

**AFTER THE OIL:
THREE FUTURE ARCHITECTURAL NARRATIVES**

by
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for the degree of Master of Architecture

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DEDICATION

For Sabreena.

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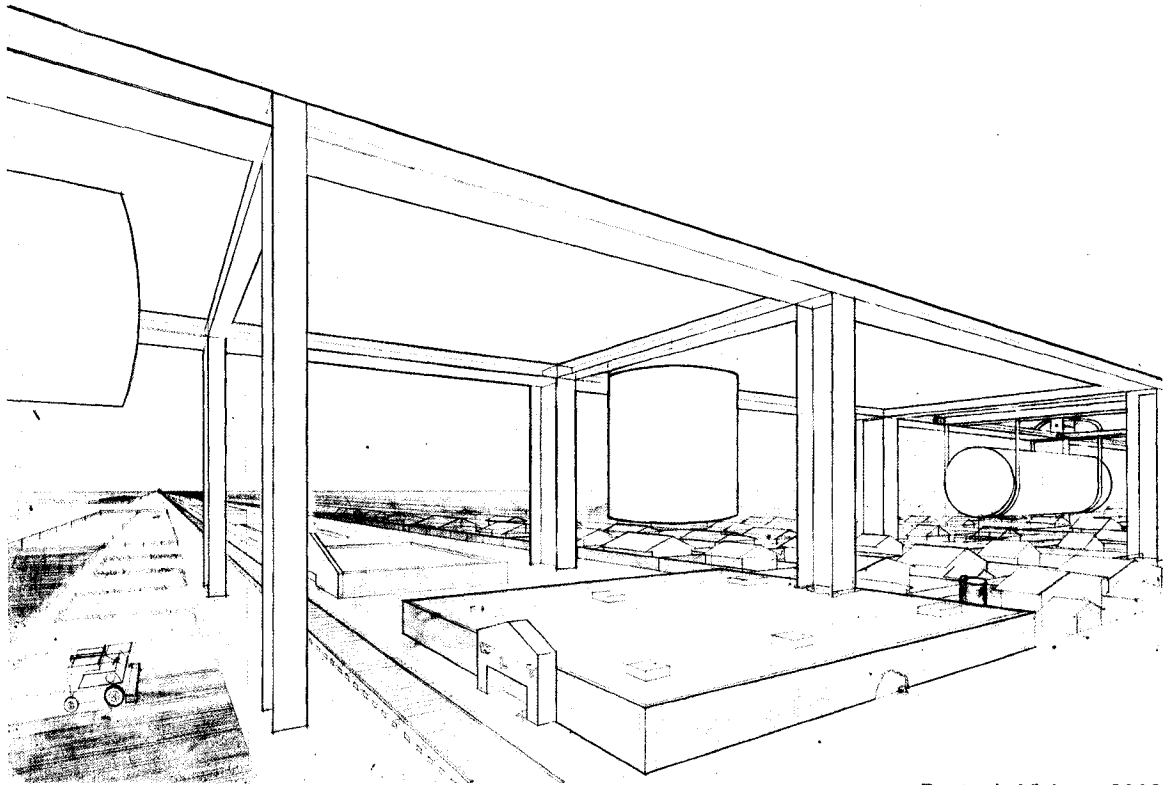
ABSTRACT

This thesis is an exploration of a future that looks beyond the production of oil in small town Alberta. It employs the method of narratives: dreamt situations and characters provide an architectural program that focuses the scope of the thesis. The retired and semi-retired characters portrayed in the stories all hail from Lloydminster, Alberta and maintain a lifestyle of seasonal migration travelling south for the colder months of the year. The other aim of this thesis is to facilitate the creation of meaningful place through architectural interventions. The idea of meaningful place is first explored through Aldo Rossi's theory of urban artifacts. Artifacts of the oil industry, box stores, and suburban housing are explored as potential sites for creative, meaningful design, rooted in place.

ACKNOWLEDGEMENTS

Many thanks to Terry and Richard for their encouragement, wise words, and good chats about life and architecture.

I would like to thank my parents for their gifts of creativity and veraciousness, two traits an architect must have.



Dystopic Visions, 2008

INTRODUCTION

The environment we grow up in affects our development as people. For architects, this means that our hometown influences the way we understand and design the built environment. Growing up in Lloydminster has shaped my development as a designer, but how? Founded in 1903, Lloydminster is a young city characterized by typical suburban housing and big box stores similar many other small prairie cities. The landscape surrounding the city is typical prairies: flat, straight, and constant. How does an architect approach the issues of a city so young, with little operating as foil for good design? The task is challenging but worthwhile. Many Canadian and North American cities resemble Lloydminster, making the need for distinct, local architectural intervention that much more important.

THESIS QUESTION

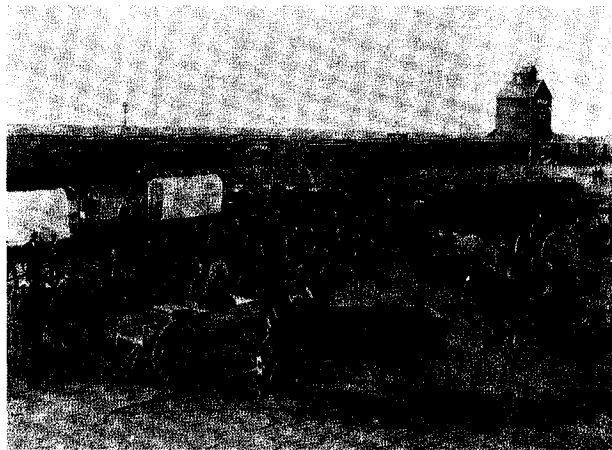
How can the inevitable artifacts of the oil industry be transmogrified to construct meaningful places for the retired and semi-retired community of Lloydminster?

LLOYDMINSTER: CONTEXT AND HISTORY

Situated on the Alberta and Saskatchewan border, Lloydminster is Canada's only border city. Given the decline of many rural towns and small cities in western Canada, Lloydminster stands out as a wealthy, thriving anomaly. Unlike other prairie communities – rural towns and small cities alike – its population has steadily increased as people have migrated to take advantage of oil industry work opportunities. Smaller centres lack the industry that allows Lloydminster to lure people away from both near (e.g. Maidstone, Saskatchewan) and far (e.g. St. John's, Newfoundland).

Before there was oil, there were settlers. Lloydminster's history can be traced to the 2000 European migrants who arrived in 1903, enticed by the promise of free land. This land was promoted for its farming and ranching potential by Reverend George Exton Lloyd and Reverend Isaac Barr.

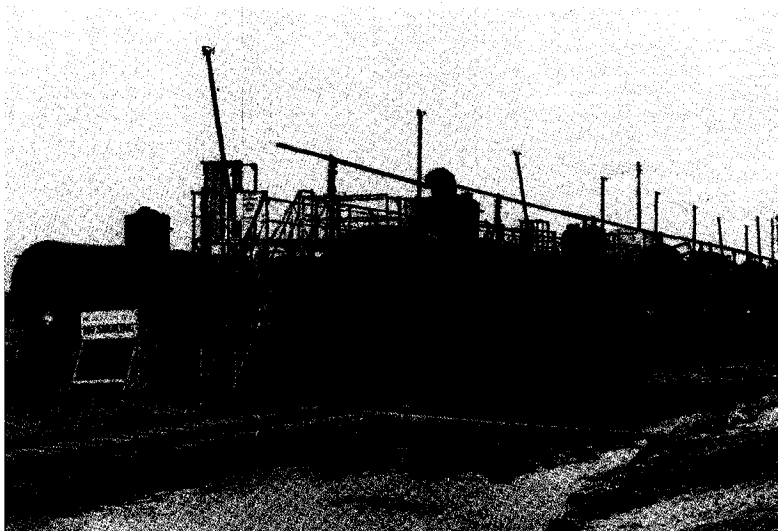
Good climate, conducive to vigorous health, notwithstanding the occasional extremes of heat and cold; fertile soil suitable for ranching and mixed farming; an abundant rainfall with good water everywhere easily obtained; some timber for building, fencing and fuel; excellent hay and pasturage; railway facilities whether provided or certain in the near future; good markets for all a farmer can produce; a school system that cannot be surpassed; perfect religious freedom; and the British law and order which all know and love so well in their native land. (Bowen 1992: 12)



Settlers leaving Saskatoon for Lloydminster
(Foster & Griffith, 2001: 3)

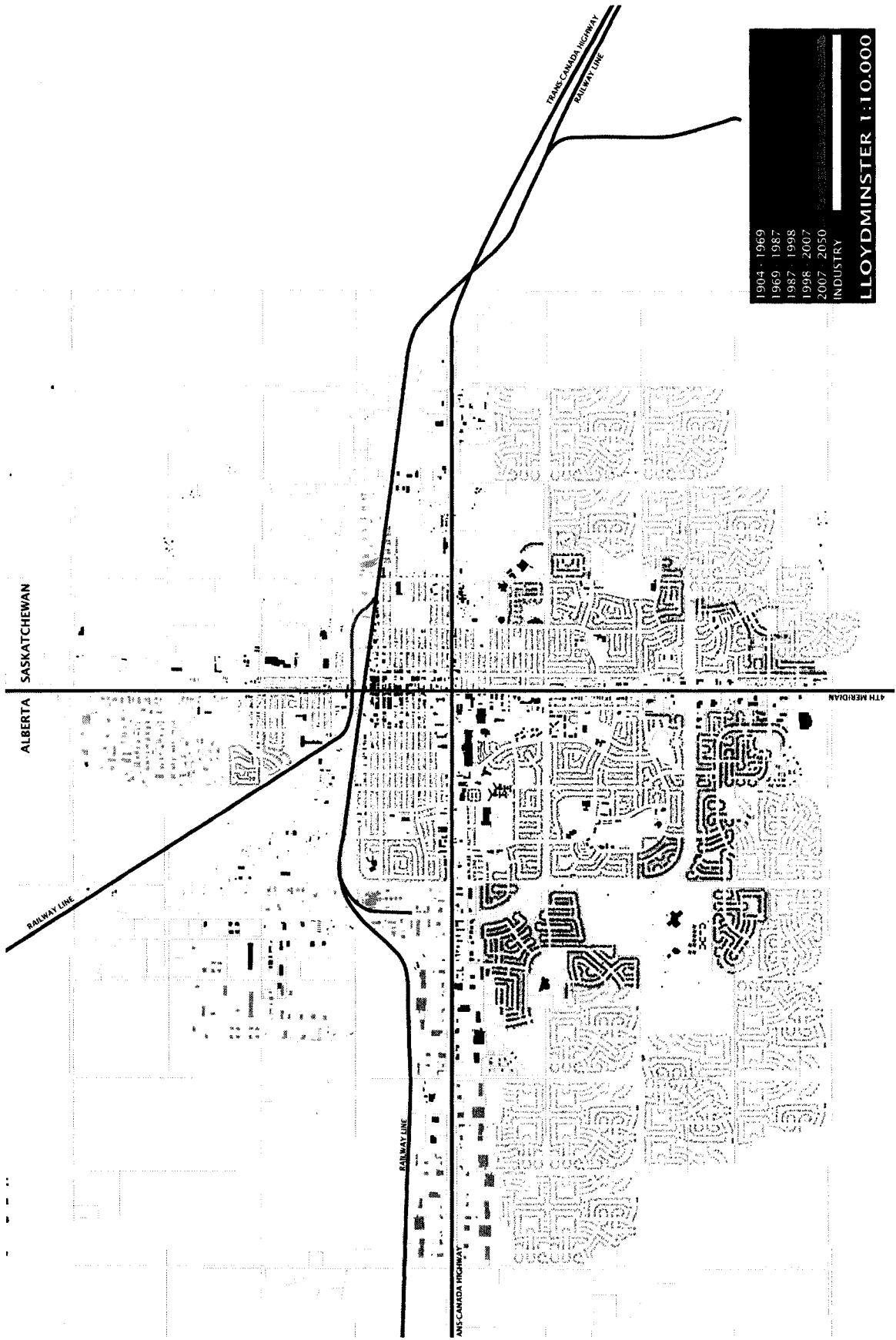
What these settlers arrived to was a rough assemblage of tents and the bitter cold of the prairies. The settlers were quite unprepared for the cold of the Canadian winter and the first years were particularly hard. The saving grace for the community was the arrival of the railroad. With an established link to the outside world, goods flowed more easily into Lloydminster, which became an established stop along the railway. In 1905 the Alberta and Saskatchewan governments established their border along the fourth meridian essentially cutting Lloydminster in two.

HISTORY OF THE OIL INDUSTRY



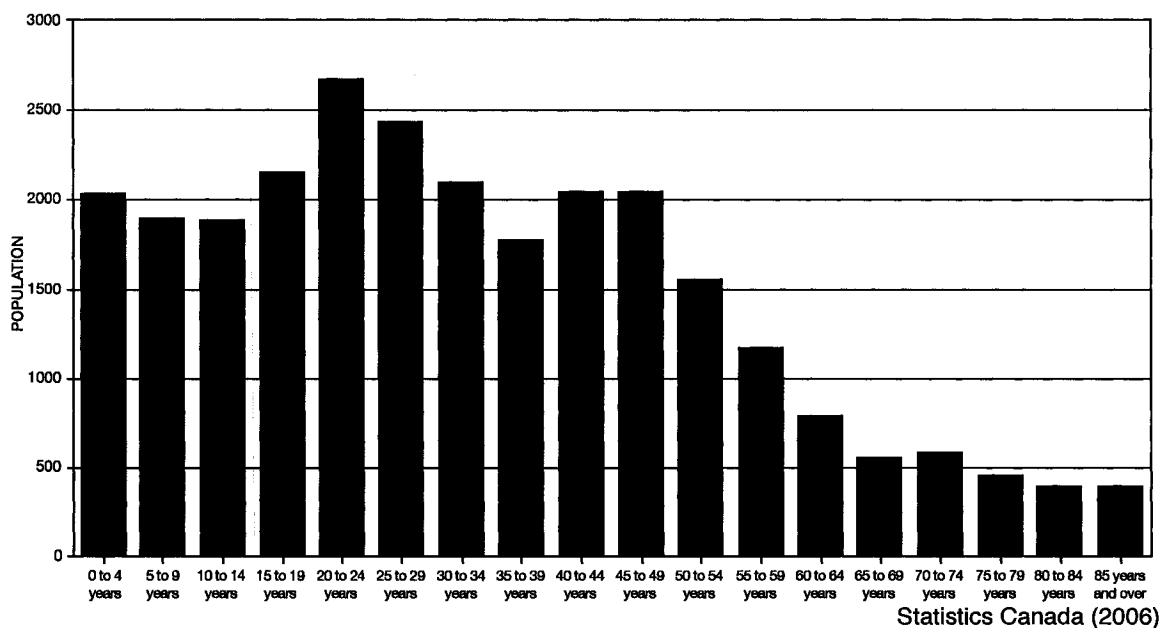
Tanks being filled at Husky Refinery early 1950's (Foster & Griffith, 2001, p. 90)

The young community continued its growth throughout the early part of the 20th century until the discovery of oil in the 1930's. While large amounts of oil were being discovered, the type of oil made extraction near impossible. The heavy crude was filled with sand, making it difficult to extract, and the quality, less than perfect. The oil required heavy processing to bring it to a useable level. Although methods were being developed for extraction and processing, the oil industry did not really come into its own until the 1960s with the building of the Husky Refinery. Until then, Lloydminster was an agricultural hub, depending on crops and livestock as an economic generator. It was at this point that the shift from agriculture to oil as an economic base, began to develop.



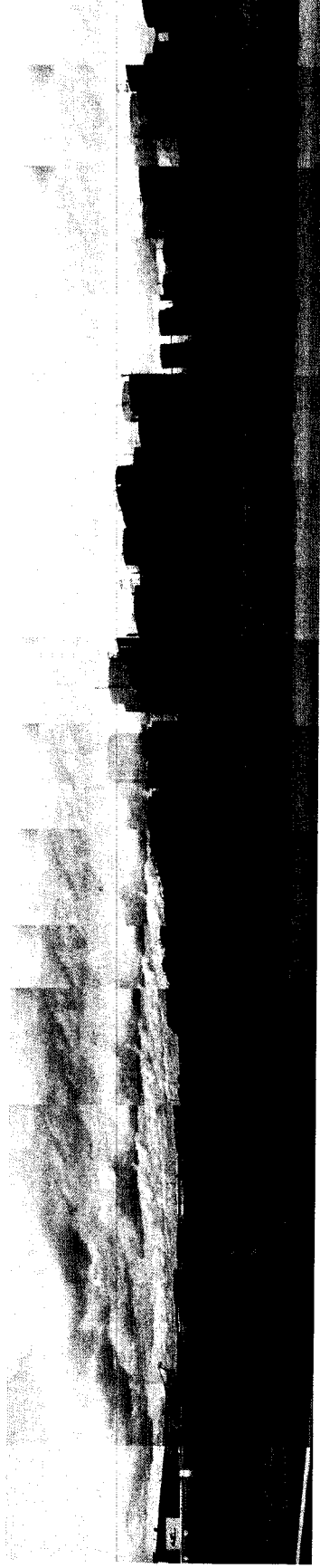
COMMERCIAL HUB

Today, Lloydminster bills itself as a commercial hub located on the Yellowhead highway that runs through Canada. Saskatoon and Edmonton, the closest cities, are less than a three-hour drive away. Although farming and ranching are still present in Lloydminster, they are no longer the economic force that they were during the first half of the 20th century. Despite Lloydminster's emergence as a commercial hub, its growth is still largely dependent on the oil industry, with over 4,000 people employed directly through the oil and gas sector (Statistics Canada, 2006). Lloydminster has three large-scale industrial complexes located at its borders: the Canola Plant, the Husky Refinery and the Husky Upgrader. The latter two are used to refine heavy crude, and employ thousands of local citizens directly; they also generate multiple businesses that draw thousands more to the area. According to 2006 Statistics Canada data, in the last 35 years the population of Lloydminster has tripled, from 8,691 in 1971 to 24,028 in 2006. To accommodate this growth, an average of 350 homes are being built each year. As the ninth largest city in Alberta, Lloydminster's population stands at 27,000 and is predicted to grow to 30,000 by the year 2011 (2006 Stats Canada).



Driving into Lloydminster, heading east along the Trans-Canada highway, is a disorienting experience. Before reaching the city limits you are treated to the bucolic prairies: blue sky, fields of canola, wheat and peas, herds of cattle, and rolling hills. As Lloydminster draws near, the scenery takes a dramatic turn. Where one might expect a change of crop from one-quarter section to the next, instead hundreds of giant oil tanks loom at the property edge. Corlac Industries is just one of the many manufacturers to take refuge just outside the city. This location allows companies to escape high taxes, more easily control the large amounts of land necessary for oil tanks, and capitalize on the close proximity to the highway. This pattern repeats itself with other oil tank manufacturers and oil supply companies, dotting the procession into Lloydminster. The rhythm is unchanged for several kilometres until the driver is confronted by the Power Centre, a collection of box stores, including Wal-Mart, Home Depot, and Canadian Tire.

With current fluctuations in the price of oil per barrel, the future of Lloydminster is always in question. Through the oil crisis in the 1970s to the current recession today, Lloydminster has always persisted and prevailed. Yet oil is a non-renewable resource that will redefine world economies when it runs out. Some estimates have put the oil reserves located around the Lloydminster region at nearly 30 billion barrels of oil with only 10% having been extracted (Roughneck, 1982: 24). Taken at face value it is safe to assume that oil extraction at this pace could last for years. Yet as demand for oil increases, drilling will increase and riskier drilling practices will be employed. And despite Lloydminster's continued economic growth, the world around it will change. As the economics of shipping goods changes, Lloydminsterites will notice these changes in the price of groceries, cars, and any goods needing to be shipped from a great distance. Lloydminster's situation is fortunate: while income will be generated through the continued extraction of oil, it will have the opportunity to secure a more stable future for the city, a future that looks beyond the depletion of oil.



Tank farm photo collage, 2008



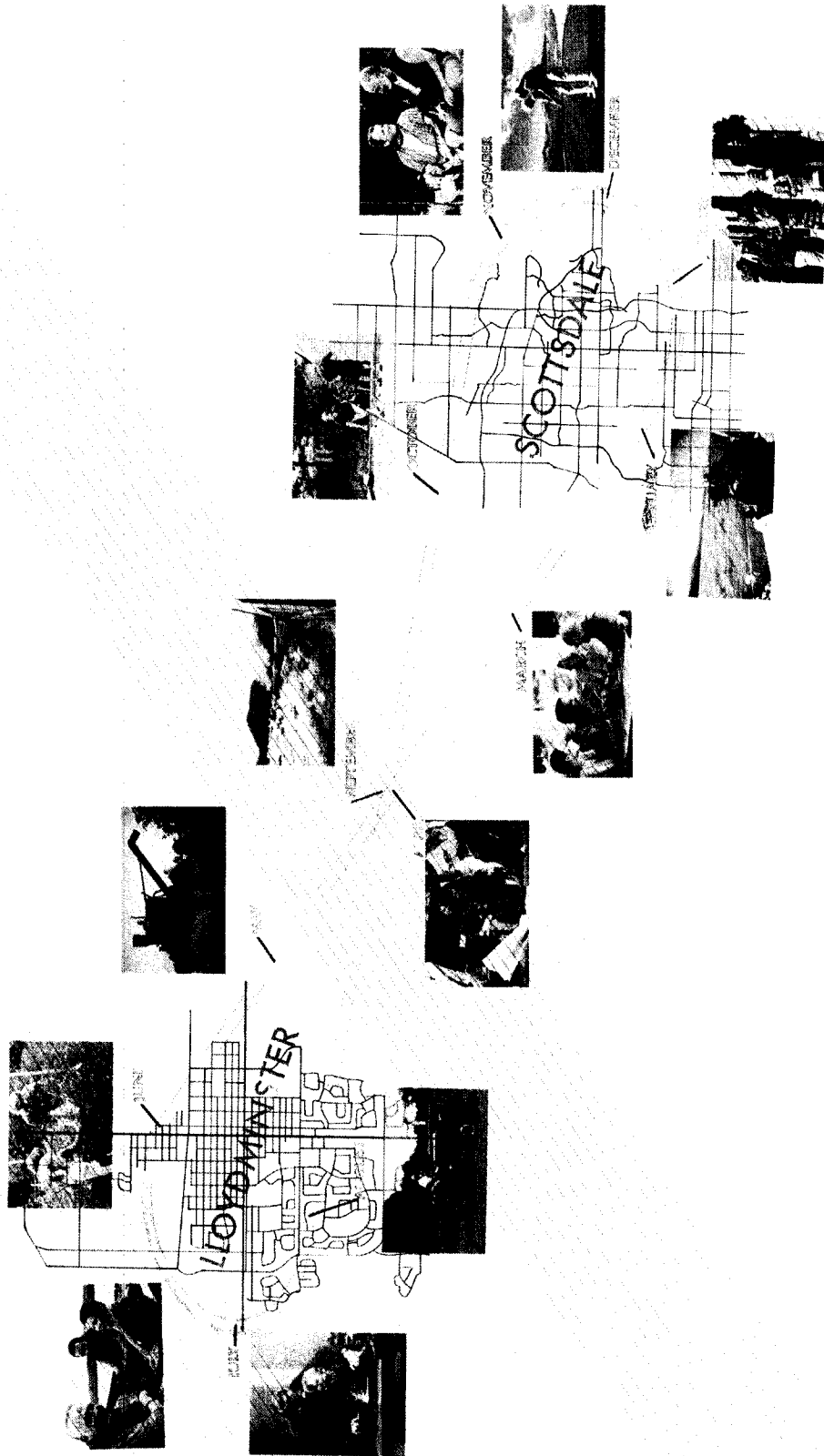
Tank farm photo collage, 2008

AGING DEMOGRAPHIC

In projecting my research into the not so distant future I came across one statistic in particular that focused my research: according to Statistics Canada, by the year 2041 nearly 1 in 4 Canadians will be over the age of 65, with an average life expectancy of 80.2 years. Making up nearly 25 percent of the population, seniors will play a larger role in how cities are shaped. Seniors are living longer on average and participating more in the work force. In 2001, 1 in 12 seniors had a job, and this proportion is expected to rise (Duchesne, 2002; Walsh, 1999). Seniors are also travelling more often, and many have homes in southern locations such as Florida, Arizona, and California. Although statistics are difficult to obtain on the exact number of Canadian seniors who winter in the United States, nearly 2 million Canadians visited Florida alone every year (Statistics Canada, 1984) while 15 to 20 percent were estimated to be over the age of 65 (Florida Department of Commerce, 1982). Of those over 65, the majority spent an extended period of time living in the southeast and southwestern United States along the 37 and 38 parallels traditionally understood as the sunbelt.



