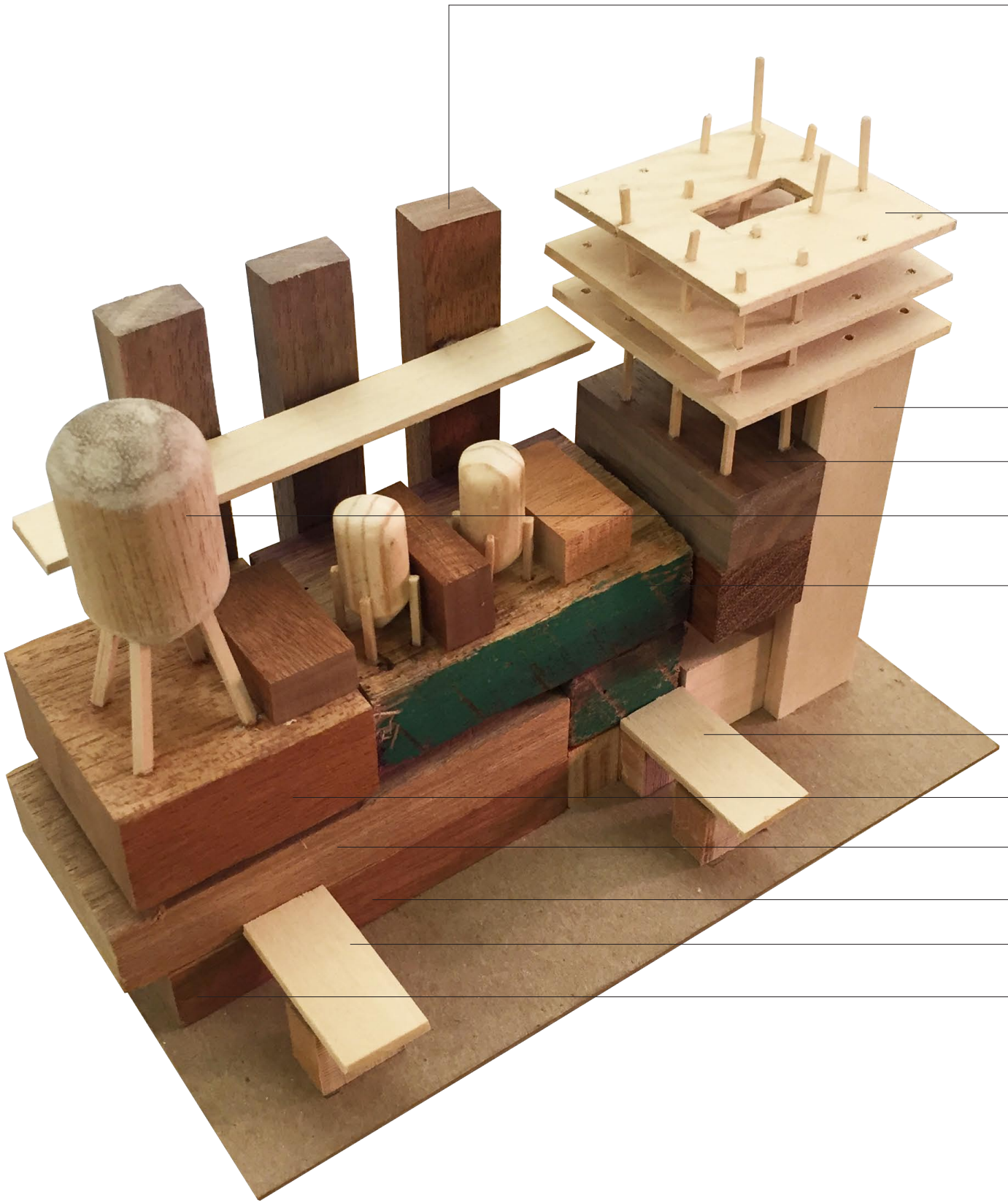


Figure 40. Aerial View of the Model, Scrap Processor

CARGO ELEVATORS

RV PARK

HOTEL ROOMS

RESTAURANT AND BAR

FEEDSTOCK SILO



Figure 41. West Elevation View of the Model, Scrap Processor

SHREDDING

CHECK IN

BALING

SORTING

SORTING BAYS

CHECK OUT

SAMPLE ROOM

SCRAP BANK



Figure 42. East Elevation View of the Model, Scrap Processor

4.5 A Catalogue of Spaces

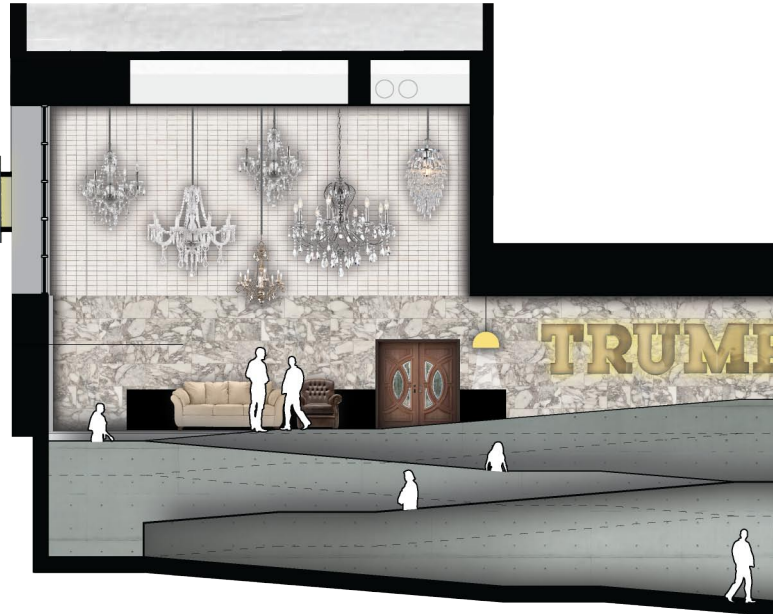


Figure 43. Scrap Bank

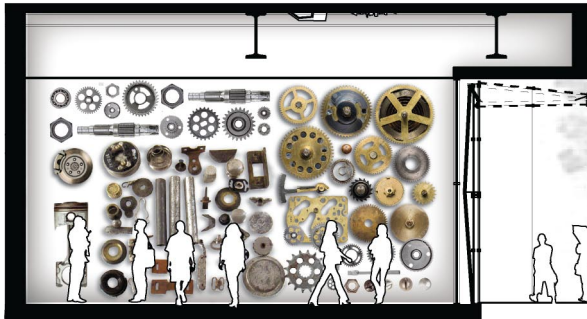


Figure 44. Sample Room

Sample Room

The Sample Room is where a buyer or seller would come to survey what the current inventory of metals are at the Scrap Processor. (Fig. 44) Items in the Sample Room would be treated in a manner similar to a luxury retailer. The treatment and display of the commodity is elevated to represent its new value.

Sorting Bays

The Sorting Bays are the first point of exchange between the peddler and the scrap dealer. (Fig. 45) Here, junk is weighed, photographed, sorted, and classified. The weight of the contents defines its value. Four of the five bays are designed for pickup and

flatbed trucks while the fifth bay, accessible via South King Street, is for the sole use of peddlers on foot and bicycle. For safety, the two must be separated as the constant movement of trucks and equipment make it a hazardous place for a pedestrian.



Figure 45. Sorting Bays

Scrap Bank

The Scrap Bank serves both the individual and the community. (Fig. 43) Individuals can rent out space, like a safety deposit box, to store their personal collection of the new precious metals (copper, for example) that would otherwise end up being susceptible to theft. Community scrap vaults are for the preservation of larger quantities

of metals needed to support local manufacturing and construction. The reaction here is to create a condition of vertical integration where the Scrap Bank has greater control over the supply chain.

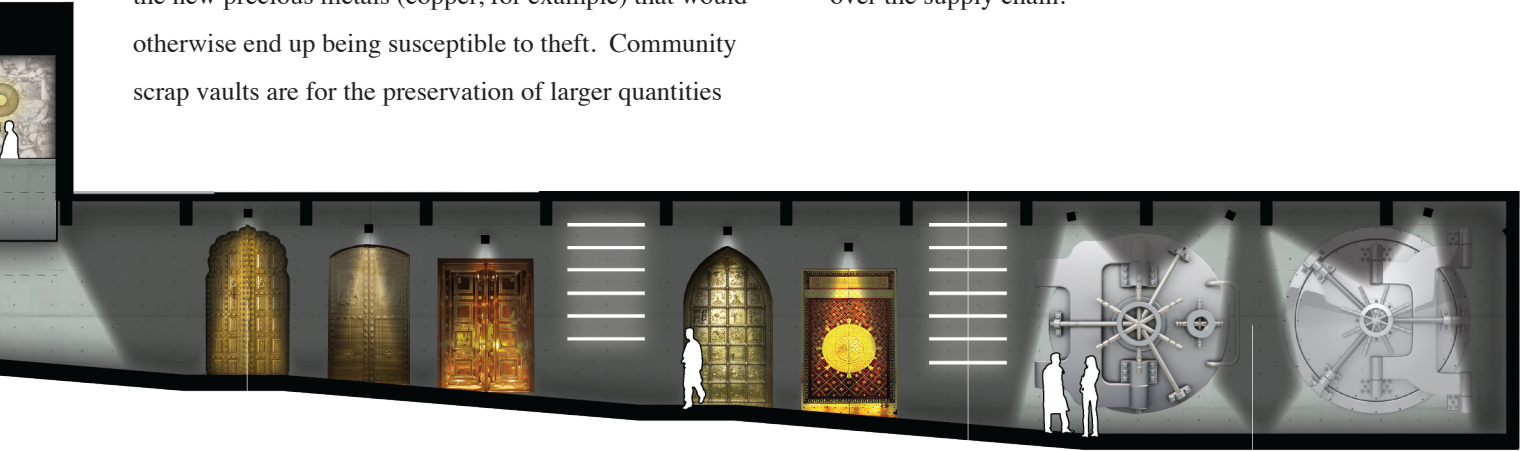


Figure 46. Feedstock Silos

Feedstock Silo

The Feedstock Silos are repurposed grain silos. (Fig. 46) They are located on the upper floors of the Scrap Processor for the temporary storage of metals that are in flux. Metals are lifted to the upper floors via cargo elevators and moved horizontally to the silos by front end loaders. Once in the silos, scrap metals can be gravity-fed back down to trucks on the ground floor by chutes and conveyors. The distribution of material in each silo is controlled separately in the Control Room.

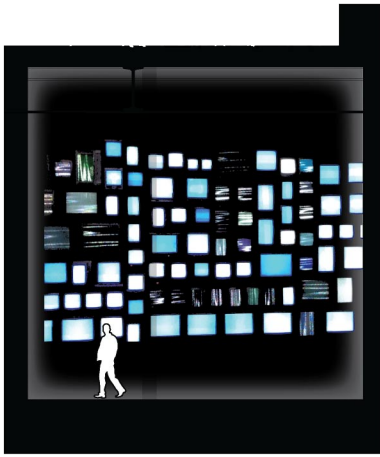


Figure 47. Control Room

Control Room

The Control Room of the Scrap Processor oversees operations at the Chinatown location but also as the catalyst site, oversees the other sites across Seattle. (Fig. 47) Via CCTV and a collection of junk televisions, the Feedstock Silos are managed, the Sorting Bays and processing operations are monitored, and the Scrap Bank is secured.