Land for sale, 2008



Programmatic interpretation of seasonal migrants between Alberta and Arizona

AGING IN PLACE

Research on the aging baby boomer cohort indicates that residential mobility choices are linked to local context and subsequent related policy implications (Hayward, 1998). There is a call for architects to move beyond expected quantitative results and present use patterns that consider the unique circumstances of this group. The social and spatial assumptions applied to previous aging cohorts make for an awkward fit with this particular population. Currently many seniors retire within their pre-existing community or migrate to a new city; however, a significant number of seniors are opting to age in place.

Aging in place occurs when seniors remain within the pre-retirement home. Factors behind this decision include prioritization of stability, a need to be close to family, the presence of strong informal bonds with friends and neighbours and a connection to formal institutions such as churches. Yet many of these pre-retirement homes are suburban and automobile dependent. If an older retiree does not have access to an



Suburban Construction. 2008

automobile, these pre-retirement homes can isolate them from the community they wish to remain in (Sebastien and Luxembourg, 2006). With higher numbers of seniors and increasing life expectancies it is clear that traditional models of retirement homes are not working for a significant portion of this growing population.

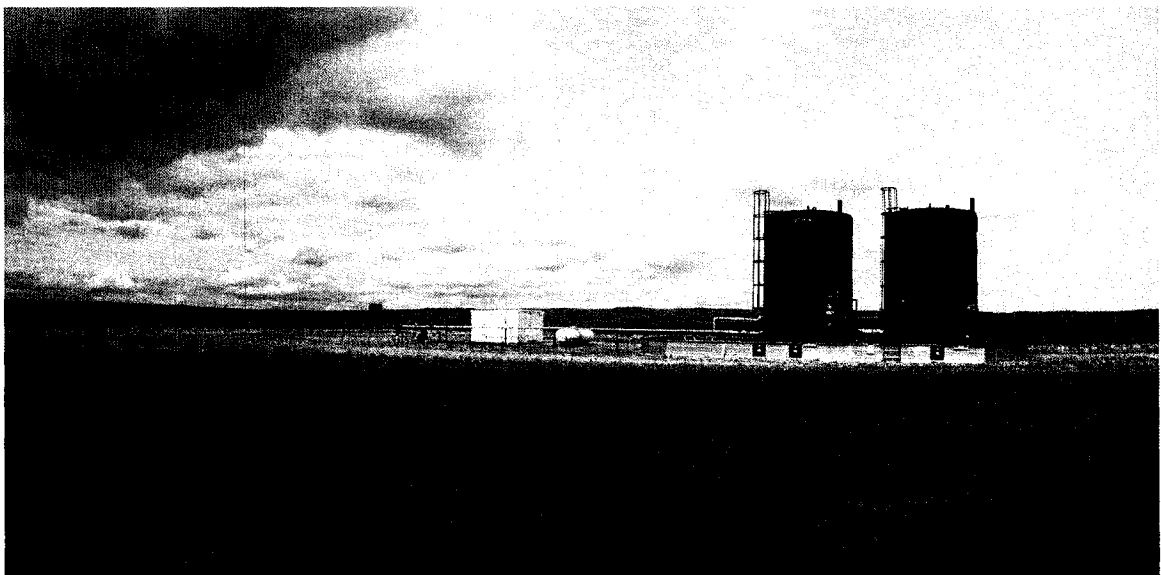
There has been some research into the reasons Canadian seniors spend half the year in the warmer parts of the US. One study suggests that many seasonal migrants winter in Florida as a strategy to maintain health, avoiding such winter hazards as icy roads and associated home maintenance (Daciuk and Marshall, 1990). In Lloydminster, seasonal migrants tend to vacation more in the area surrounding Phoenix, Arizona. Informal interviewing suggests that the main reason for spending the winter in Phoenix is the climate. Many seniors enjoy the warm weather, as it allows more time for outdoor activities such as gardening and golfing. There is also a trend to purchase second homes in the same area as many of their peers from the same cities. There is a dichotomous relationship in this seasonal pattern, where the seasonal migrants tend to be more insular in their time in the United States, preferring to spend more time within their own community of seasonal migrants. While in Lloydminster, this group is more community oriented visiting, friends, family and participating more in the community. The current pattern of the seasonal migrants tends to suggest three distinct modes during the year. There is one mode of living while in Lloydminster, one for travelling in-between, and thirdly, life in the United States.

How will this seasonal migration be affected by the rising cost of transportation? Is it necessary to purchase an entire home in the United States only to live there no more than six months out of the year? My concern in this thesis is to interpret the habits of the seasonal migrants in order to come up with a new architecture that accommodates these people as they age.

ALDO ROSSI – THEORY OF ARTIFACTS

Understanding a relatively young city such as Lloydminster is a challenging task. Patterns of architecture have yet to emerge that mark Lloydminster as distinctive amongst other small western Canadian cities. Aldo Rossi's writings in *The Architecture of the City* provides a good theoretical framework for this investigation. Although Rossi's writings focus primarily on Europe, they are still applicable to cities such as Lloydminster. His writings on urban artifacts are of particular importance when trying to understand how the eventual urban artifacts of Lloydminster will be interpreted.

In *The Architecture of the City*, Rossi posits a new way of understanding cities that puts the architect in an un-heroic and neutral role. For Rossi, understanding the city involves architecture in a physical sense, but also considers the sociological, psychological, and historical aspects of the city. As Rossi write "...there exist few instances of cities which display exclusively modern urban artifacts – or at least such cities are by no means typical, since an inherent characteristic of the city is its permanence in time."
(Rossi, 1982:126)



Oil Tanks in Field, 2008.



Small Box Big Box Collage, 2008

Rossi argues that urban artifacts –within and beyond European borders - define a city. However, when one thinks of Lloydminster, one finds oneself hard pressed to recall a single, defining piece of architecture or significant urban artifact. Can the idea of urban artifact still be useful in this context? Can a relatively young city like Lloydminster, whose urban artifacts have perhaps yet to appear, exist within Rossi's theoretical framework? And, more broadly, can Rossi's theory be reinterpreted to serve the modern North American city?



Small Box Big Box Collage, 2008

Rossi's understanding of the architecture of the city is informed by two key points: first, that the city be approached as a man-made object, and second, that the city be recognized by its collection of urban artifacts. He goes on to identify the four major characteristics of an urban artifact: individuality, locus, design, and memory. Rossi uses the construct of urban artifact as a vehicle to understand "the architecture of the city-that is, its form, which seems to summarize the total character of urban artifacts, including

their origins” (Rossi, 1982:32). Urban artifacts are therefore a way for people to interpret and understand the city through its individual buildings.

Rossi argues that urban artifacts are characterized by their own history and their own form, argues Rossi. Buildings such as the Palazzo della Ragione in Padua have contained a multiplicity of functions over time, yet these functions remain independent of the form. Rossi argues that the form is what impresses us and what structures the city as an urban artifact (Rossi, 1982). The individuality of the urban artifact lies in its form, for “if the architectural construction we are examining had been built recently, it would not have the same value” (Rossi, 1982:29). The form of an urban artifact should be appreciated for its many layers, for its history and its enduring, evolving relevance within a particular space.



Small Box Big Box Collage, 2008

Part of what defines an urban artifact for Rossi is the memory of the place. Tied up in this idea is that of permanence. Rossi distinguishes those monuments or urban artifacts that either propel or prohibit. In later chapters, Rossi refers to the latter as pathological elements. Pathological elements are urban artifacts whose function remains the same throughout history. Their function is isolated from any kind of social or technical development. The propelling urban artifact contains many of the same qualities as the pathological one, yet is distinguished in its varying functions. Rossi uses the example of the Palazzo della Ragione in Padua, where this building is still recognizable in its

original program but where that program has long vacated and has been replaced by other programs. Rossi writes, "The physical form of the past has assumed different functions and has continued to function, conditioning the urban area in which it stands and continuing to constitute an important urban focus" (Rossi, 1982:60).



Palazzo della Ragione (Rossi, 1982, p. 60)

Lloydminster struggles to find a true monument that propels. In reading Rossi, one of the first houses built in Lloydminster comes to mind. The house is currently on display inside the city's museum, isolated and preserved. Had that building remained on its original site, perhaps it could have become a propelling urban artifact. In a way, Lloydminster's suburbs are another example of a pathological urban artifact. They are continuing in a context that has not changed in decades. The same colour of vinyl siding endures, as do two car garages and tall white fences - these houses are urban artifacts that as Rossi notes are, "...isolated and aberrant" (Rossi, 1982:60). Though Lloydminster may be a city without a true, glorified monument, its existing structures fall within Rossi's theoretical framing, if only in a more modest manner. Is it possible to reverse these



Small Box Big Box Collage, 2008

pathological urban artifacts into ones that propel, such as suburban sprawl and the big box stores? Although challenging, I do think there are opportunities for this reversal. Given time and creative interventions the monuments of suburban sprawl and even big box stores can become artifacts the propel.

Another element in the idea of urban artifacts is that of collective memory. Collective memory is something that can be read in the architecture of the city, as it is directly related to objects and places: “the city is the locus of the collective memory” (Rossi, 1982:130). In this way, urban artifacts are created by individuals and the ruling party, but those individuals share the same collective memory of the city, with its citizenry. Rossi has also argued that rarely do new urban artifacts exist. While a ruling party might set out to create or build an urban artifact, only the passage of time will determine whether or not that building will become one. During that time, ruling parties might change power and slowly the function of that artifact changes and the building undergoes democratization by its citizenry. This is a simplified version of what Rossi argues when he says “only a correct coincidence of factors yields an authentic urban artifact, one wherein the city realizes in itself its own idea of itself and registers it in stone” (Rossi, 1982:162).

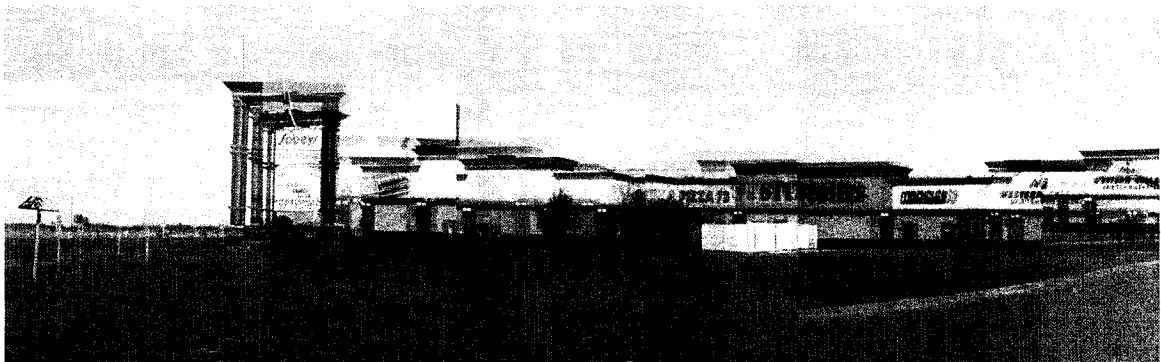


Small Box Big Box Collage, 2008

What are the implications when looking at the will of individuals and the will of the collective, in the context of Lloydminster? As a young city it is hard to predict how current

artifacts will be interpreted throughout the course of history. Moreover, the institutions of power have changed substantially from the days of the Roman Forum to the days of big box superstores. No longer do state and religious institutions build like they did in ancient Rome. Instead, developers and industry mark the landscape with grand brushstrokes. Yet, the Forum was also once a place of trade and industry. It is hard to pinpoint the will of individuals; do they desire suburban homes and big box stores, or is this the silent hand of capitalism at work?

Returning to the question of whether there exists a modern day urban artifact, it is clear that in Lloydminster no such thing exists as one finds in Rossi's examples. But the idea of an urban artifact is still relevant and important when trying to interpret and construct the modern day city. Current building practice in cities like Lloydminster places emphasis on speed and ease of construction. Little thought is put forward to its future use and place in the urban fabric or locus, on the one hand, nor into the history of a place. What few examples exist of Lloydminster's past have become pathological, entombed in museums or demolished for new construction. If we read the history of a city in its urban artifacts, there appears little to read in Lloydminster. Perhaps this is to be expected given the young age of the city; yet what will persist through time to be read one hundred years from now? This thesis attempts to explore this issue by keeping in mind the principles that make good urban artifacts and seeking to incorporate those principles into the design work.



Small Box Big Box Collage, 2008

DESIGN METHODS

NARRATIVES

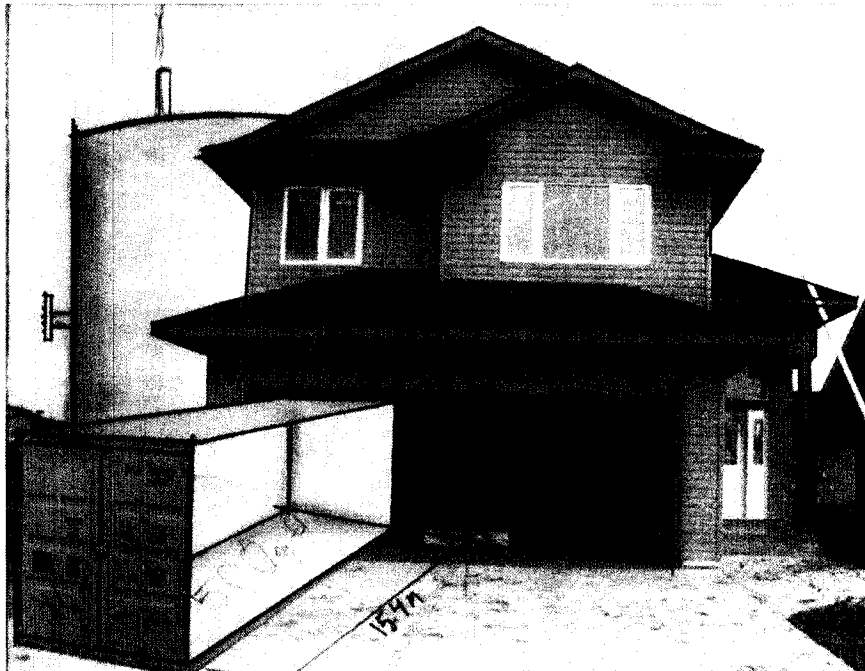
If older cities display examples of urban artifacts as Rossi argues, then Lloydminster's urban artifacts are yet to appear given its young age compared to the European cities Rossi wrote about. The following narratives offer a method for dreaming about the future Lloydminster to further understand this idea of urban artifacts. Following a method employed by Douglas Darden (1993) in *Condemned Building*, these stories frame a likely future for the people of Lloydminster. They are also means to narrow an architectural response. Dreaming of an entire cityscape is important to frame the tone of this thesis, yet resolving to that level is beyond its scope. While the people and stories are fictional, their situations and character traits are based on actual residents of Lloydminster.

The stories that follow aid in establishing an architectural program for this thesis. While each story is brief, it provides a quick glimpse into a probable future that demonstrates how architecture could meet the needs of each character. Each story follows a couple or individual in various stages of retirement in different locations. As all characters are from Lloydminster and spend a portion of their year there, there are community buildings that each character frequents. It is this common ground that unites the individuals as a community and defines that community as unique.

The narratives are used as an introduction to program. The characters in the stories address their needs in the form of a greenhouse, clinic, pub, cafe, louvres, work place and others. These elements are incorporated in the work by way of collage and program requirements in order to narrow the architectural intervention.

STORY I - DEREK AND NATALIE

The hum of the solar panels orienting themselves to catch the first rays of the morning sun woke him up. Seconds later he realized that the train had stopped moving. The rhythmic clicking of the train that put him to sleep so soundly last night was gone. How far had they traveled last night, was this day two or day three, Derek couldn't remember. The past week had been a mess. Condensing their life possessions, 52 years worth, into roughly 1000 square feet wasn't easy, but strangely liberating. Natalie, still asleep,

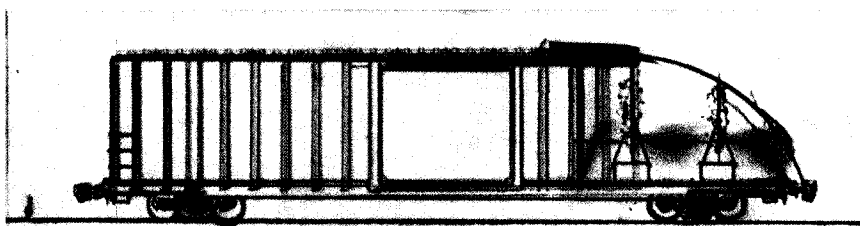


Suburban Tank, 2008

had protested Derek's ruthless elimination of random Christmas decorations, old cutlery, and forgotten possessions. "What are Tim and Kerry going to do with this crap?" Derek argued. With one child, and another on the way, their daughter Kerry was more than happy to buy their large family home. With four bedrooms,

two bathrooms, and a massive garage, Kerry's young family would make good use of the large house. Derek wondered briefly if Tim had understood his directions on how to adjust the geothermal heat pump; it was getting colder these days and the slab Derek installed needed time to heat up. Natalie's voice rang in his head, telling him to stop worrying. He got up to make coffee.

It was the coffee grinder that jolted Natalie awake. Seeing light stream in from the louvres in their bedroom, she was confused as to why Derek wasn't at work already. Since the massive layoffs at the Husky Upgrader, Derek had been working early morning shifts, despite being days away from retiring. Natalie sighed pure relief. They weren't in Lloydminster anymore. They were where, she wondered. She jumped out of bed excited at the prospect of spending an undisturbed morning with Derek. She opened the louvres of the bedroom and saw the Rocky Mountains staring back at her.

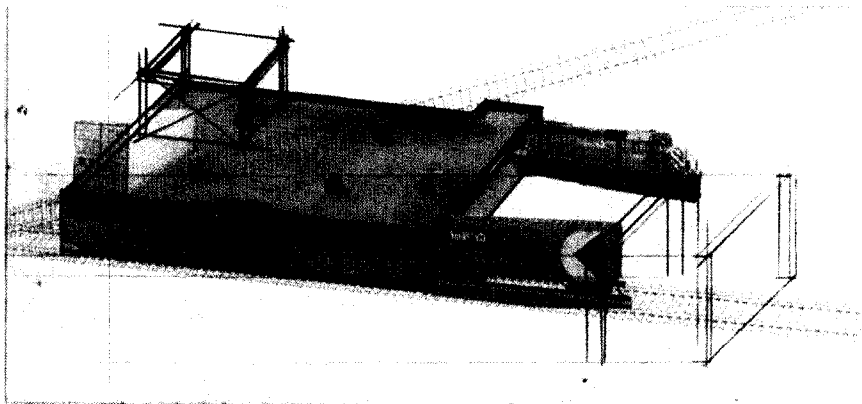


Greenhouse Train, 2008

"Coffee?" Derek asked. "Yes," Natalie murmured. The kitchen was slowly filling with light from the morning sun. It revealed a somewhat compact space, but still lots of room just for two. Natalie contemplated pushing the walls of the kitchen out to make more room, but the chill of the morning air stopped her.

Having barely finished her thought, she heard the hum of the electric motors and the mechanical sound of the porch space being opened up down the hall. Natalie silently cursed the noisy intrusion of sound into the quiet morning air, but remembering her plants, quickly regretted it.

The front of the compartment was slowly revealed as the aluminum shroud retracted into the ceiling. A sea of greenery glistened in the refracted morning light of the greenhouse glass. Tomatoes, cucumbers, snap peas, potatoes, roses, and African violets were only some of the flora contained in this small space. Derek, buried under the greenery, was checking a valve located underneath one of the hydroponic containers. "Do you think it's working?" Derek asked. "Of course - Jerry knows what he's doing." Jerry at the community greenhouse had set up the hydroponic and grey water recycling system.



Gantry Crane Staples Store, 2008

Natalie had met Jerry at the community greenhouse shortly after her retirement from nursing. In the years since then she had become an avid volunteer. Although she was still working part-time at the assisted care unit in the old power centre, she found

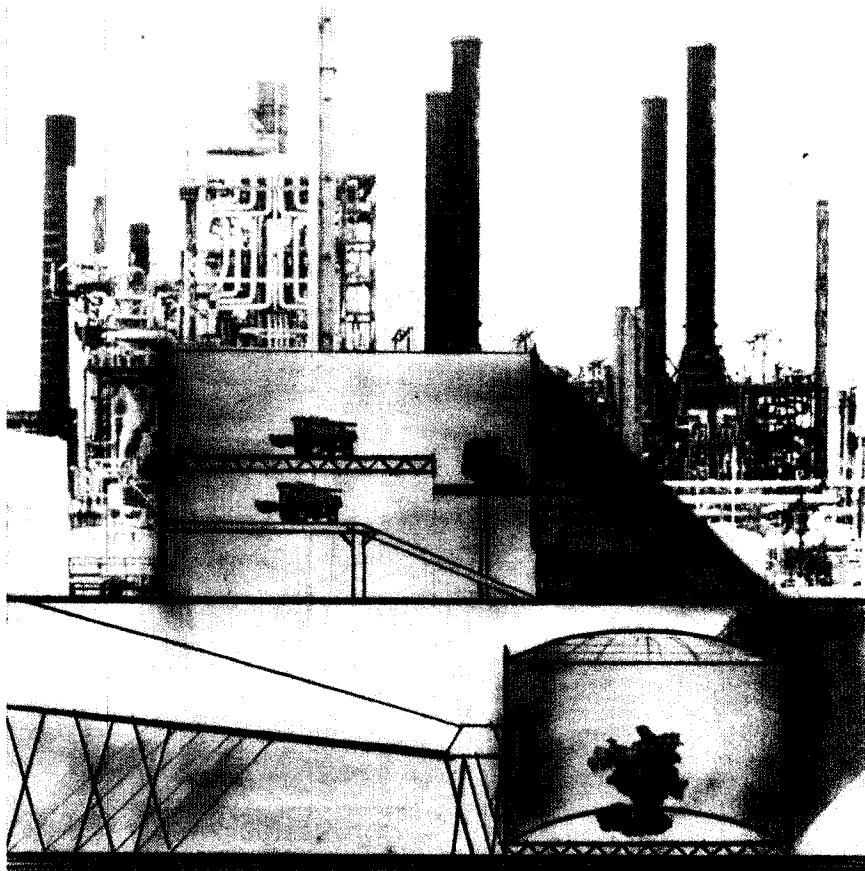
volunteering at the greenhouse relaxing. The feel of wet soil in her fingers was therapeutic and she enjoyed the company of the other volunteers, not to mention a share of the fruits and vegetables. "If you are worried about it, we will be in Scottsdale in a few weeks and Jerry will be there; you can get him to check the system. If you want to do something you can weld those shelves to give me more room for my plants." "I can do that today if you want." Derek replied.

Derek was surprised by his reaction, one week off from welding and he was already looking for something to do. He was excited at the prospect of welding, especially something that required his creative input, something that he could admire every day. The work he did at the Upgrader was thankless, only worthy of comment when something went wrong. On his way back to the storage compartment, Derek couldn't help but take the drop cloth off his motorbike and admire its clean lines. Although gas was expensive and scarce, he saved his money to enjoy the few times a year he could hit the open road.

It was only a couple more weeks until they arrived in Phoenix. Many of his friends were already there, having left Lloydminster after the first frost. Apparently there was room for their house at one of the old Staples stores on the outskirts of Scottsdale. Its location at the periphery of town made for amazing views of unspoiled wilderness. Derek was looking forward to months of golfing and beer, leaving the cold prairie winter behind.

STORY II - JOHN AND CHRISTINE

John struggled with the stubborn bolt holding him back from enjoying a fresh cup of coffee. In his younger days John would have cursed the rusted bolt, ending the dispute in disgust, with a bloodied knuckle and his cowboy hat lying on the floor. As he meandered back to the tool chest he caught a glimpse of the young girl who had brought the combine in for repair. She was old enough to be driving the combine, but young enough to be sent on this errand. The community shop wasn't known for its speed, but its low cost repairs, aided by volunteers like John, made this shop a vital part of the community. Shipping costs had made the purchase of new farm equipment extremely expensive. The lack



Orchard Silo, 2008

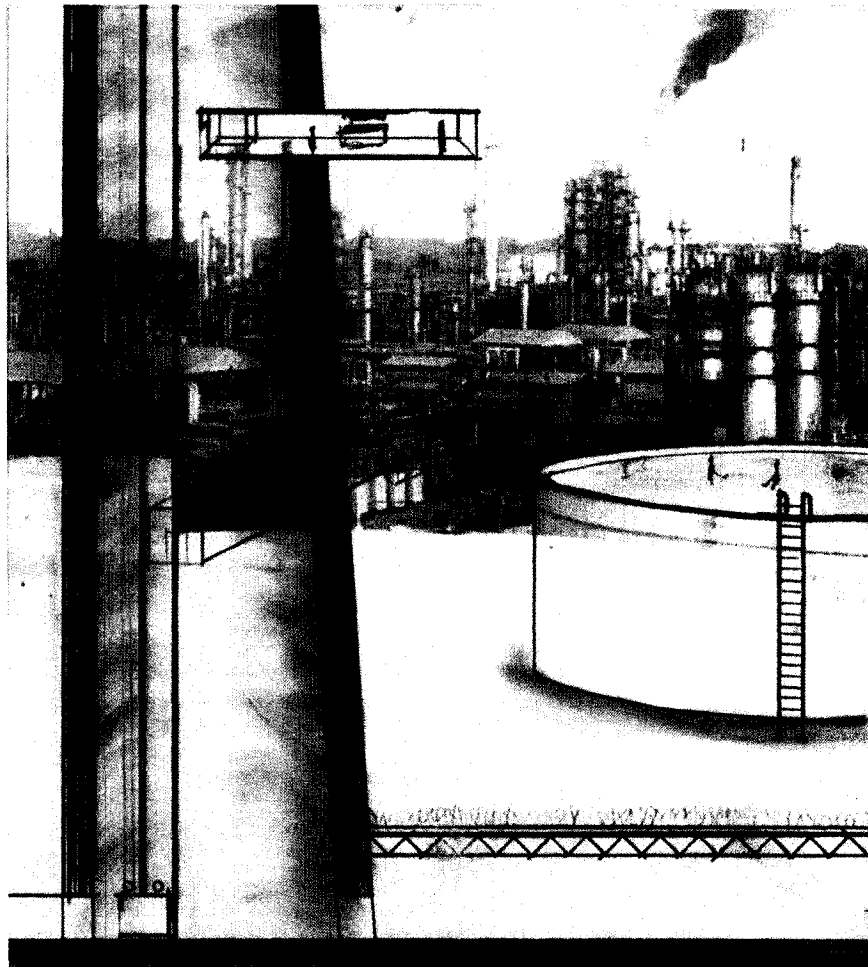
of parts also required creative solutions, and guys like John were always full of them. John returned to the stubborn bolt with a bit of leverage and leaning back he could feel the bolt give; that coffee was right there in front of him.

John joined his buddies in the coffee room to fill his mug and they promptly went next door to the other silo. John loved spending time in this silo. He enjoyed managing the repair shop but found happiness in the dark soil that covered his cowboy boots. Even if below that soil lay the steel foundations of a derelict oil tank, the sky above was still blue and he stood in a 50-metre circle orchard of apple, peaches, plums and lately even mango trees. John loved it in this silo, it was dead quiet in the winter when the roof was closed, nothing but the stillness of the trees and the good conversation of his friends from the shop.

After their break John returned to the combine to find the young girl he left feverishly working at one of the rusted bolts. John looked down to see rusted bolts scattered across the floor. Youth had removed them, but wisdom was picking them up so they wouldn't get lost. "You've got a way with that wrench," John said. "I helped my dad get this old combine running," the girl said earnestly. "My brothers are busy getting the wheat to the pool today." "Well, I could use some help with this header," John said. "Yeah I guess so," said the girl, trying to shrug off her eagerness. John spent the rest of his morning with an extra shadow. He was mindful not to be preachy, he remembered his dad teaching him

how to fix things as a kid and how he had appreciated his silent teaching method. After a few hours the job was done. As the girl pulled the combine out of the shop he gave the horn a few short blasts and waved to John.

Lunch time came quickly and John was on his way home winding down the metal ramps and stairs that led to the north cooling tower. John stepped into the elevator and pushed five. He was hit by a wall of delicious baked goods as the elevator doors opened. He wasn't the only one busy this morning, clearly Christine was getting ready for the lunchtime rush down at the coffee shop.



Cooling Tower, 2008

He opened the door to find large baking sheets of macaroons, shortbread, oatmeal raisin cookies, and more. "I better just sample one of these," John said. "Don't you dare! You've got your meal on the table, those are for the coffee shop and the ladies in the greenhouse!" Christine said smartly.

John sat down to lunch and looked out the window. It was a cold December day but the kids were still playing hockey down in silo number three. In the summer, silo number three was full of bathers cooling off in the outdoor pool. Christine loved going down there in the early mornings for a swim. It reminded her of their winters in Phoenix where swimming outdoors was possible all year round. The decision to stay in Lloyd for the winter was surprisingly easy. They loved spending the Christmas holidays with their grandchildren and the new bathhouse provided a unequalled experience of bathing outside in -40 weather, but sitting in a tub of water that was +40.

The water certainly helped Christine's health; 88 years takes its toll on the healthiest. They moved their unit to the north cooling tower last year when Christine's health took a turn. The north tower has a full time nurse on call 24 hours a day, which makes things much easier. At the base of the tower there is also a pharmacy and clinic where their family doctor sees patients once a week. "Are you going to help me with this baking, or just sit there staring out the window? I don't want to miss that bus to the power center," Christine asked. "I'll be there in a minute," he replied.

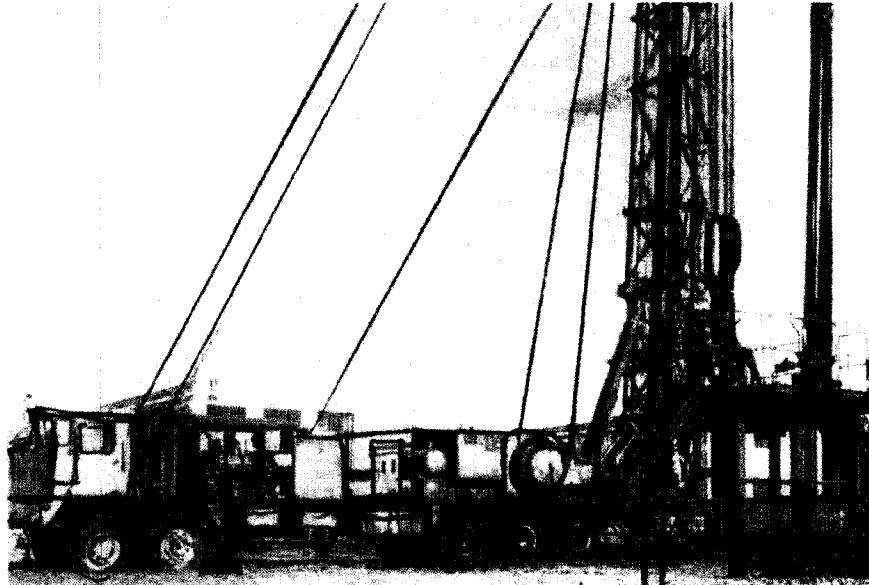
STORY III - CHUCK DERRINGER

The drill made short work of the forgotten oil well head. Chuck eased the rig deeper into the earth until he felt the bit hit the bottom of the casing. Increasing the RPM, Chuck smiled and thought to himself, "Easy money". The discarded oil wells of 50 years ago made ideal conditions for geothermal. All Chuck had to do was drill them down a bit deeper and the hole was ready. Of course Chuck would have a lot more work to do laying the hose, digging the trench, and hooking up the system to the existing HVAC system of this house.

It was a job Chuck had created for himself. Thirty years ago when he was in his early 20s, oil was still easy to find in this area. He had bought his own drilling rig, hired a crew and became a legitimate oil man—at \$350/barrel for heavy crude, it paid the bills too. Chuck knew the oil wouldn't last, and he prided himself on the, "tech" that he had built to prepare himself for that day. His rig was his life, quite literally it was his home. He sold his house years ago, telling people, "Why have a house with more than one bedroom? I can only sleep in one at a time!" Since then he spent his days outfitting his rig as home. He made many of the modifications himself, salvaging old oil tanks and scrap metal he would collect while on the job. His rig was his life, his work, his Mad Max escape vehicle, and he loved it that way.

Chuck spent the rest of the day digging a trench for the hoses

to run across the yard and into the basement of the house. It was five o'clock, he was tired and hot from the mid-July sun and looking forward to the after work beer with the boys. He locked up the storage unit and decided to leave it in the yard; he would be back tomorrow-no need hauling it back to the power centre. Jumping into the cab of the truck he flipped the ignition, silence. Back in the day, the roar of his old V12 diesel engine coming to life made him happy. Now he revels in the near silence of his 10 tonne rig creeping along the road, nothing but the hum of the transmission being turned over by six electric motors.



Jackknife Rig, 2008

He crept towards the old loading dock of the Wal-Mart, and slowly backed into position. He nudged the push bar against the concrete wall and felt the vacuum seal attach itself to the rear compartment. He flipped another switch, which opened the air duct connecting the rig to the Wal-Mart and was hit by a blast of cold air. "Straight from the earth," he thought in his head. Chuck had drilled all the wells that regulated the temperature of the old Wal-Mart-200 holes

in total, a big job that took all summer, but it paid well, and he was guaranteed a docking spot for the rest of his life. He liked the old Wal-Mart, he remembered before when it was a sprawling open space, now it had been cut up, dug out and built up, forming an almost labyrinthine space which contained all the necessities of life: a garden, chicken farm, farmer's market in the summer, coffee shop, and his favorite, the rooftop pub.

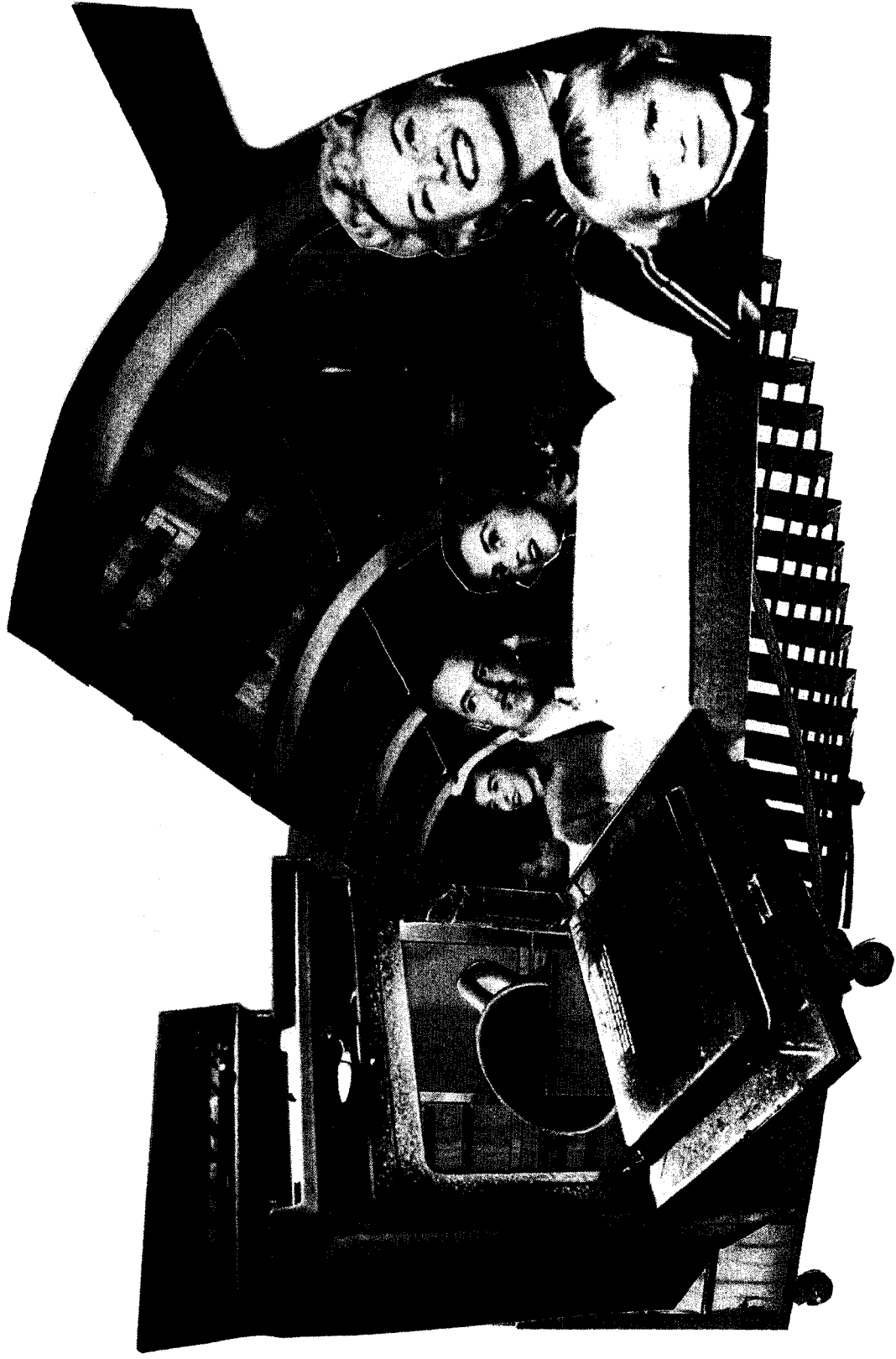
Chuck's movements quickened, he was anxious to join the boys on the rooftop for a cold one. He checked the grey water connection between the Wal-Mart and his rig and decided to take a quick shower before heading up. He opened up the front door of his rig and stepped inside the interior hallway of the Wal-Mart. The sun was still high in the summer sky and the tall summer wheat cast shadows down into the hallway from the skylight. As Chuck walked down the straight hallway, noting whose bays were still empty, he wondered if Lynda and Gerry were back from the lake.

The boys were on round two when he got there. They hadn't forgotten him, and a bottle of Pilsner, cold and dewing in the hot sun, was waiting for him. "Chuck," they chorused together. "Boys." He sank into the comfortable wooden chair and joined the gaze of his mates westward. It was the edge of town, and it was beautiful. Westward towards the agricultural fields, framed by the biggest sunset you've ever seen; behind them their everyday lives. They would leave in August for Texas, always chasing the sun, always finding the next place to drink beer and be with friends.

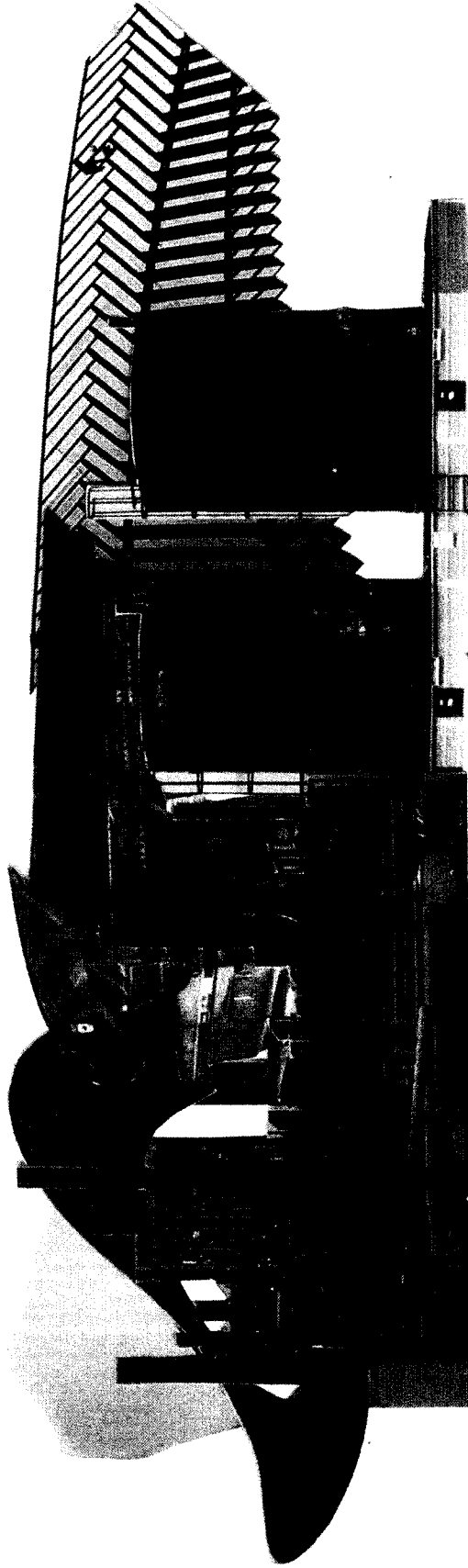
DESIGN PROCESS

COLLAGE

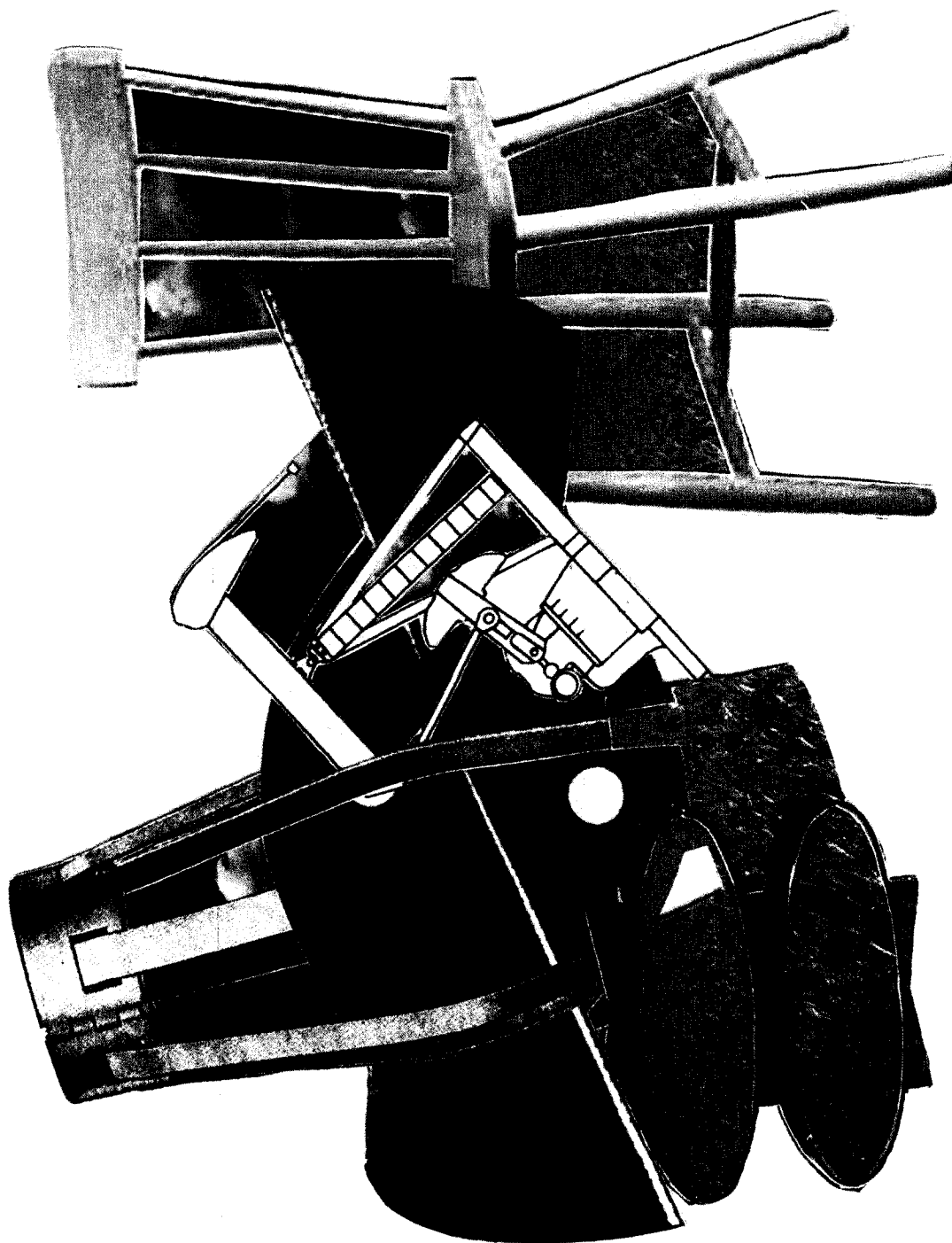
The collage process that led to my design ran parallel to the writing of the narratives. By extracting key words, objects, ideas, places, and rooms from the text, specific collages were constructed. The collage method captures the idea that the urban artifacts of the oil industry would be recycled in new building construction. The collages also include objects that are indirectly related to the oil industry, highlighting/capturing a spirit of lost and found objects. Ben Nicholson writes, "collage making...cannot fully control what occurs in the juxtapositions because it uses readymade components" (Nicholson, 1990:19). The following images explore collage as a visual narrative that complements the narratives and provides a vision of the objects future reuse; "after the oil".