Figure 48. Gold Room and Bar

Gold Room & Bar

The Gold Room and Bar is accessible through the Hotel and has views into the Scrap Processor. (Fig. 48) These spaces act as informal meeting and social gathering areas with access to the Gold Room limited to private gatherings. The Bar is public and offers views in to the Scrap Processor and access to a rooftop dining area.

Hotel Rooms

The Hotel Rooms represent luxury, privacy, and anonymity. (Fig. 49) Each have south facing views and natural ventilation. Wall coverings come from discarded billboards while furnishings are a remnant of the junk market.



Figure 49. Hotel Rooms



Figure 50. Sorting and Baling

Sorting & Baling

The Sorting and Baling areas are where piles of scrap metal are further processed into bales for distribution or transported vertically to the Feedstock Silos for temporary storage. (Fig. 50) This area is naturally ventilated and naturally lit via exterior glazing and skylights. As loaders are moving from the exterior

to the interior, a consistent level of light is maintained to help the drivers eye adjust. To keep dust down, water misters are installed throughout. The objective of the Sorting and Baling area is to keep material moving. These piles would act as signifiers in times of prosperity and hardship.

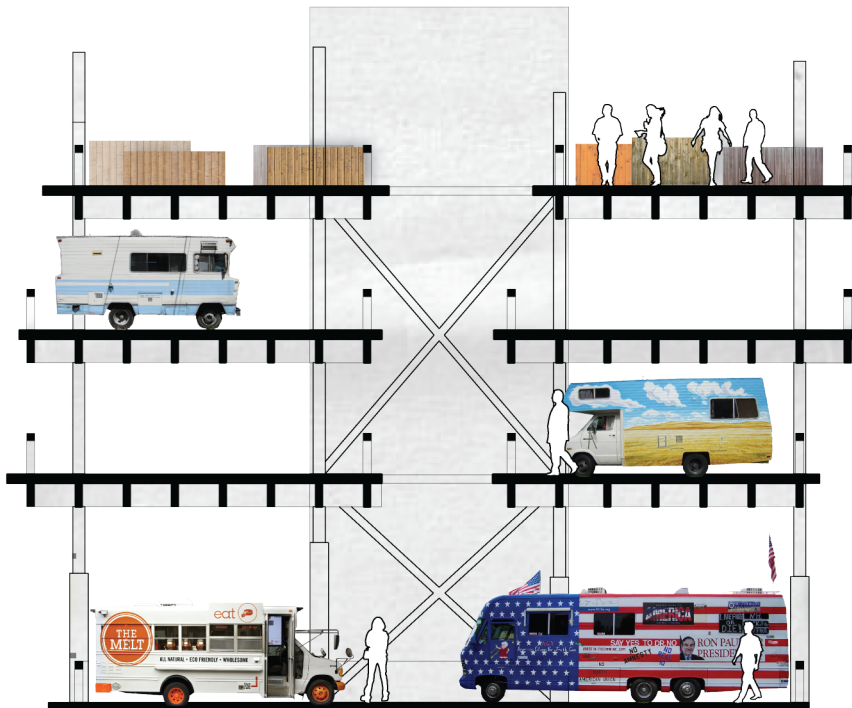


Figure 51. RV Park

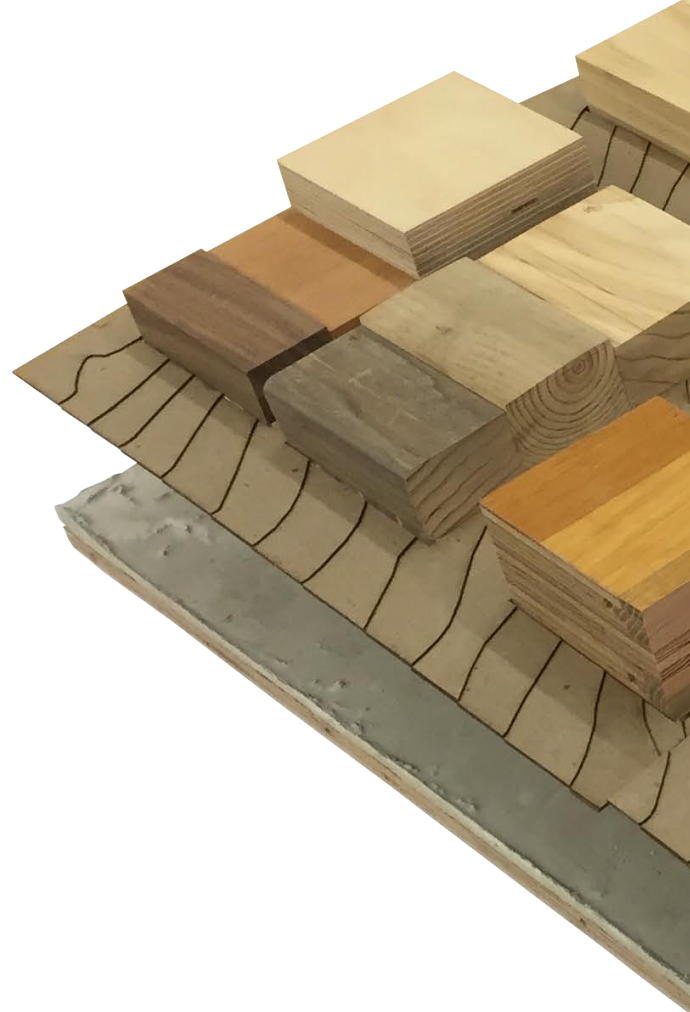
RV Park

The RV Park is an extension of the Hotel. (Fig. 51) These tenements on wheels offer a unique experience to stay to camp in the city. Where the Hotel Room stands as a symbol of the mobility of the urban dwellers, the Recreation Vehicle represents the ultimate mobility. In this case, these vehicles are a static reminder of a lifestyle often unobtainable or discarded as junk.

CHAPTER 5 CONCLUSIONS