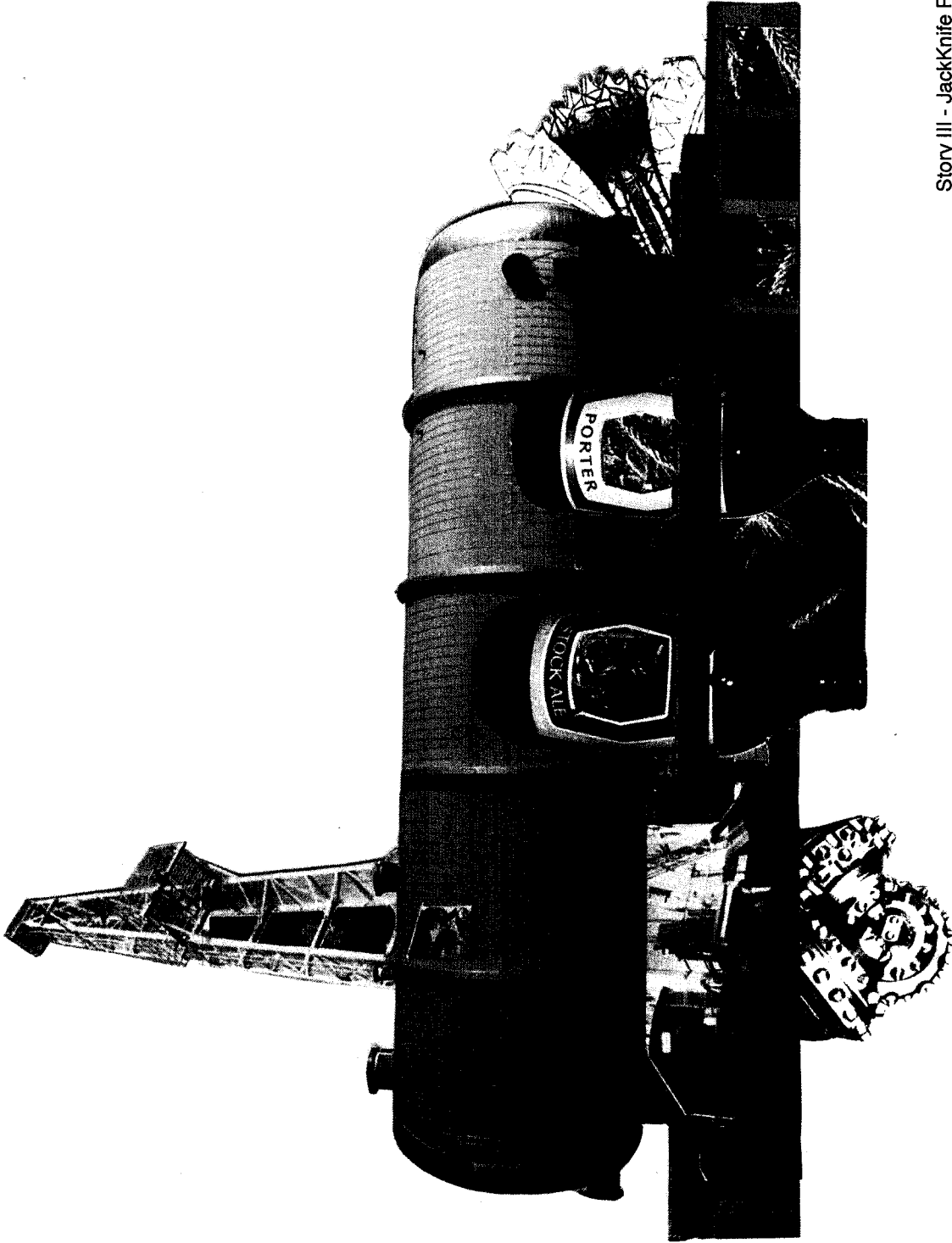
Taken from Story II, this collage combines the idea of past train travel, oven, and staircase as a way of translating the text.



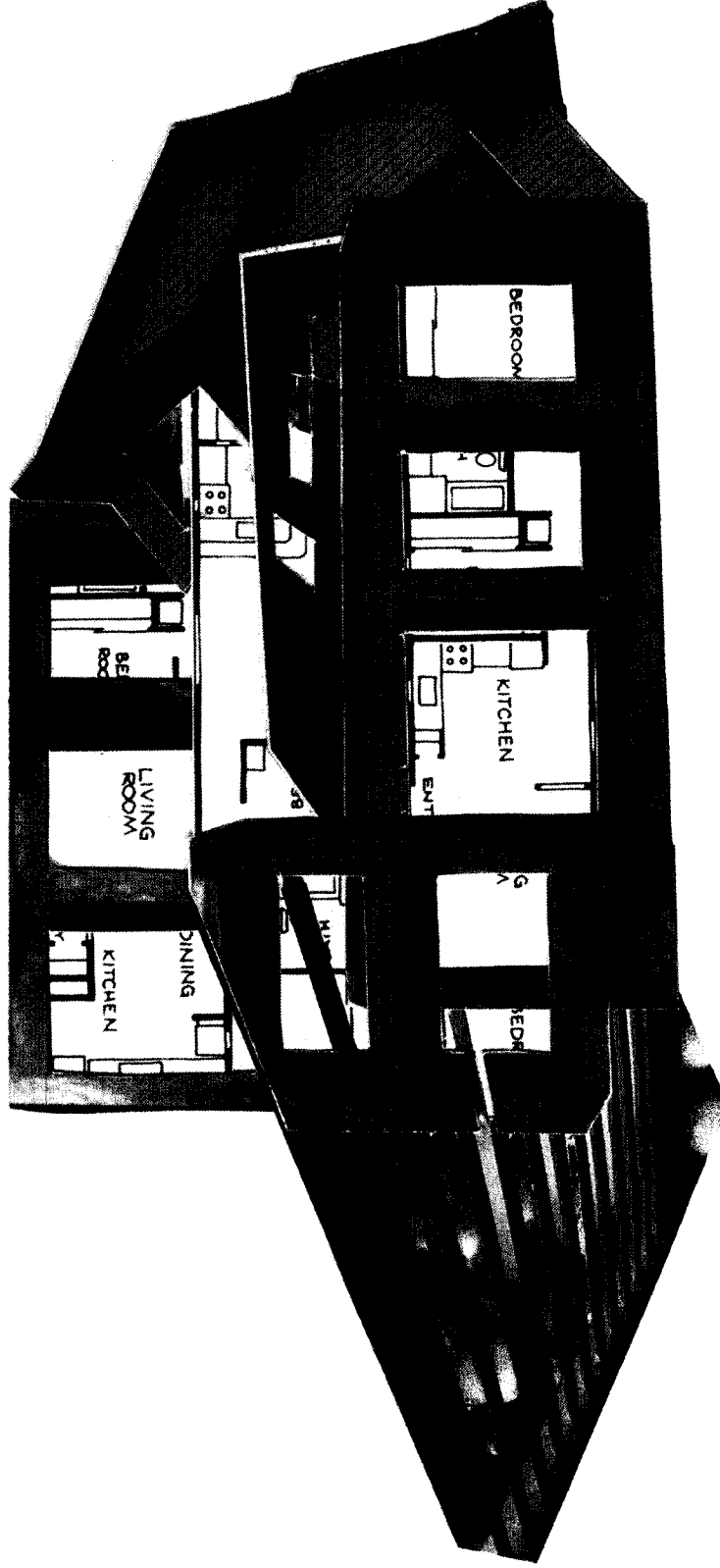
Story II - Cowboy Hat
In this collage the cowboy hat expresses an idea of leisure as it hangs on the infrastructure of the refinery.



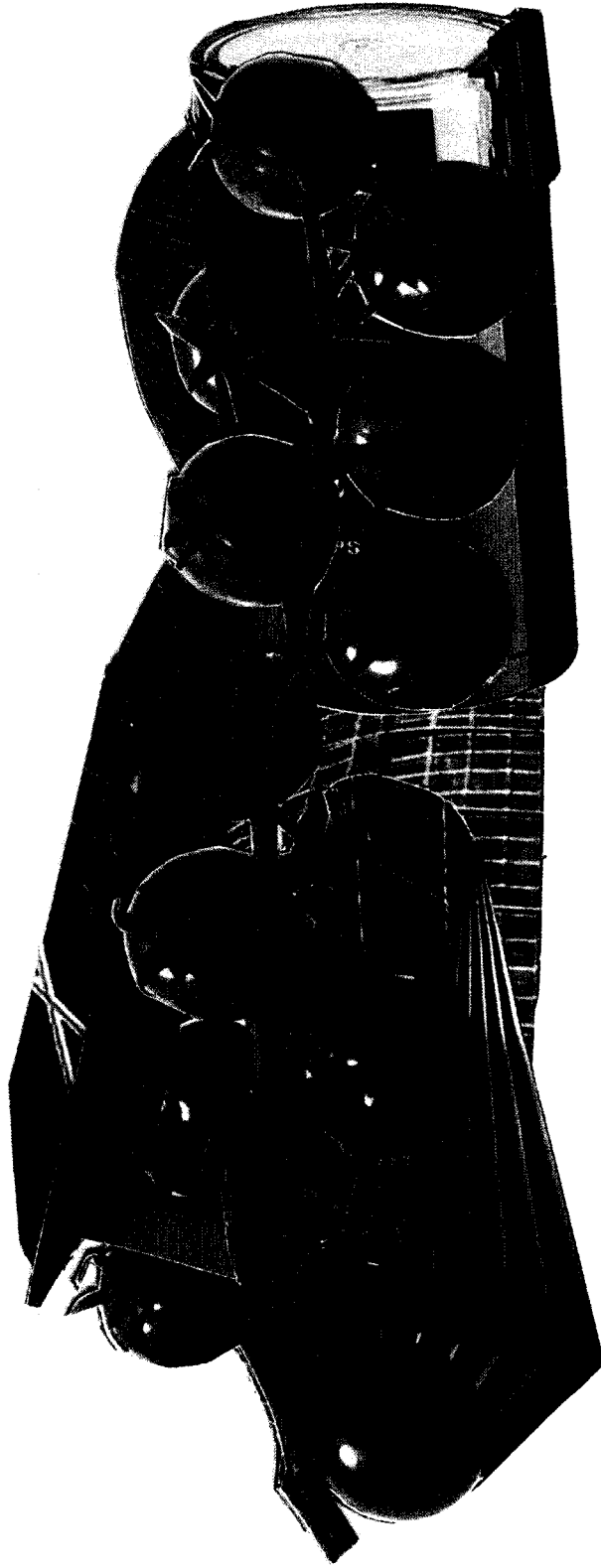
Story III - Chair
The Chair collage incorporates the idea of leisure and work with the familiar symbol of Tim Hortons bridged by the oil pump.



Story III - JackKnife Rig
This collage is more direct in its formal language of making a machine that has a connection with work but also leisure.



Story I - Solar Panels
Elements of the suburban home, solar panels, shelving and louvres were extracted from the narrative and then incorporated to create this composition.

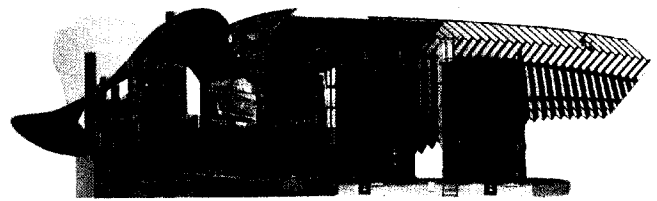


Story 1 - Tomatoes
Tomatoes, greenhouse, louvres and coffee grinder were elements taken from the narratives and combined.

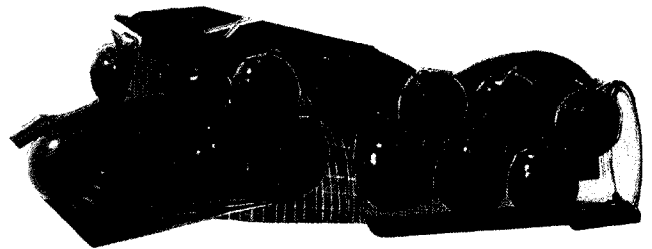
PROCESS

After examination of the six collages presented, one collage was selected for each of the narratives. The three collages selected for further development are: Tomatoes, Cowboy Hat, and JackKnife Rig. These three collages then began to be worked through sketches of the collages in plan, elevation, and section.

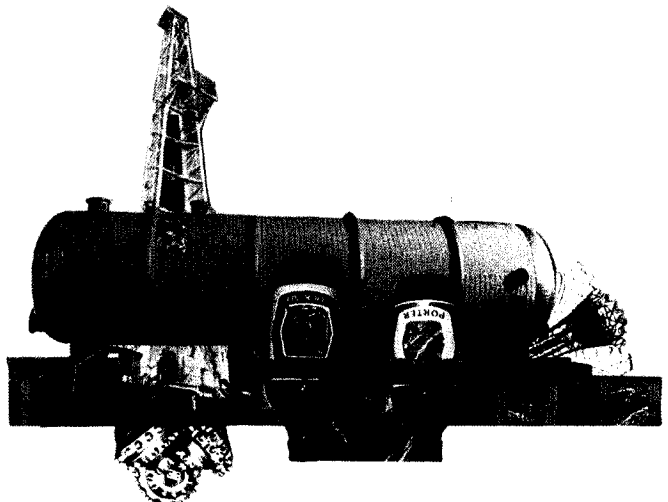
The section drawings proved most useful in their detail, to understand their construction and consequently inform later design decisions. The sections also resulted in sometimes unexpected results and in this way assisted in developing the design work. The



Cowboy Hat



Tomatoes



JackKnife Rig

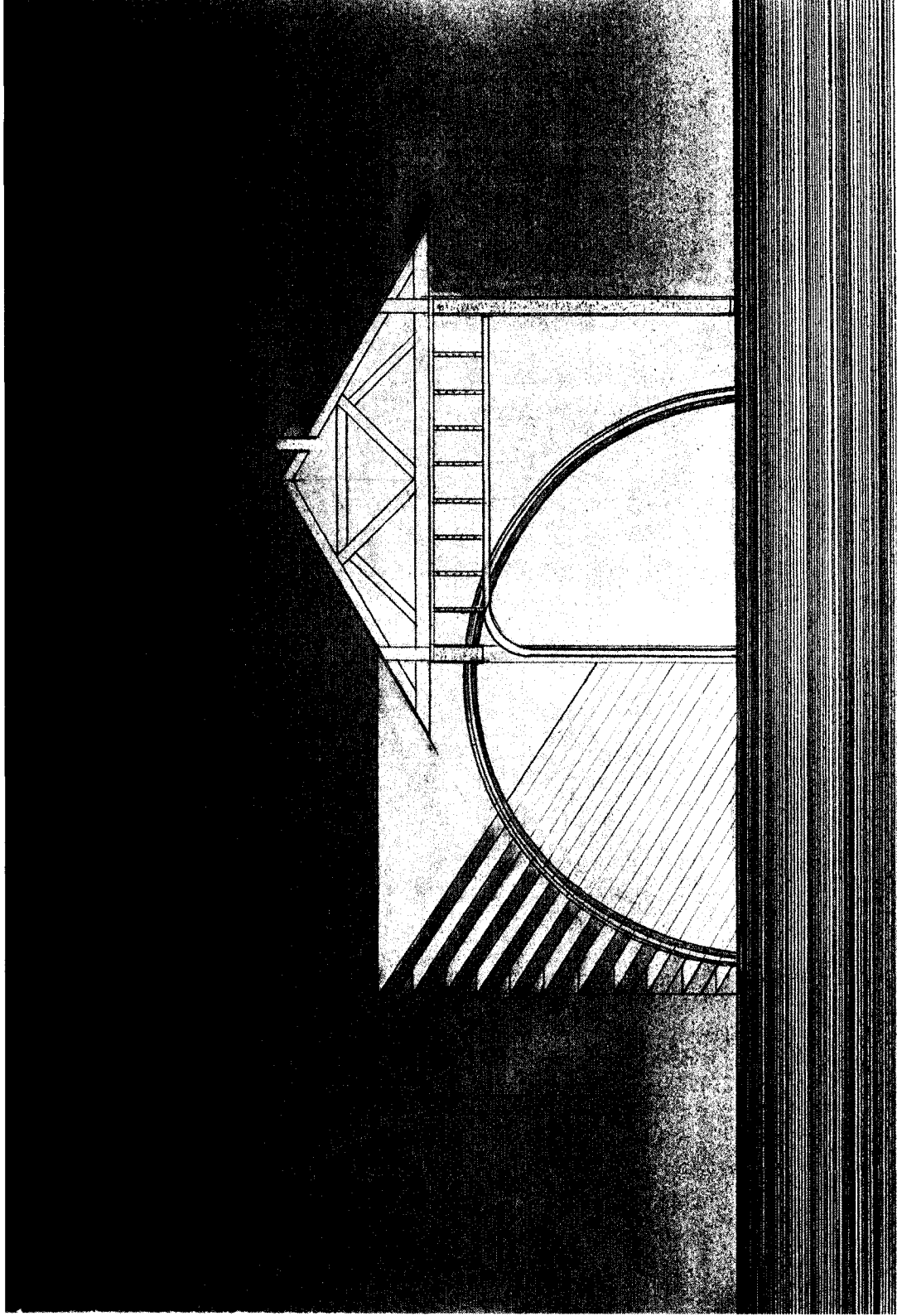
section through “Tomatoes” displays an idea of using a typical garage door to create large apertures. The section through “JackKnife Rig” suggests a more phenomenological quality of inhabiting the inside of a large metal tank. The three collages were chosen for their formal possibilities as well as their potential for juxtaposition and translation.

After taking sections through each collage, the next step was to translate the information from the collage and sections and represent that into three-dimensional space. The

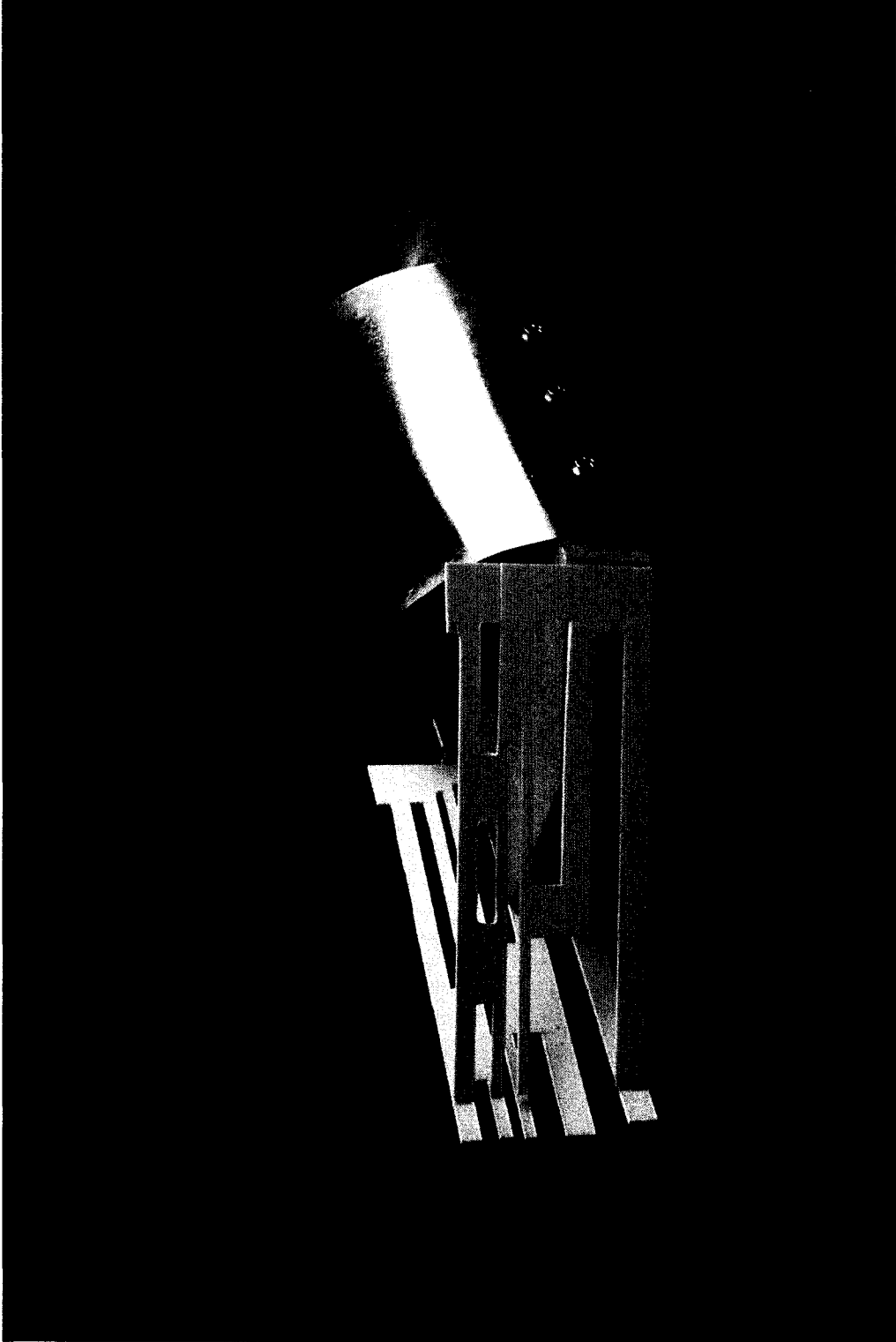
models are synthesized and stripped of much of the information that the collages contain. For the “JackKnife Rig” it is about a movable scaffold, for the “Tomatoes” a clear, round section attached to a base, for the “Cowboy Hat” an underlying structure where pieces can be plugged in or unplugged based on the needs of the inhabitants. These models are about condensing the ideas of the collage in order to see the larger juxtapositions that exist.

From collage, to section through the collage, to *parti* model, the final set of drawings for each narrative generated scaled plans, sections and elevations. Along with that comes a more completed physical model of the home. The first two narratives of John and Christine and Derek and Natalie are less developed than the drawings and models for Chuck. The following sets of drawings begin with Derek and Natalie, John and Christine and finally Chuck Derringer.