Junk is a defining by-product of our current consumer society. It permeates the urban environment as an artifact and a site, linked to a global network of trade. But junk is in a state of constant flux, changing form and location. As a result of this, the junkyard, the primary site of collection, has typically been relegated to the periphery of cities in North America, concealing its contents. By locating junkyards on the periphery and concealing their contents, cities encourage the large, global scrap trade while discouraging community driven innovation and entrepreneurship. This thesis posits a divergence and an arrested circulation in the existing flow of scrap offshore. This thesis proposes a series of small-scale, urban junk markets and scrap metal processors positioned throughout Seattle, with particular investigation of a site in Chinatown. These junk markets will serve as hubs for the trading, storage and processing of these American artifacts, typically buried in landfills or dumped in junkyards. The project will thus act as a market and archive for junk, providing for its barter and repair, and its processing into scrap. Lastly, as commodities markets fluctuate and materials become more scarce, these depots will also act as scrap banks, preserving valuable metals for future use.

This thesis process called for a challenge to the typical singular small-scale architectural response. There has always been a relationship between the size of a junkyard and its contents. Reducing the size, reduces its capacity to move large volumes and maintain economic viability. Instead I sought to explore various different scales ranging from the object itself, to the junkyard, to that of global shipping networks. As a result I concluded with two architectural responses on two separate plots of land within a field of seven sites in Seattle. My intentions are manifest best in the writing of Jennifer Bonner, Assistant Professor of Architecture at the Harvard GSD, as she states, “Design, at its most hopeful and productive, is an anticipatory discipline. It helps give form to future ways of living and working. In discontinuous and difficult times, more than ever, what’s needed is a dynamic look at the future of situations, rather than objects alone or species type.”³⁸