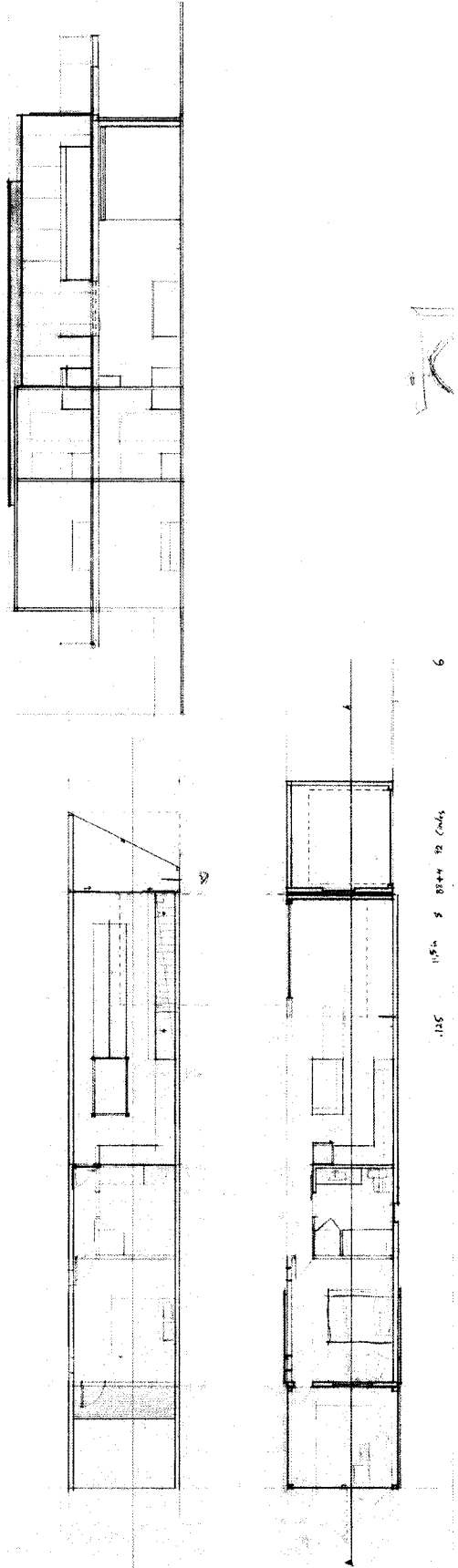
STORY I - DEREK AND NATALIE



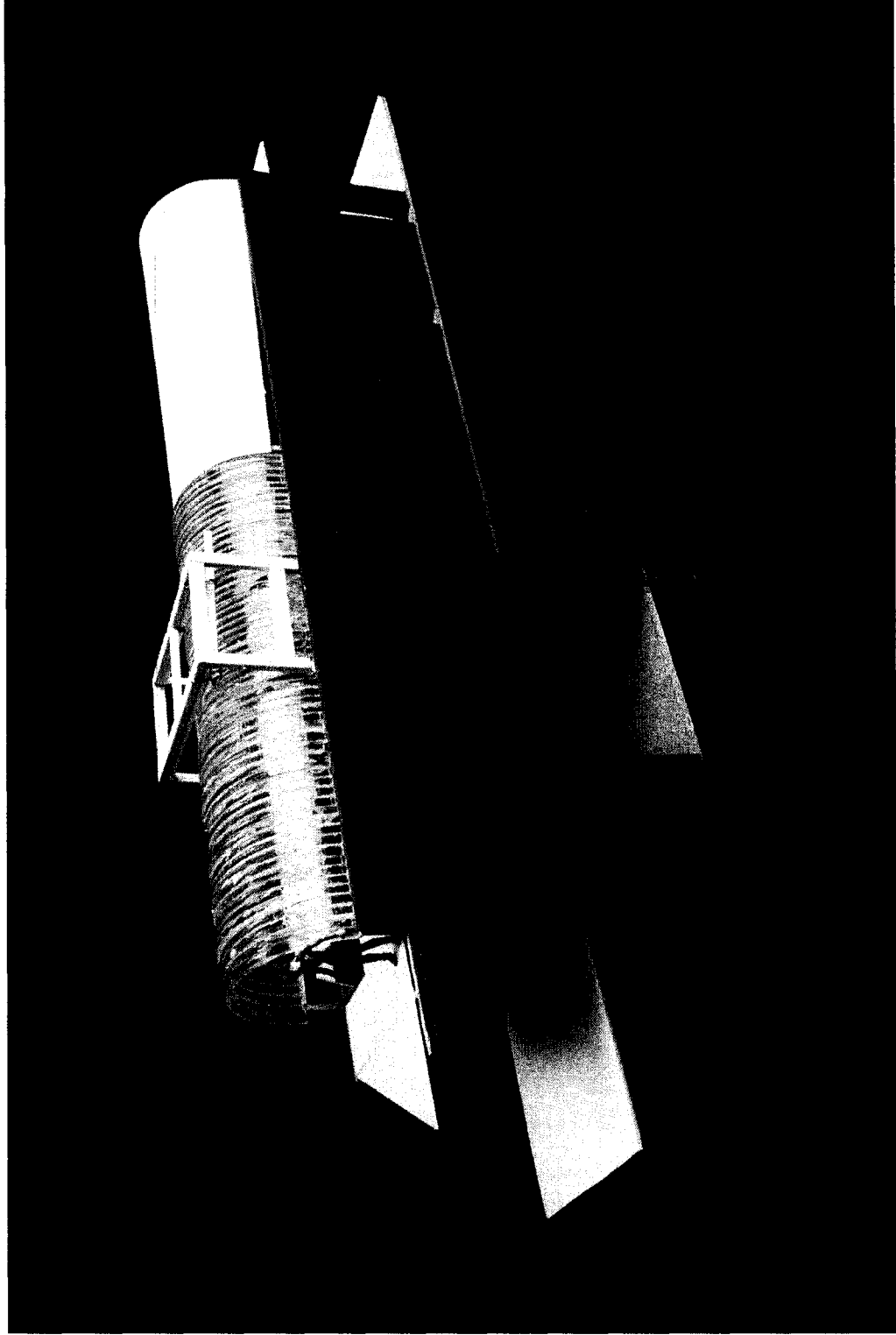
Story I - Section through Tomatoes Collage - A typical suburban garage creates a large aperture that is shaded my external louvres.



Story | Derek and Natalie - Tomatoes Model - Collage is distilled into movable louvres that expand outdoor living with metal shell protecting the greenhouse below.

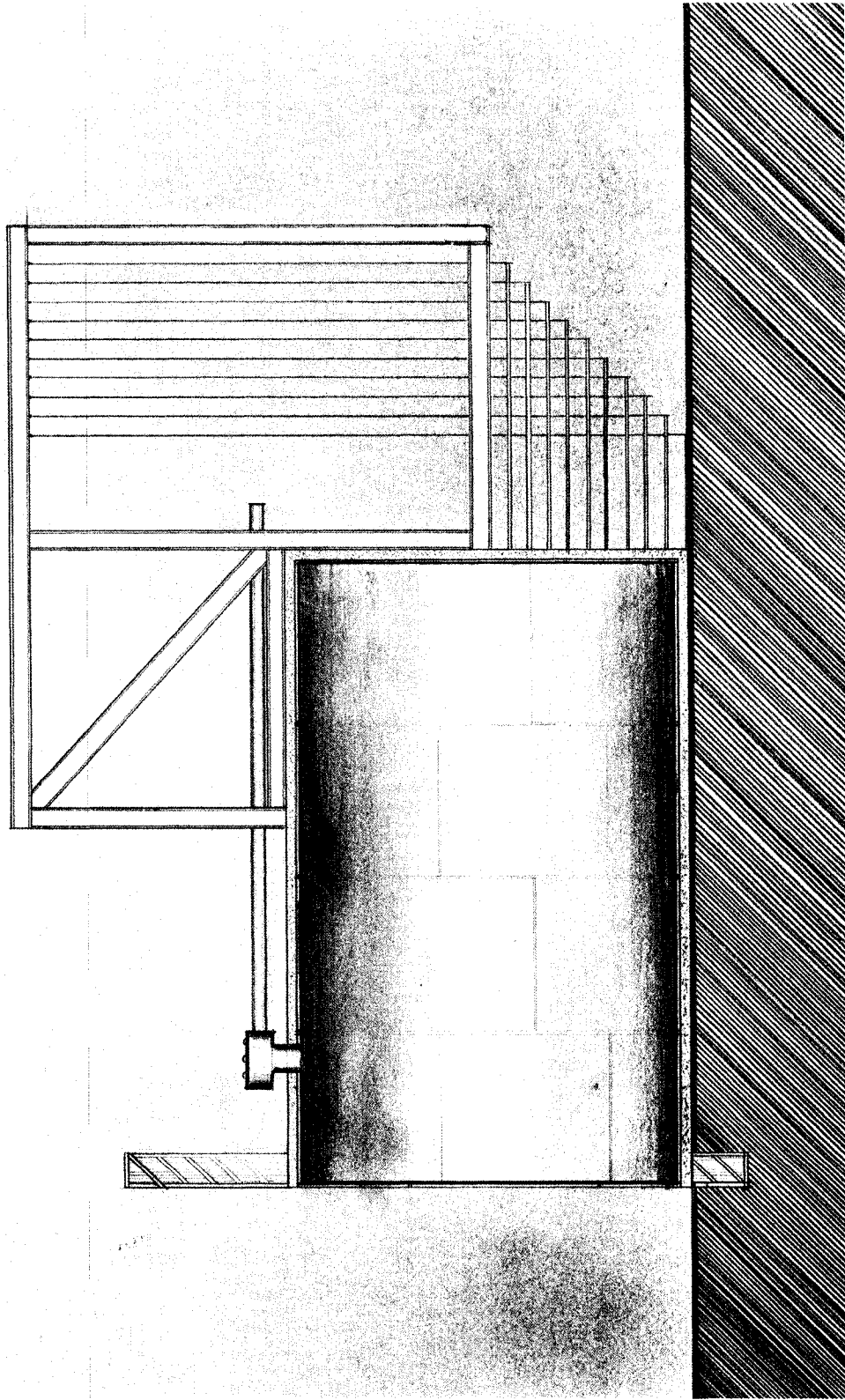


Story I - Derek and Natalie - 1:50 Orthographic Drawings - Plan shows greenhouse on upper floor which is connected below to the living space by way of stairs and trap door which can regulate humidity and heat.

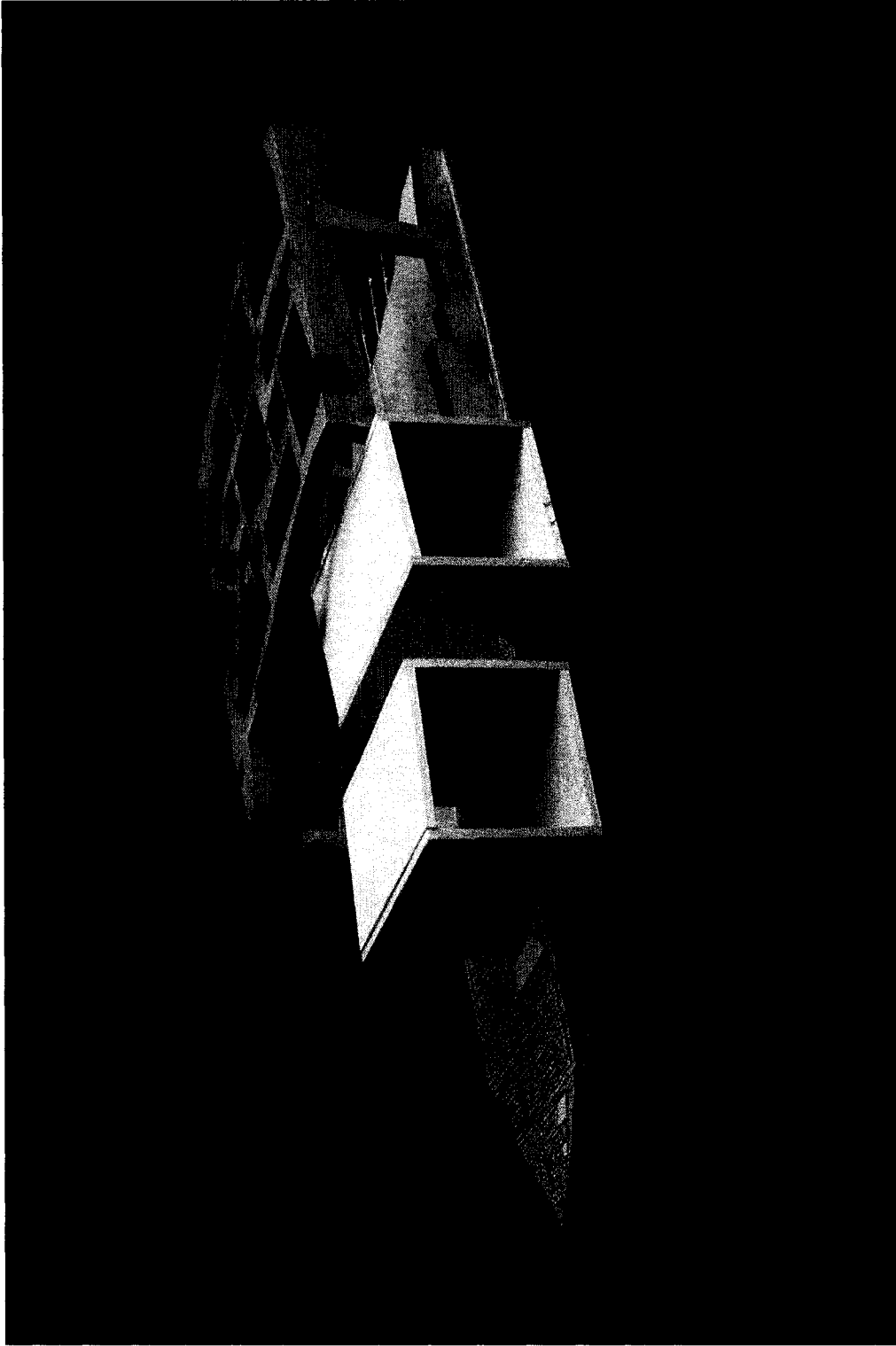


Story I - Derek and Natalie - 1:50 Model - This final model is intended to attach to a suburban home by using a removable section of the building to frame an entrance.

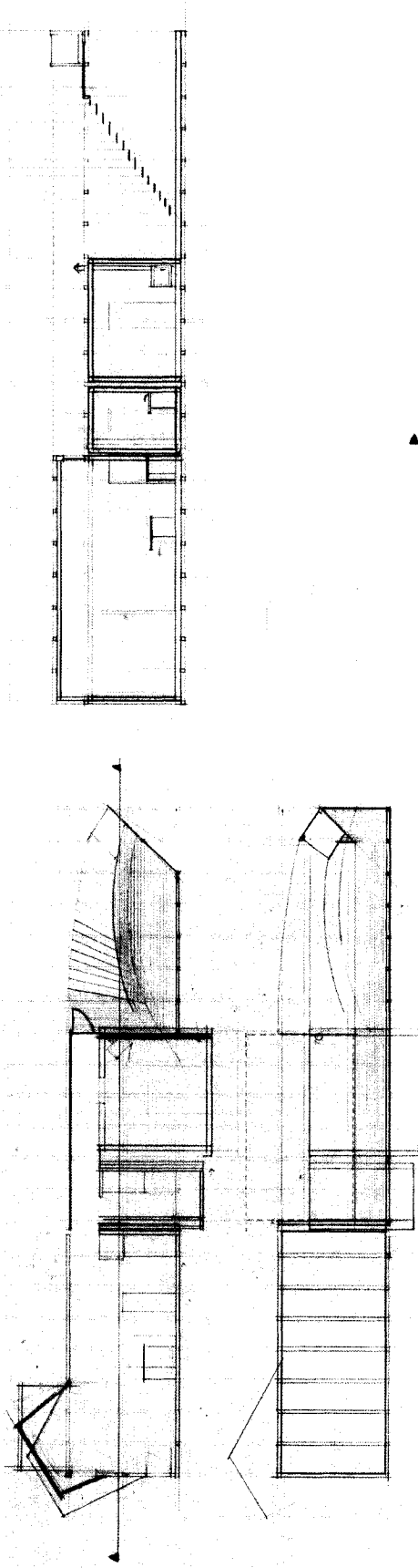
STORY II - JOHN AND CHRISTINE



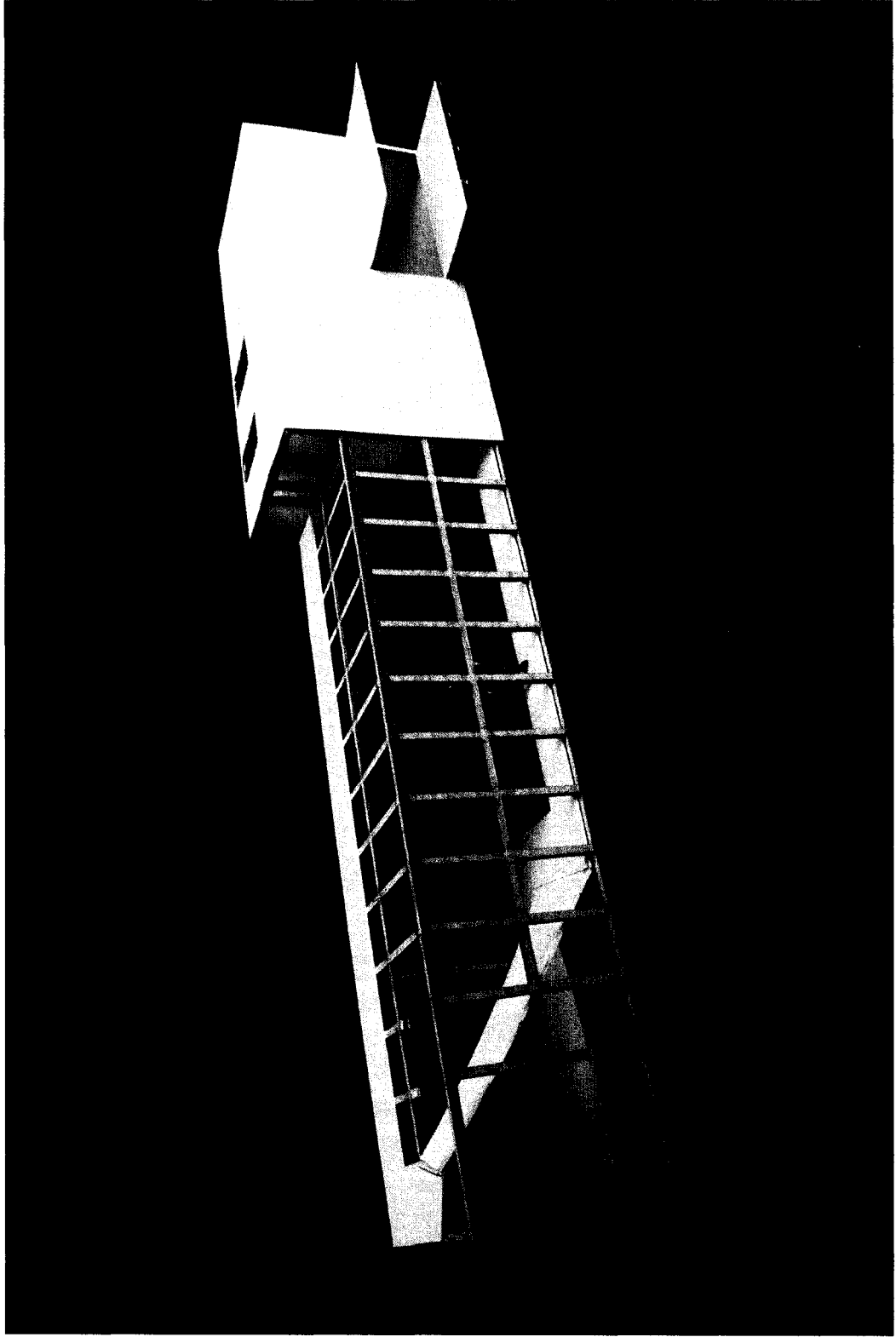
Story II - Section through Cowboy Hat Collage - This drawing looks at how an oil tank could "plug-in" to a metal framework.



Story II - John and Christine - Cowboy Hat Model - Looks at how two rooms could fit within metal framework.

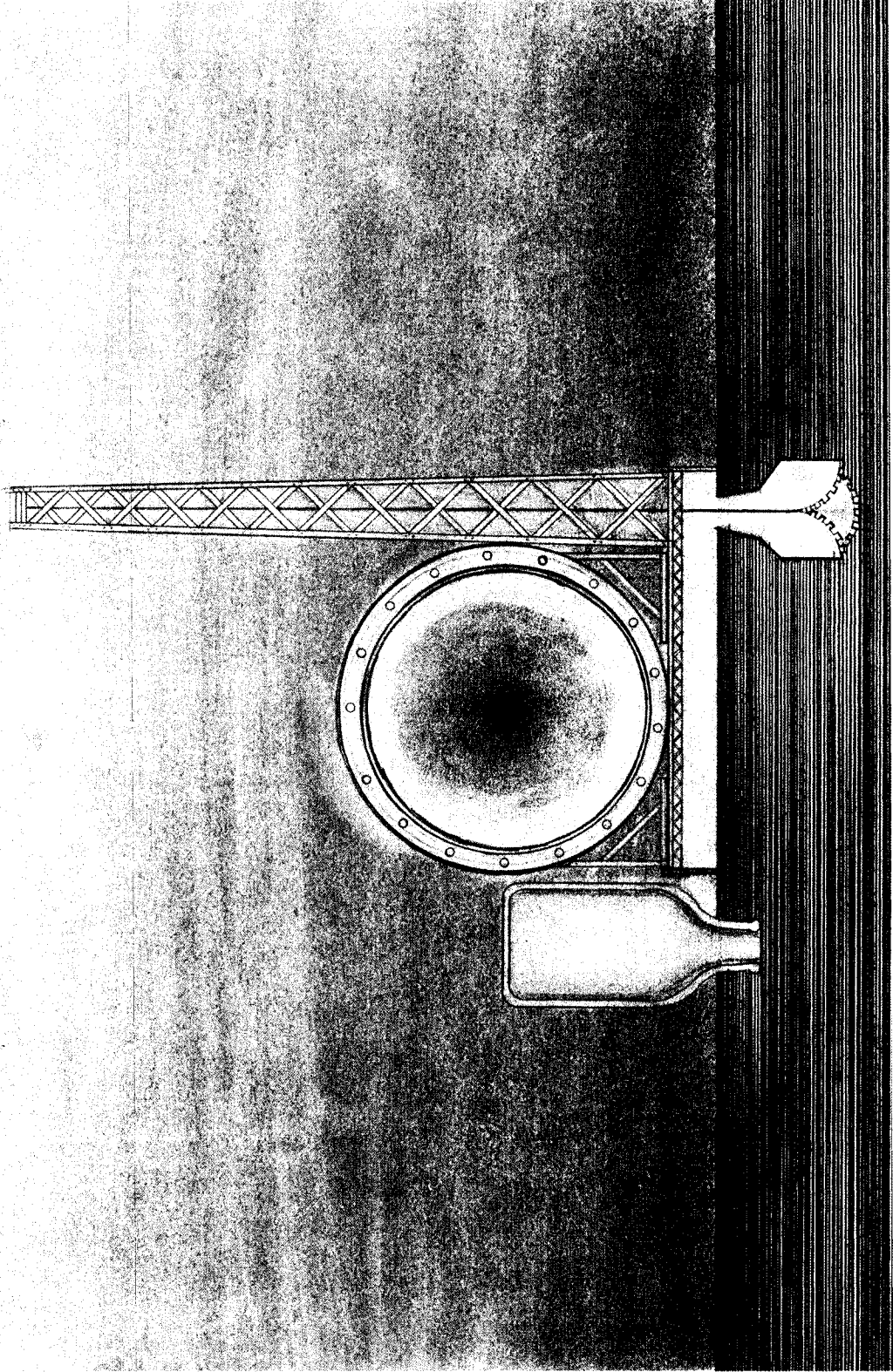


Story II - John and Christine - 1:50 Orthographic Drawings - These show the over-arching steel frame structure with a double height living space and two inserts making up the bathroom and bedroom.

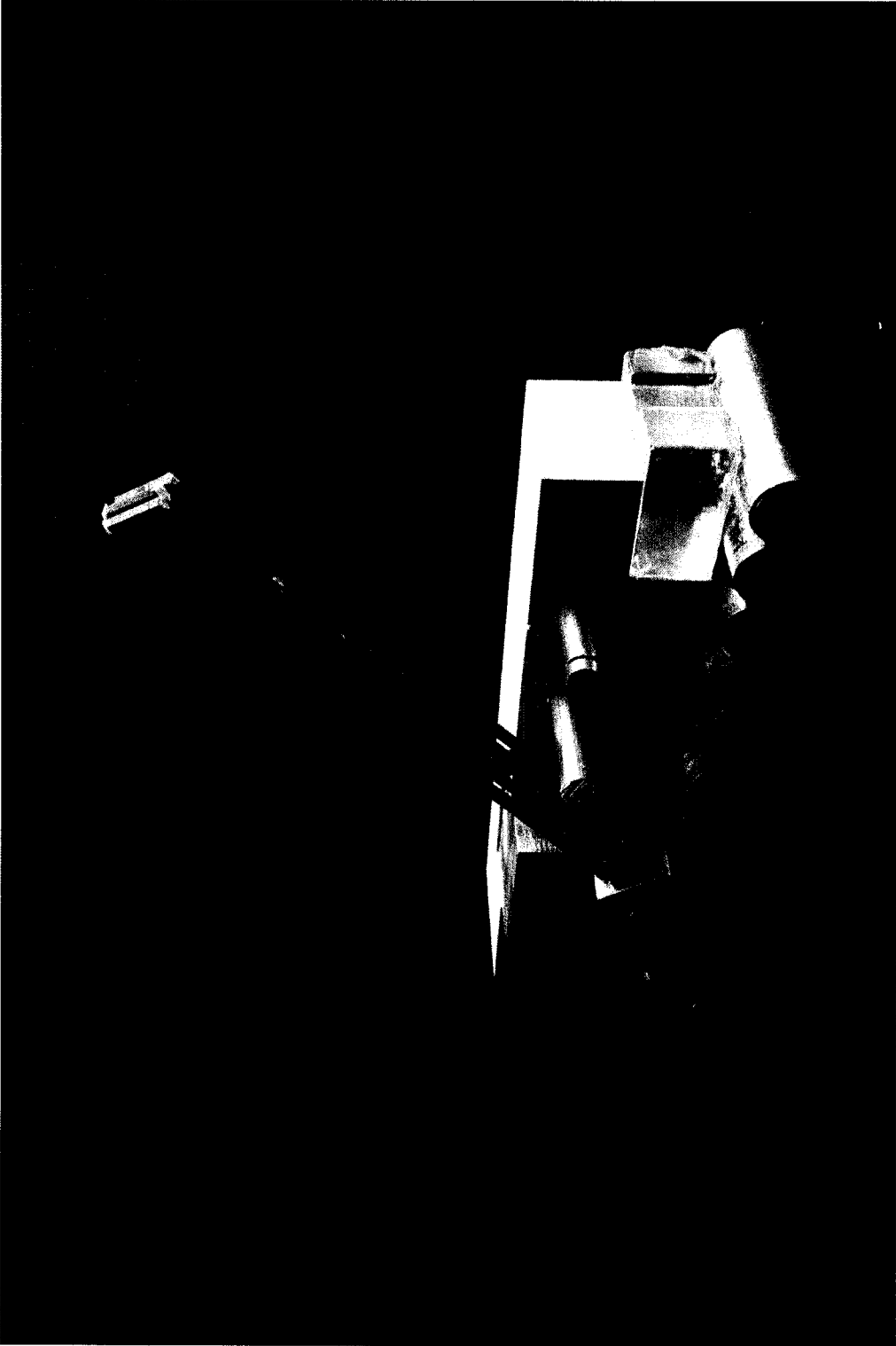


Story II - John and Christine - 1:50 Model - Model shows how the skin of the building could fold out to create another outdoor living space.

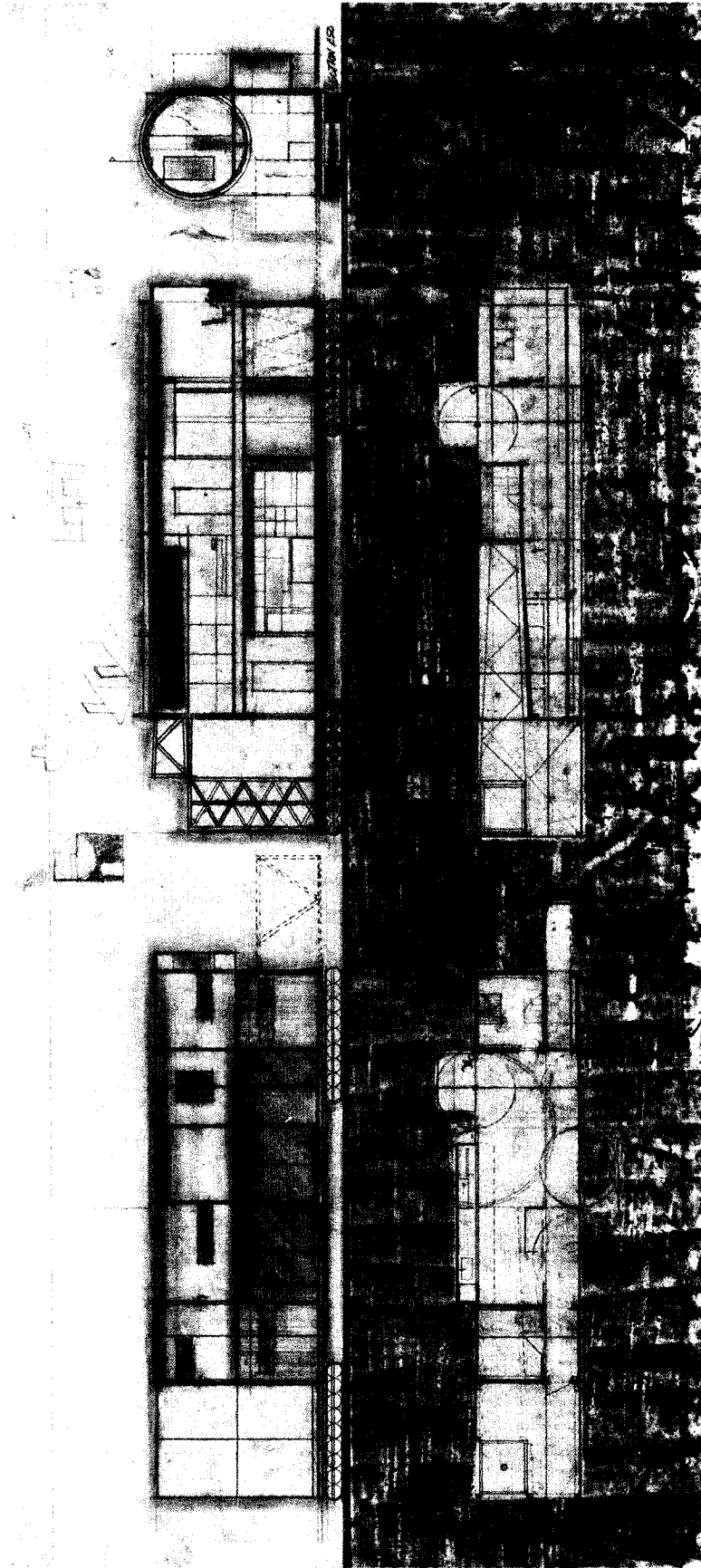
STORY III - CHUCK DERRINGER



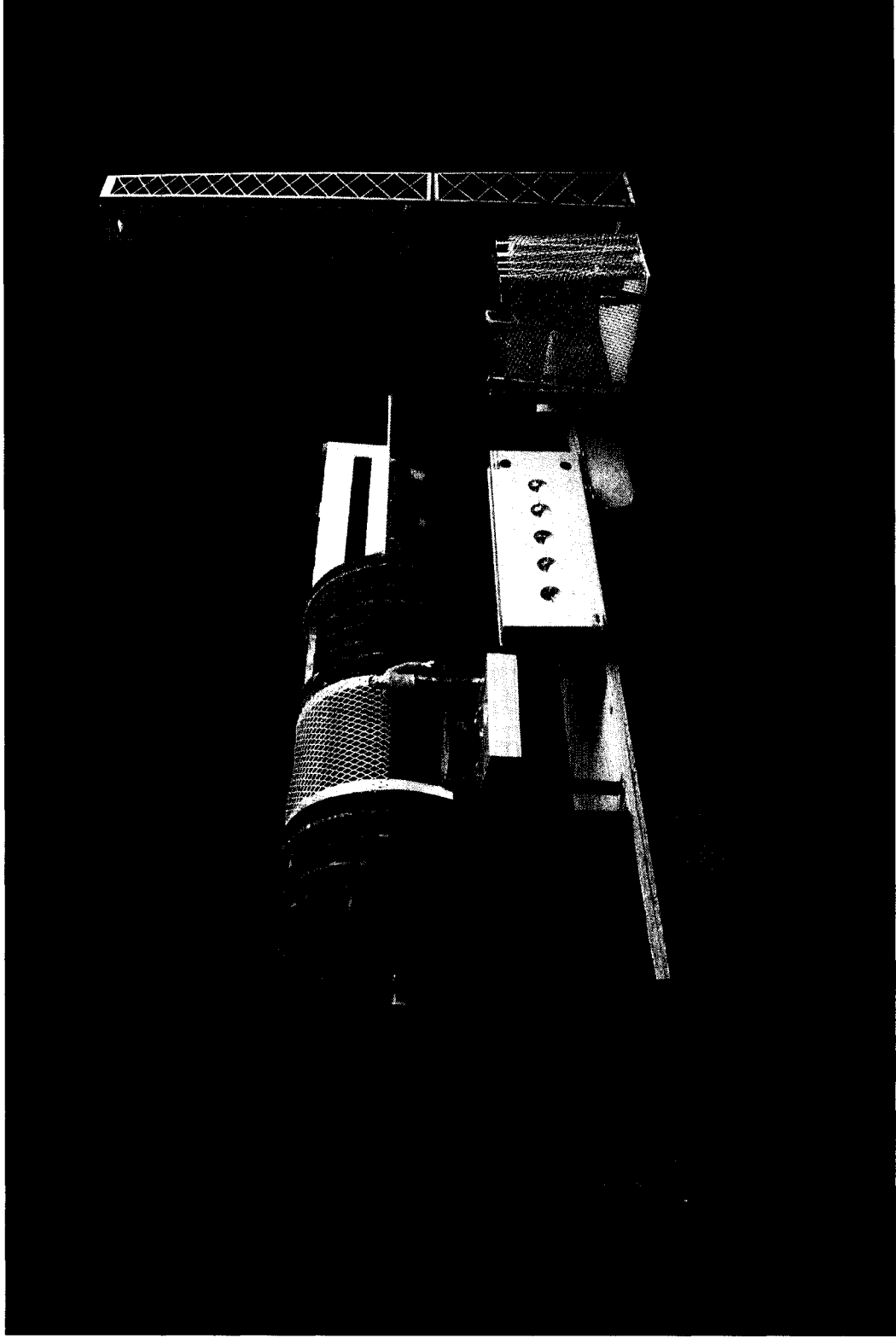
Story III Section through Jackknife Rig Collage - Drawing shows how the collage elements of a tank, bottle, rigging and storage come together.



Story III - Chuck Derringer - JackknifeRig Model - Distills idea of a removable work unit which contains storage and rigging operating on tank tracks.



Story III - Chuck Derringer - 1:50 Orthographic Drawings - Collage and models have led to design that incorporates a more private living space inside the tank which is held above by two solid steel buttresses on either end of the building which act as service cores.



Story III - Chuck Derringer - 1:50 Model - Model shows the movable parts of the lift, pulled out service core, rigging, and gangway.

SITE

The three proposals put forward have the ability to site themselves nearly anywhere. By accommodating the seasonal migrant program, these units have the ability to take their home with them. It is important however, to test these individual units in a larger community setting. Throughout the narratives, reference was given to a variety of community locations where these seasonal migrants could engage their community, whether in Arizona or in Lloydminster.

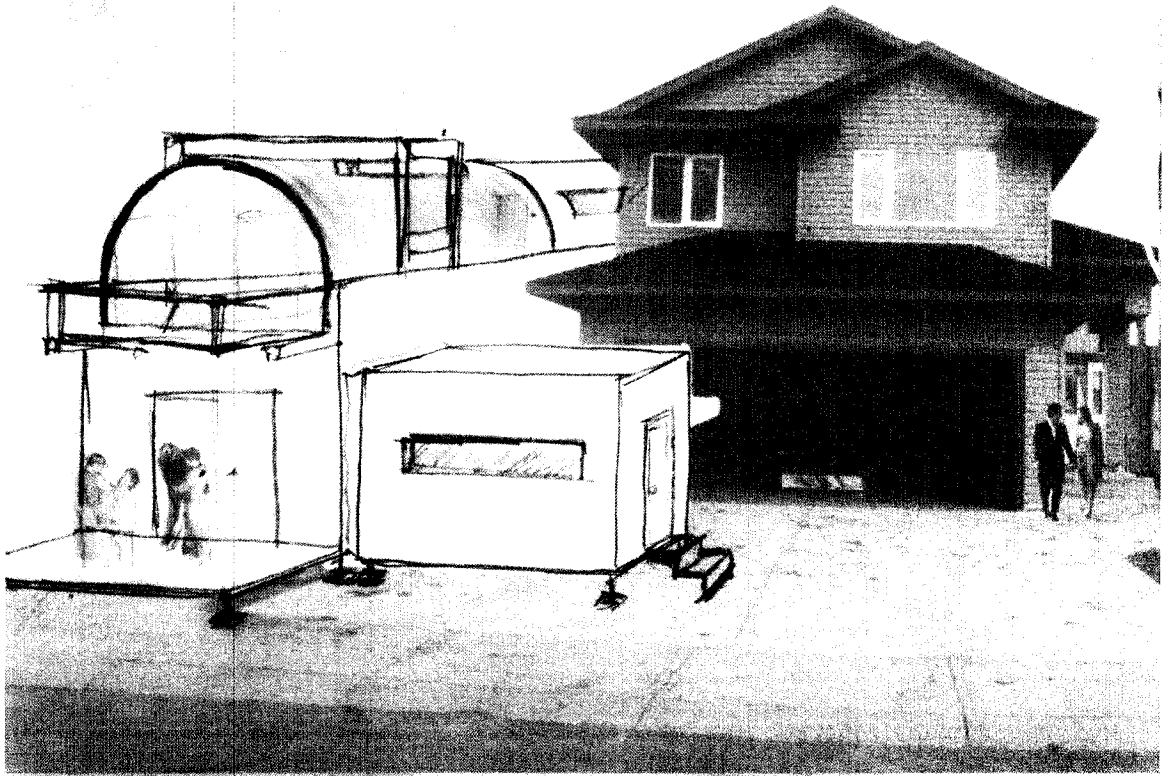
In Story I, Derek and Natalie are found in the Rocky Mountains somewhere in-between Lloydminster and Arizona. In Lloydminster they had just sold their suburban home to their daughter, but they would remain part of that home by parking their home next to their old suburban house. In this scenario there is a densification of the suburbs that allows for a heterogeneous community. This works both ways in maintaining social ties with the elderly and their families, but also providing independence from the family. The third location for Derek and Natalie is an old Staples store in Phoenix where their friends have reserved a spot for them to dock.

John and Christine in Story II, represent an older couple who choose not to partake in the seasonal migration. They are located in the old oil refinery attached to a large cooling tower. In this location there is more infrastructure and support for the elderly. At the base of the cooling tower is a clinic and pharmacy. Yet, the refinery doesn't become an isolated retirement home in the typical sense. Instead there are community skating rinks, thermal baths, and a community repair centre for agricultural equipment all linked by public transit.

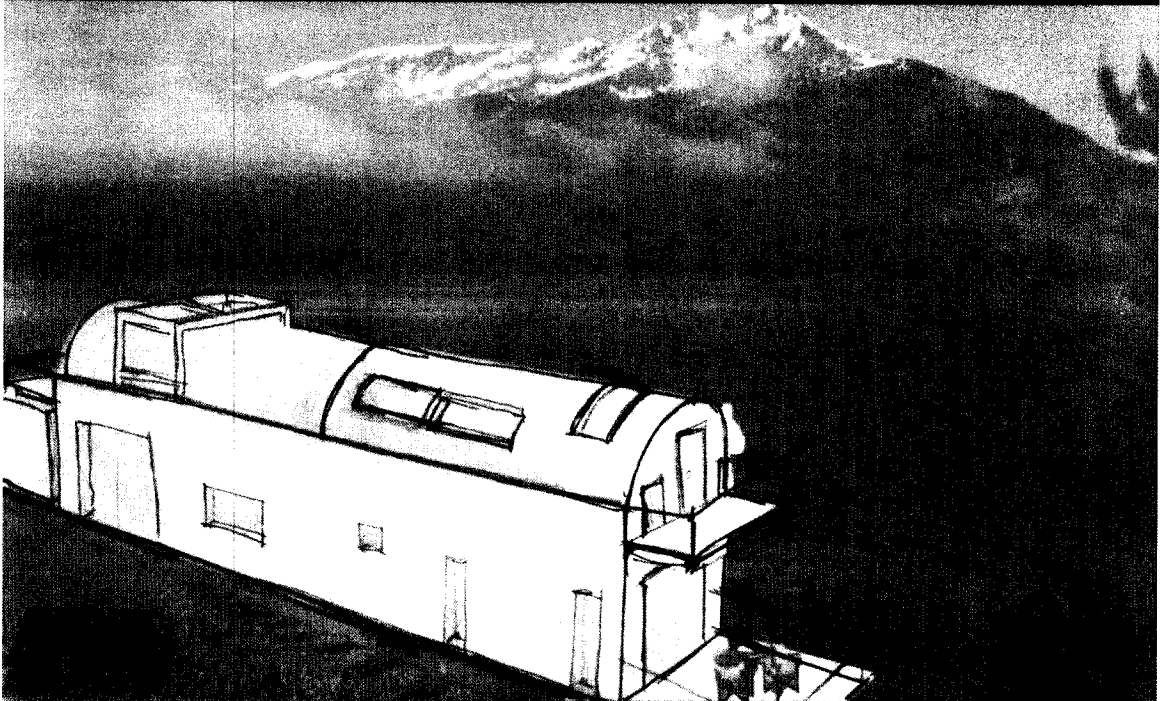
In Story III, Chuck Derringer represents the most mobile of all the characters described. His home is actually self-propelled over short distances, which allows him to participate in the community by drilling wells for geothermal installations. His home is located in the Wal-Mart in Lloydminster. Here he finds a community of similar people who he can socialize with and be supported by. Again, the program is not strictly retirement home, but a cross programming that engages the larger community; greenhouses, pub, café, skating rinks, farmers market, and other services that engage the larger population of Lloydminster.

It is this site that I chose to develop for this thesis. As all homes in the narratives are capable of connecting to a box store, and given the homogeneity of box stores, it seemed appropriate to test the idea of community in this location. Given the large scope of programming a box store it made sense to again draw from the narratives to provide both a program and a method of approach. The narratives provided objects, places, and program that were incorporated together through the method of collage. The collage proved to be a rich source of material and was explored further by modelling a section of the Wal-Mart. While it was beyond the scope of this thesis to see the entire Wal-Mart designed fully it is also not the goal. If large corporations do end up leaving these Wal-Marts and box stores abandoned, then there could be a more organic evolution of these large empty buildings. In the "Wal-Mart Evolution" drawing, there is an attempt to see how the introduction of one program, such as a community greenhouse, could spawn other inhabitants to lay claim to a part of these enormous stores and for a community to find a home.