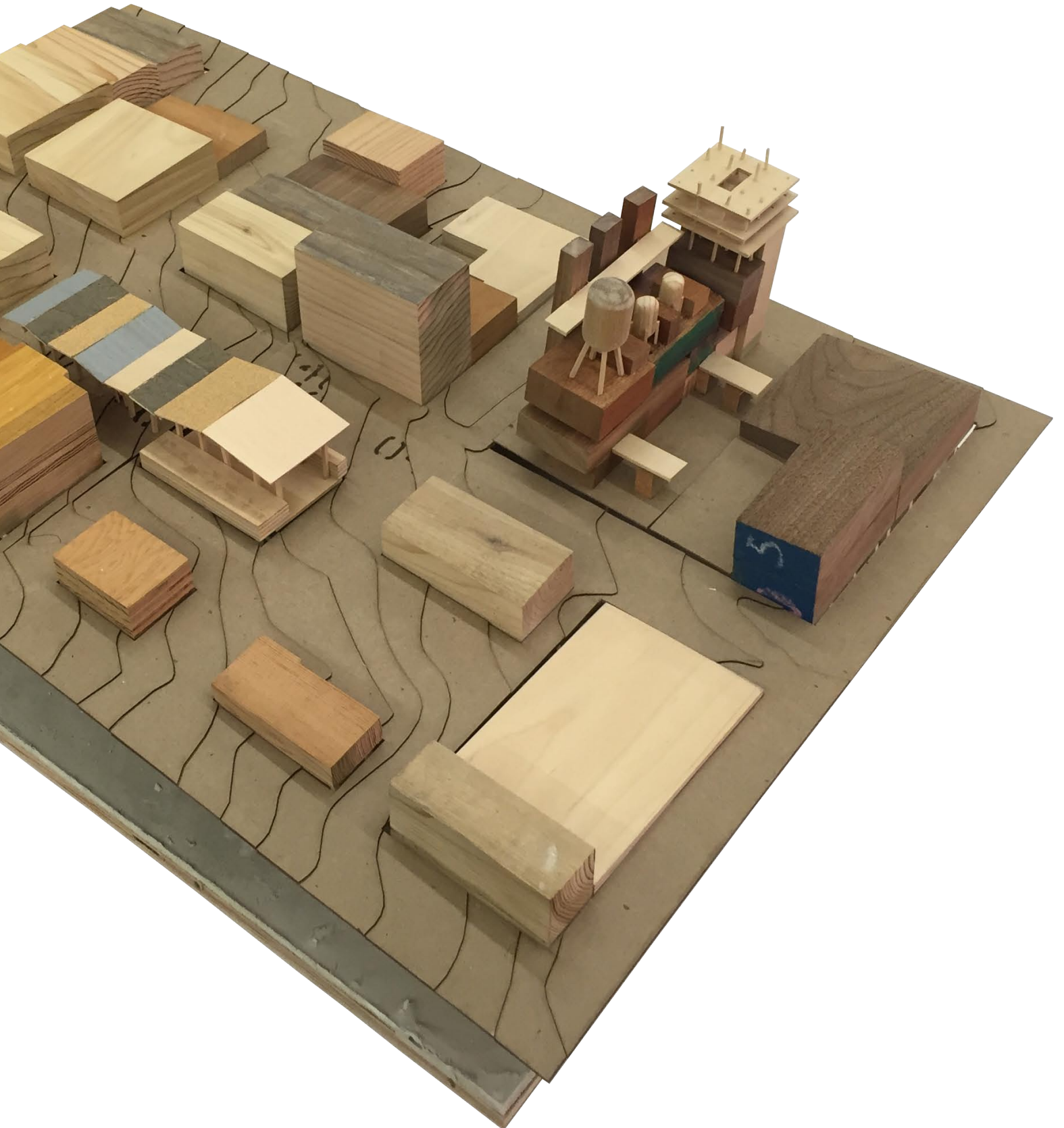


Figure 52. Site Model

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