MODELS IN SITU

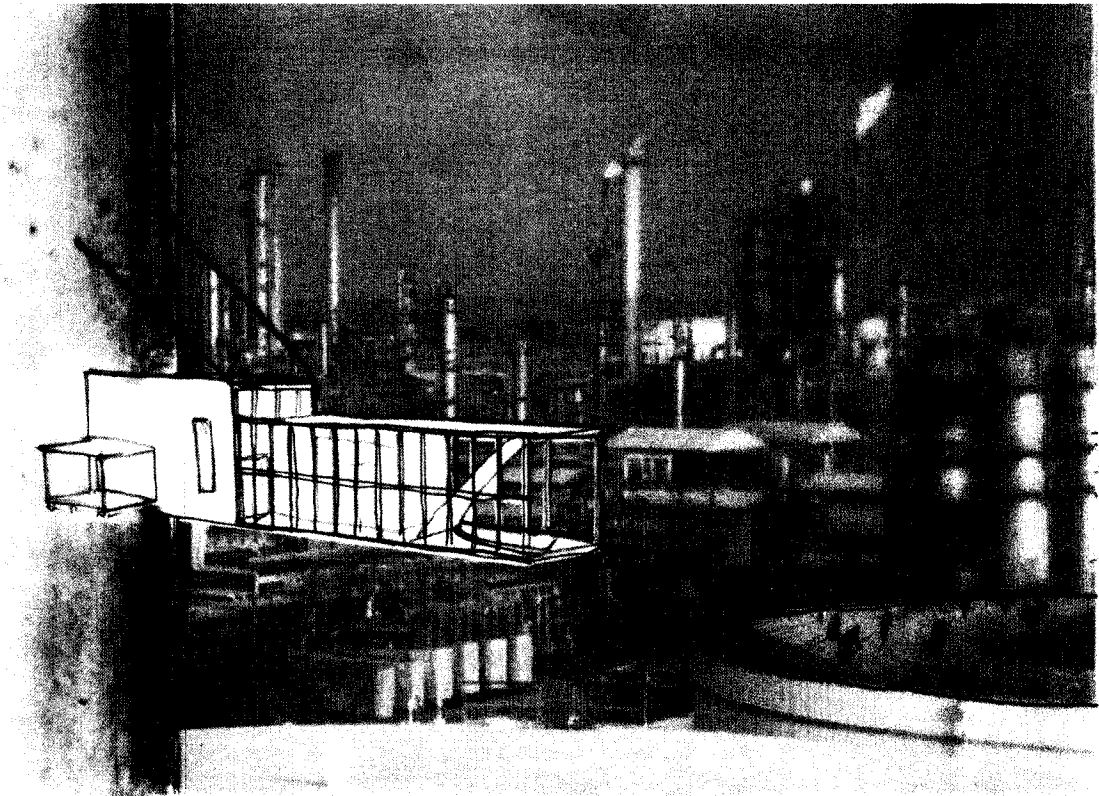


NATALIE & DEREK - 06.15.2060 - LLOYDMINSTER

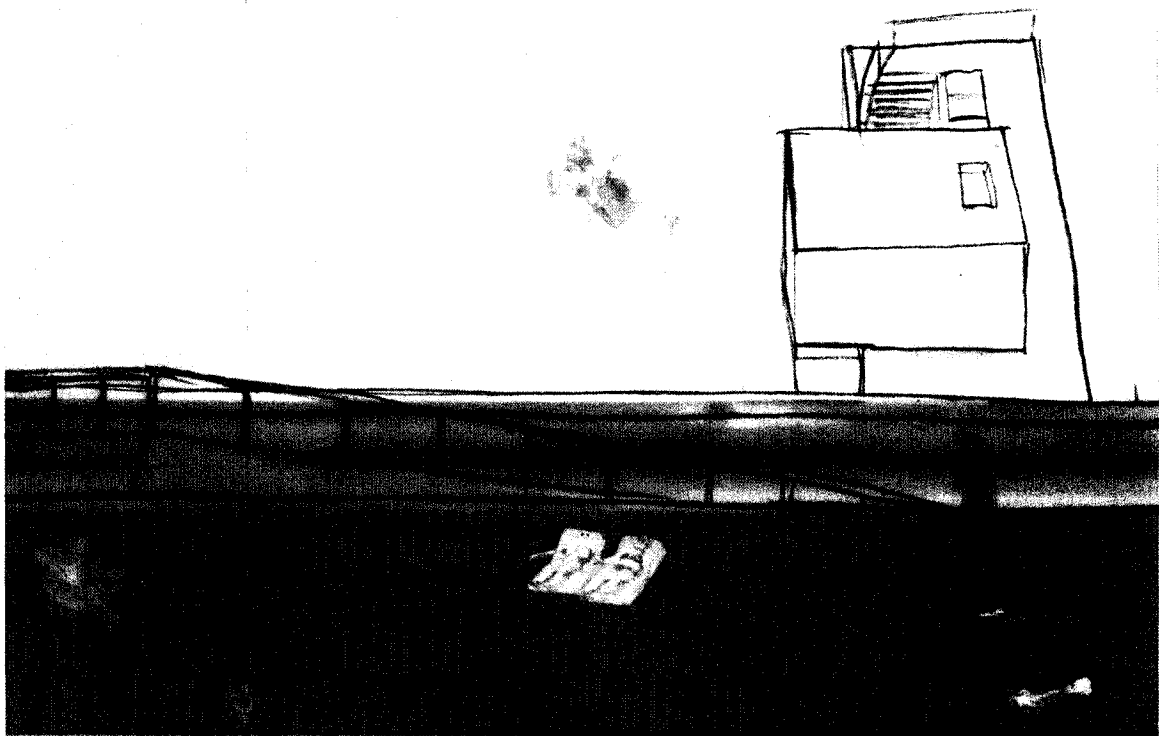


NATALIE & DEREK - 04.19.2061 - ROCKY MOUNTAINS

1. Lloydminster suburban extension and on the road in the Rocky Mountains

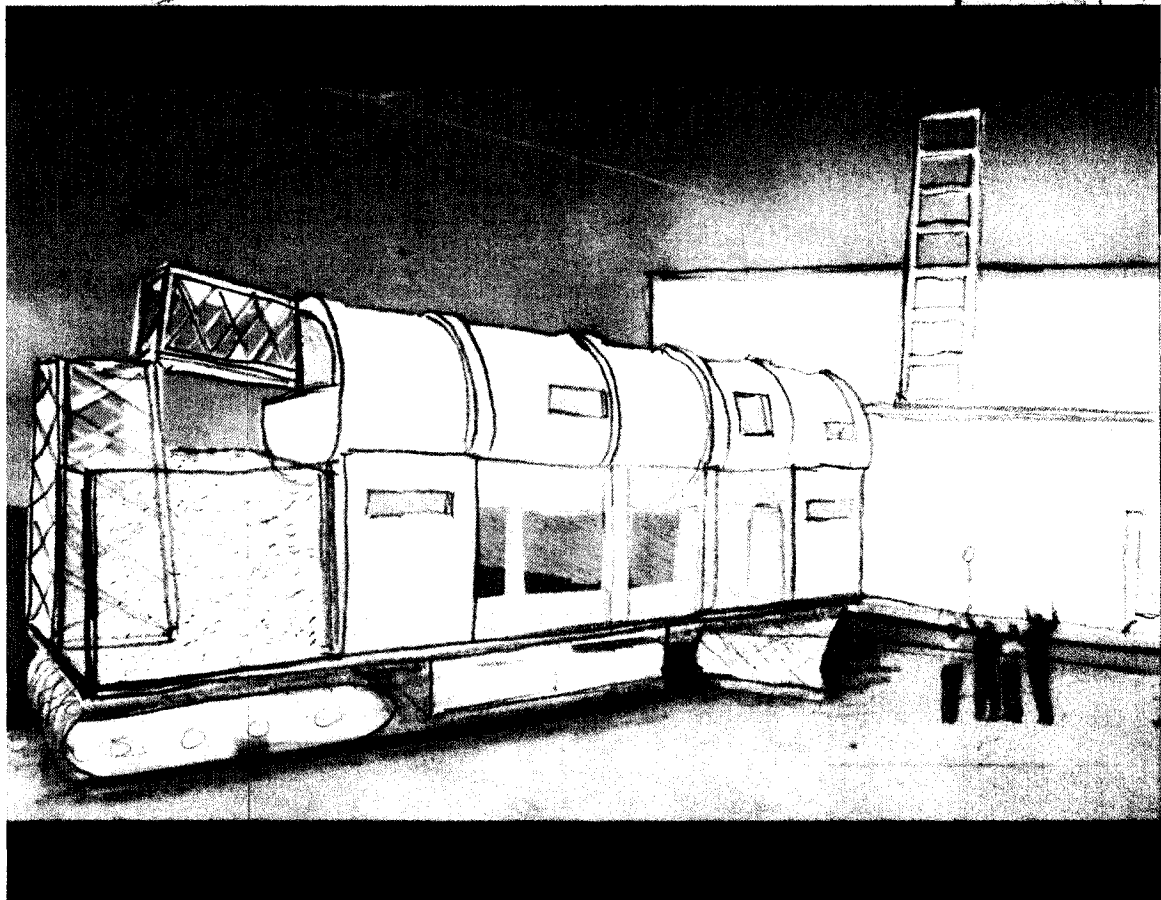


JOHN & CHRISTINE - 11.21.2061 - LLOYDMINSTER



JOHN & CHRISTINE - 05.01.2061 - SCOTTSDALE

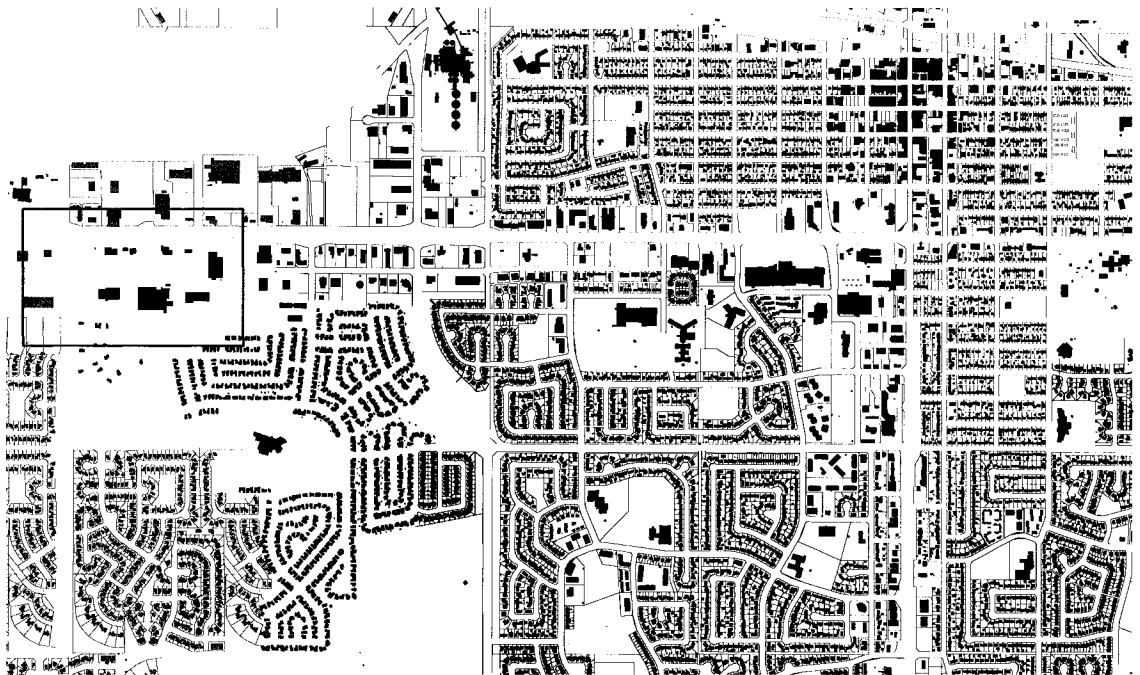
2. At the oil refinery in Lloydminster and in Scottsdale at the Staples Store.



3. At the Staples in Scottsdale and back at Wal-Mart in Lloydminster

RETURNING TO WAL-MART

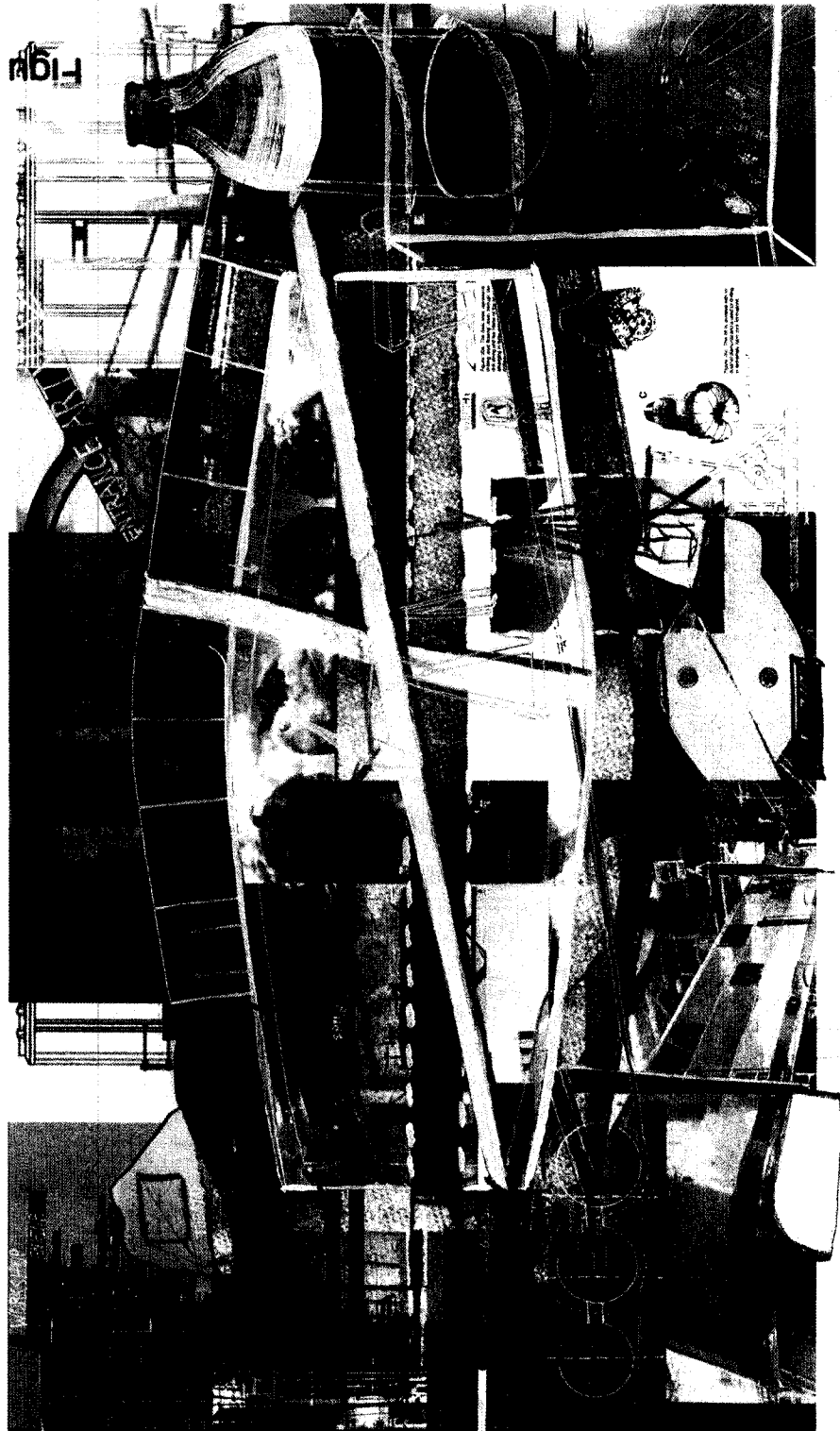
It is the Wal-Mart that I chose to develop. As all homes in the narratives are capable of connecting to a box store, and given the homogeneity of box stores, it seemed appropriate to test the idea of community in this location. Given the large scope of programming a box store it made sense to again draw from the narratives to provide both a program and a method of approach. The narratives provided objects, places, and program that were incorporated together through the method of collage. The collage proved to be a rich source of material and was explored further by modelling a section of the Wal-Mart. While it is beyond the scope of this thesis to see the entire Wal-Mart designed fully it is also not the goal. Imagining that large corporations do end up leaving these Wal-Marts and box stores abandoned, then there could be a more organic evolution of such large empty buildings. In the “Wal-Mart Evolution” drawing, there is an attempt to see how the introduction of one program, such as a community greenhouse, could spawn other inhabitants to lay claim to a part of these enormous stores as a way for a community to find a home.



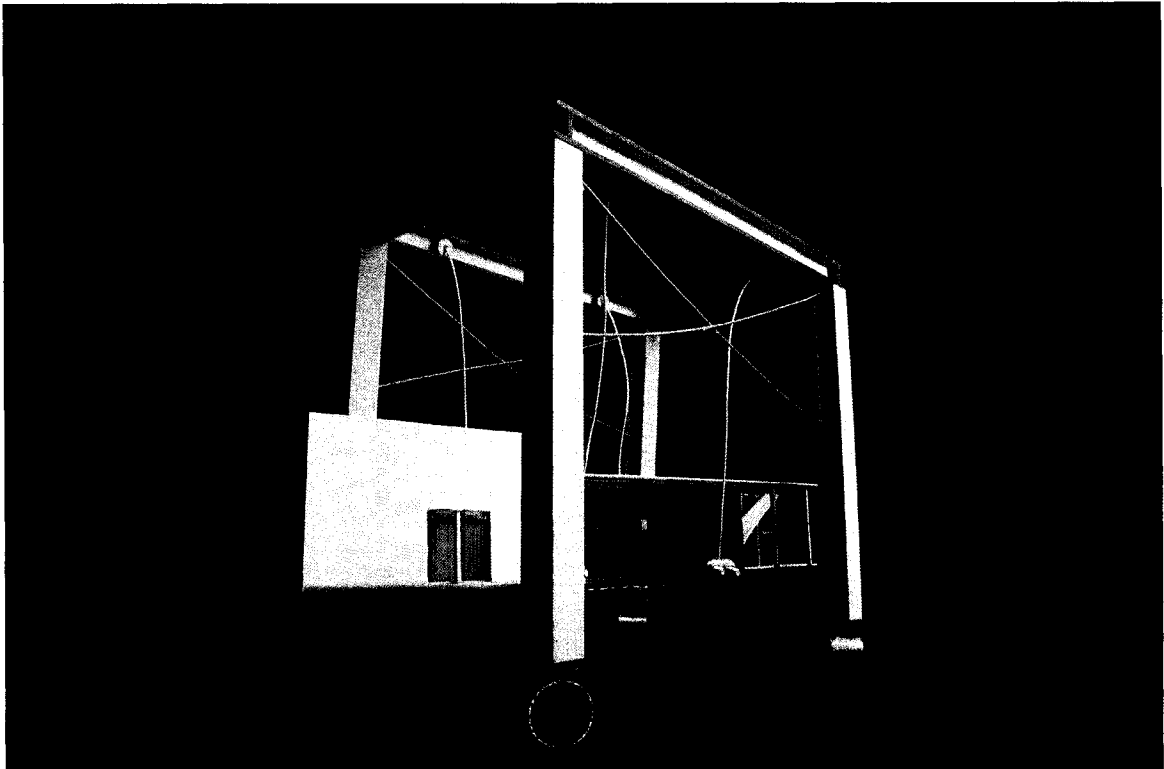
1:10.000 map of Lloydminster - Powercentre highlighted in red



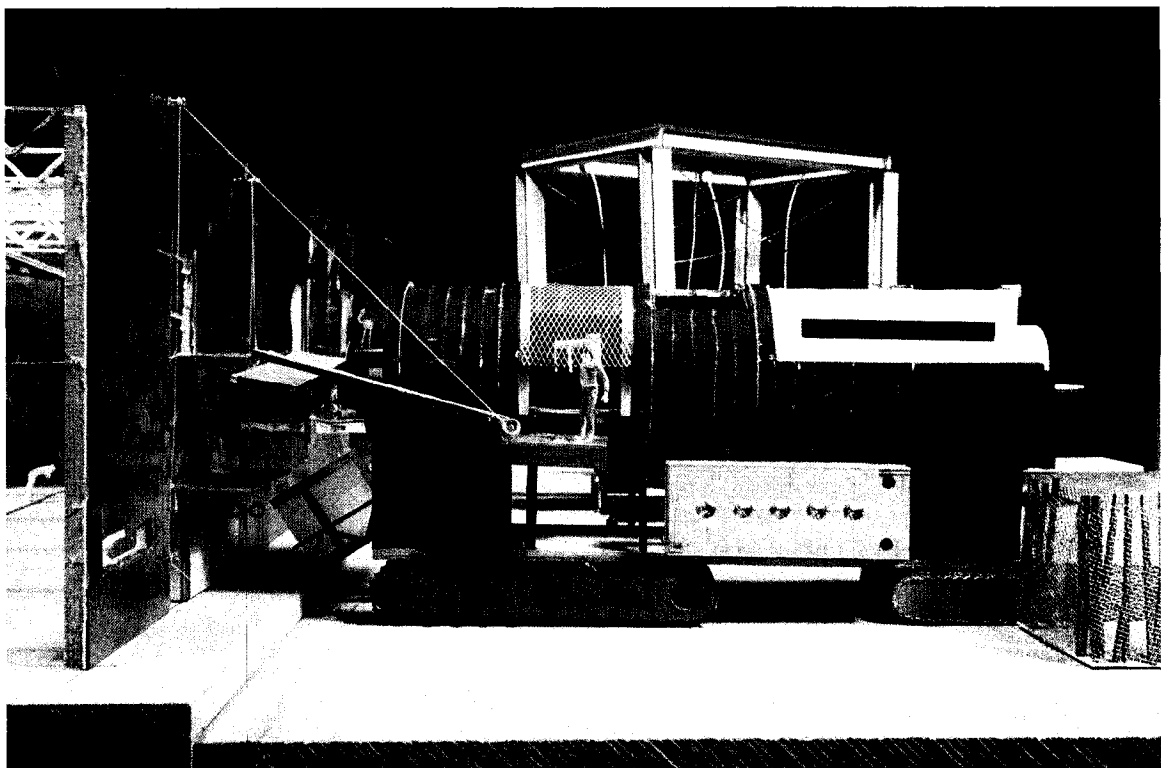
1:2000 map of Lloydminster - Wal-Mart highlighted in red



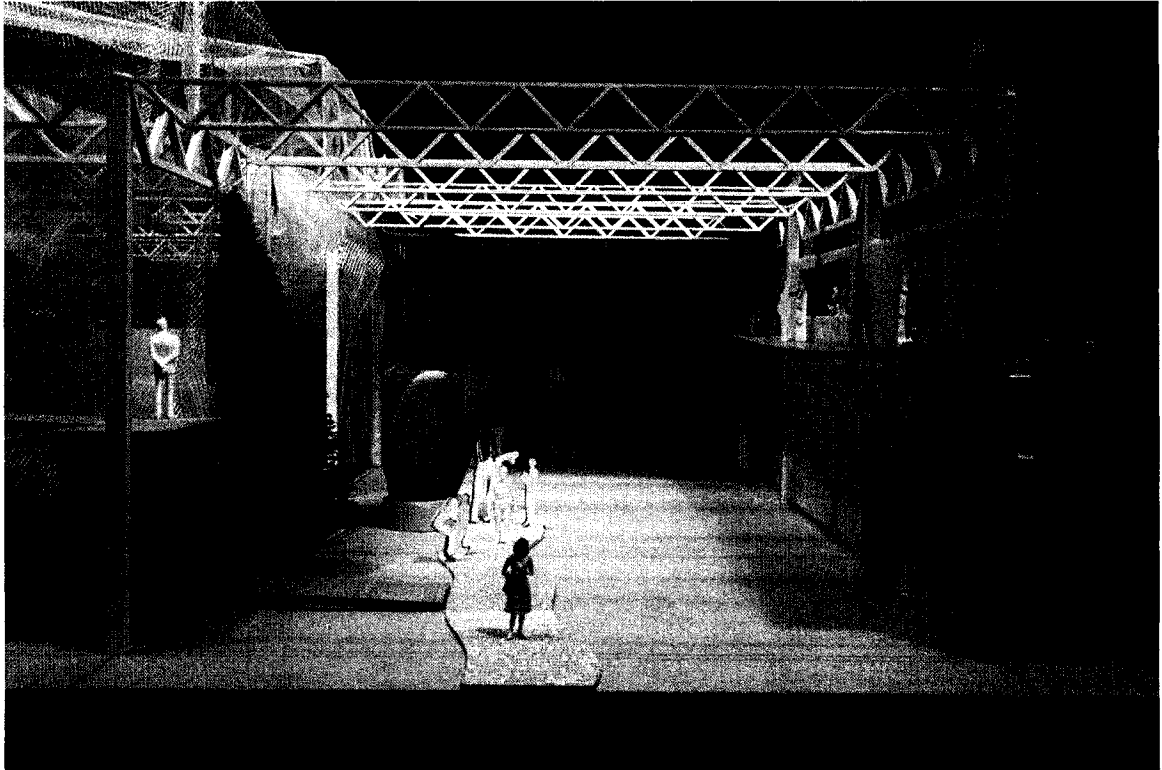
Wal-Mart Collage



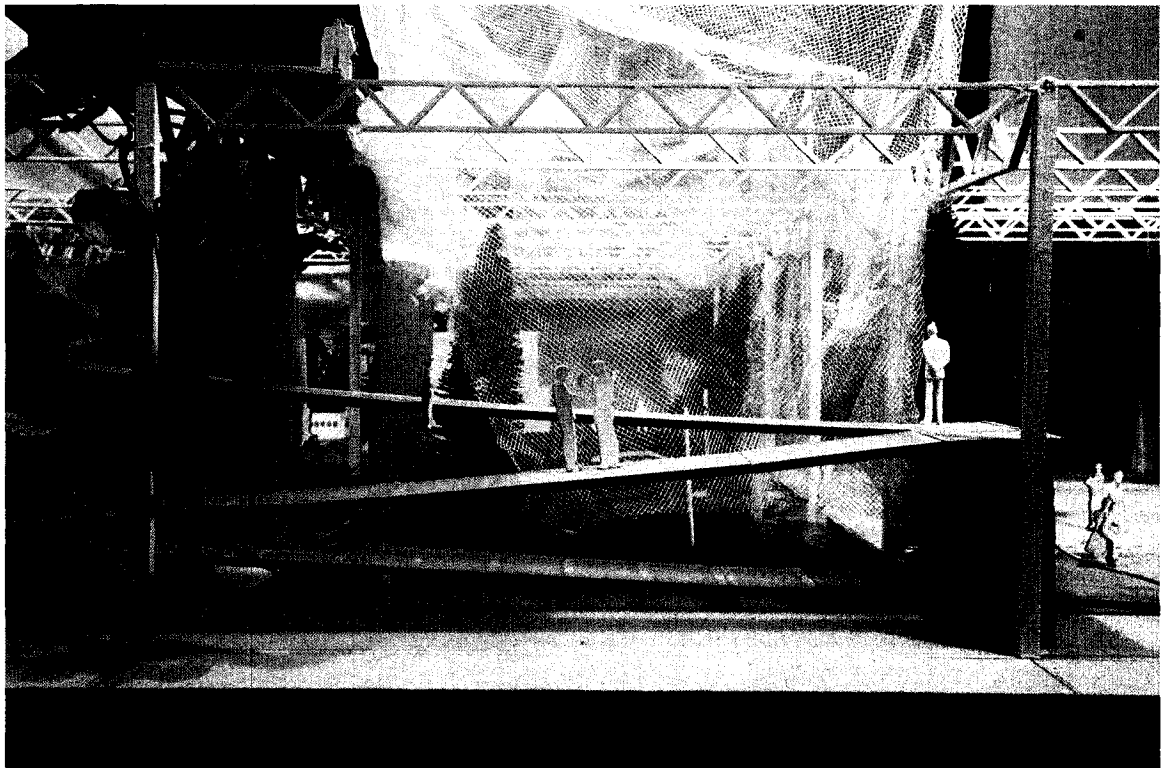
Gantry Crane



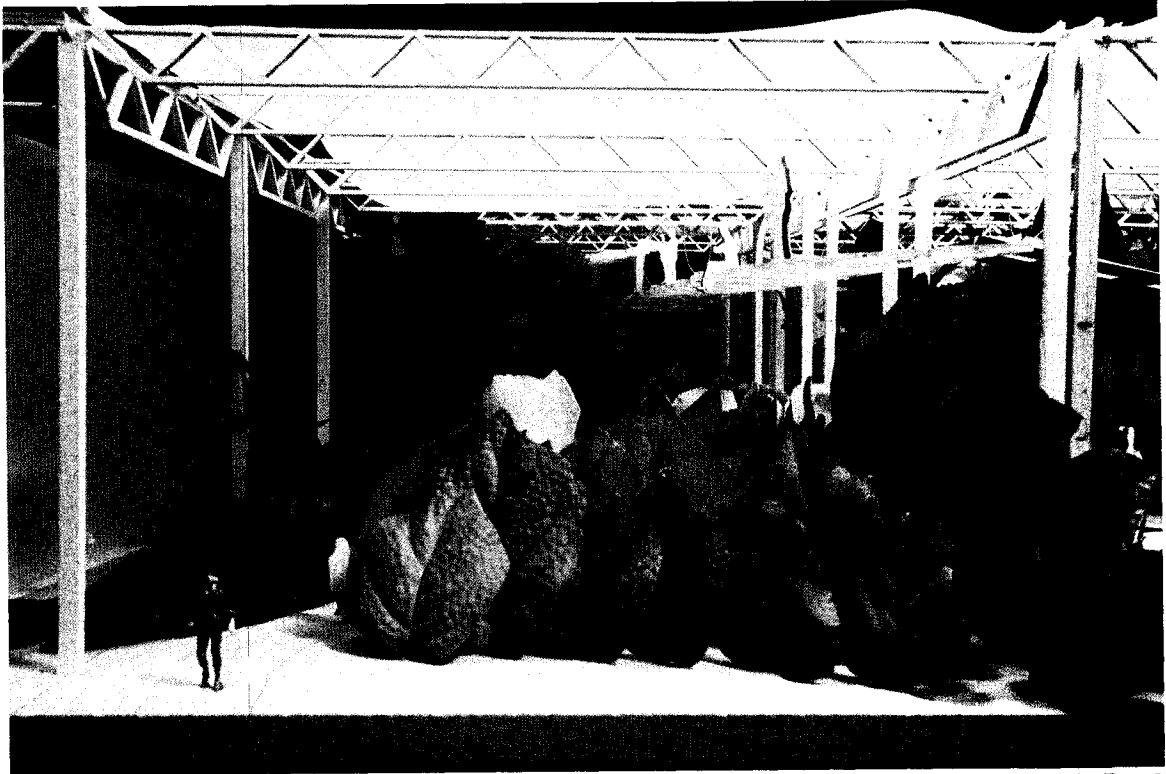
Wal-Mart Sectional Model - Bay 6



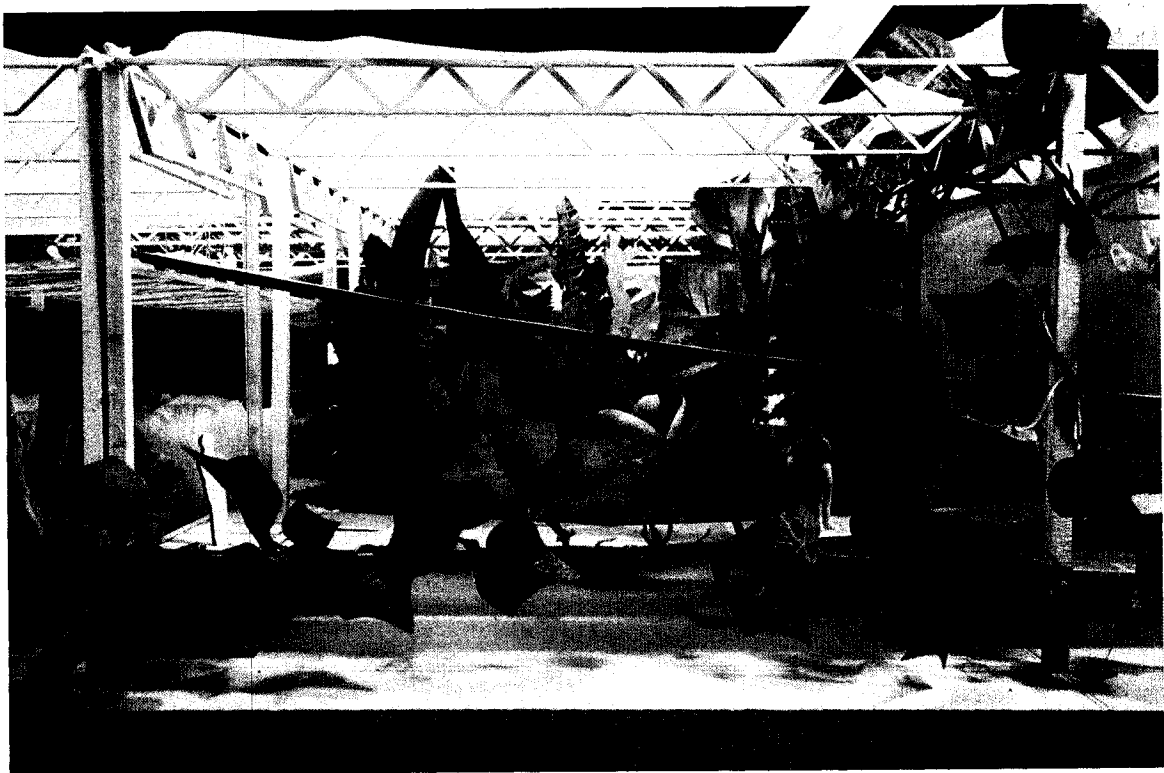
Wal-Mart Sectional Model - Bay 5



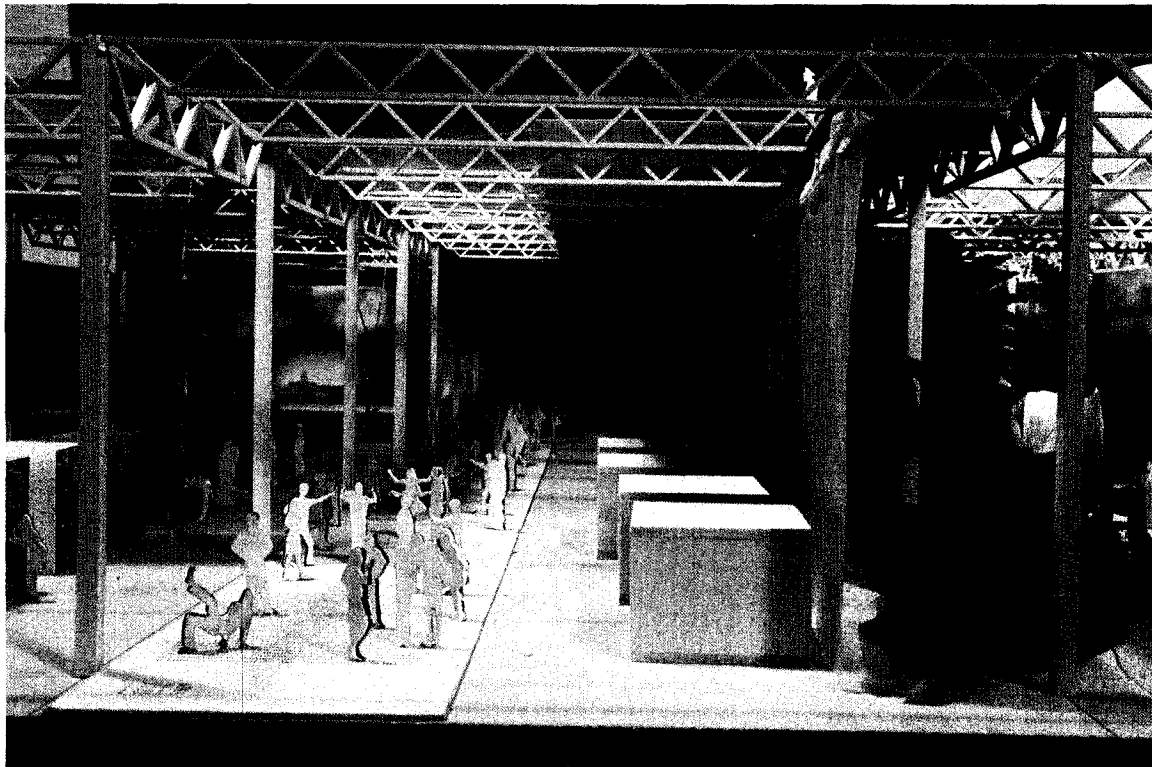
Wal-Mart Sectional Model - Bay 4



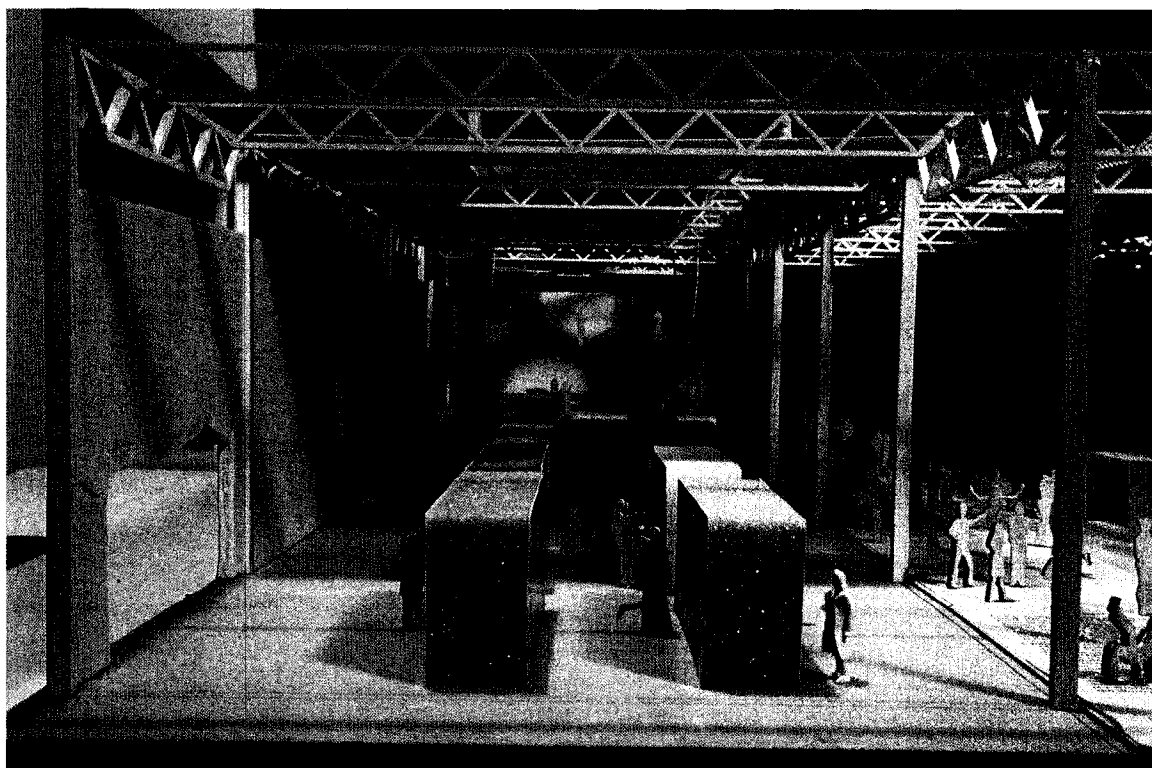
Wal-Mart Sectional Model - Bay 3



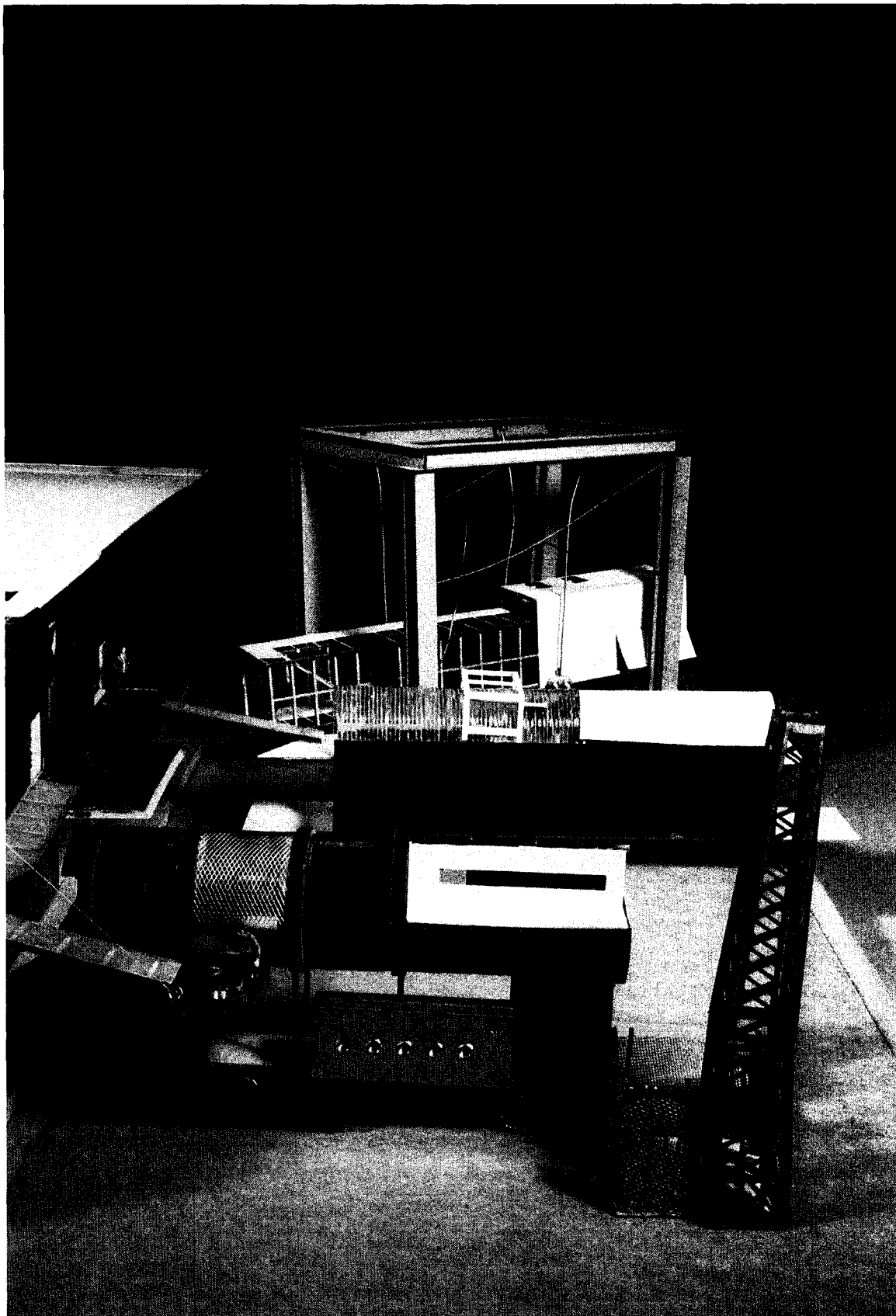
Wal-Mart Sectional Model - Bay 2



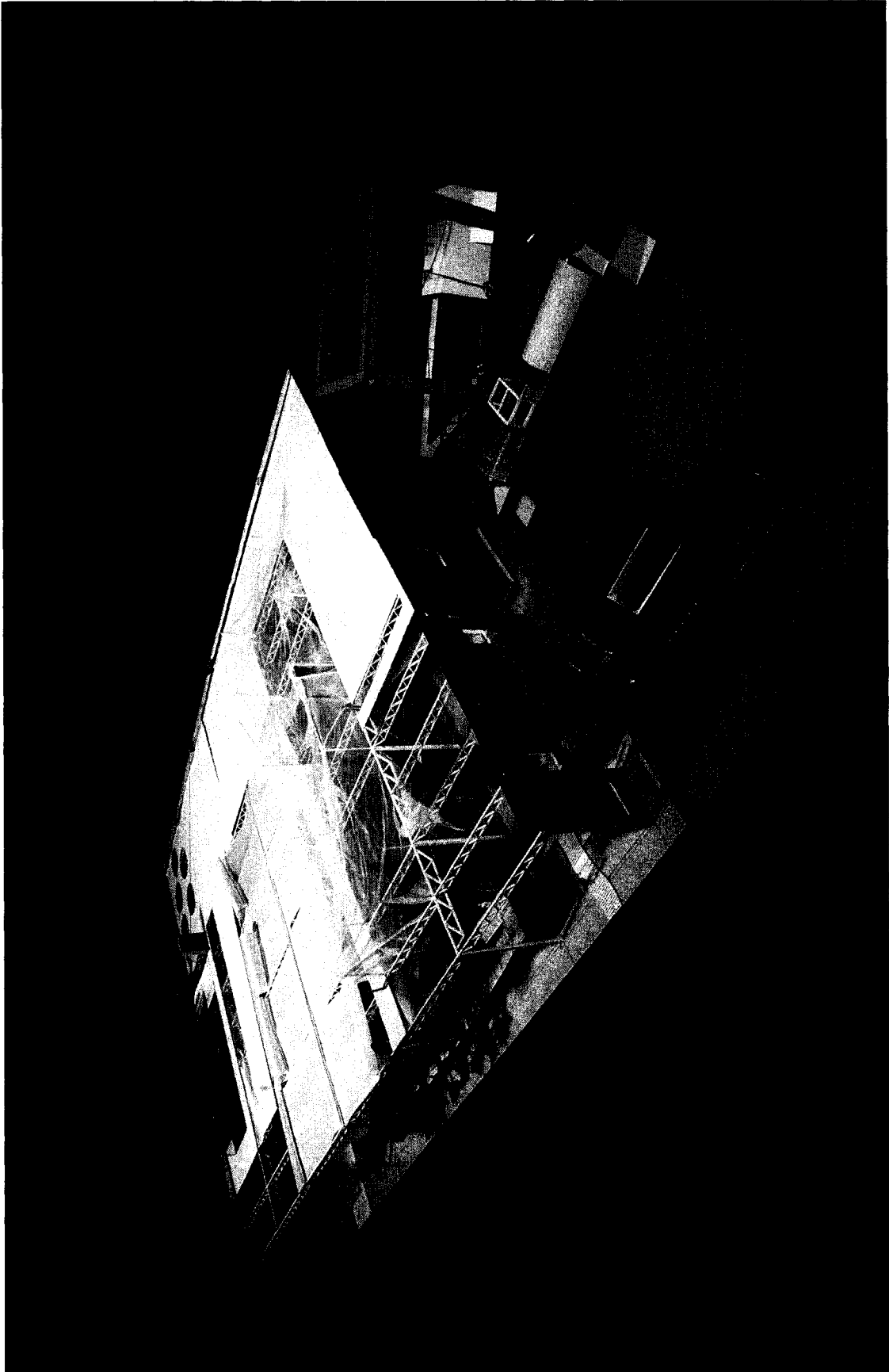
Wal-Mart Sectional Model - Bay 1



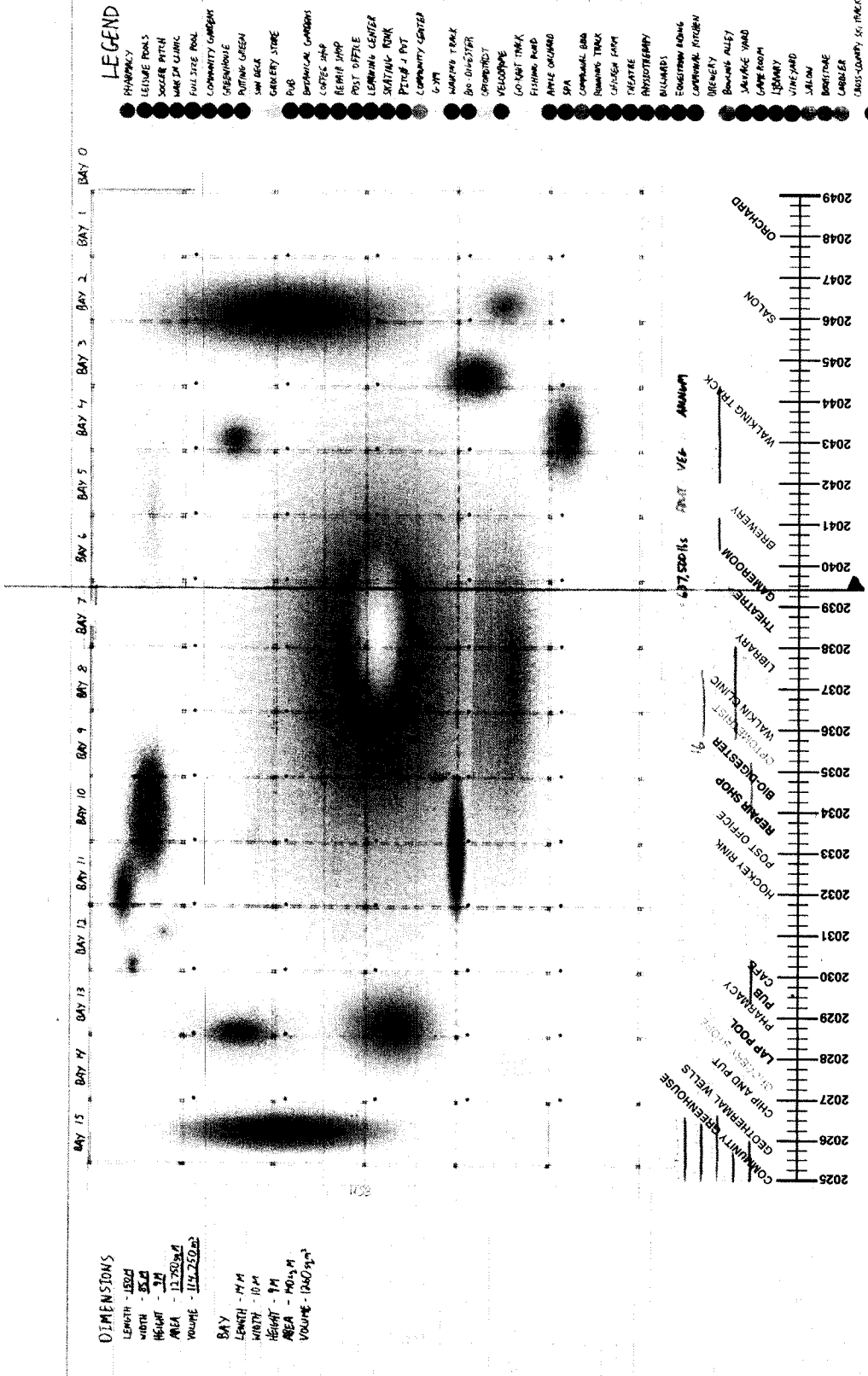
Wal-Mart Sectional Model - Bay 0



Docking Bay with Derek and Natalie's, John and Christine's, and Chuck's Home



Wal-Mart Sectional Model 1:50



Wal-Mart Evolution - Shown over a time period of 25 years this drawing looks at how the Wal-Mart's program could evolve based on the programs discussed in the narratives.

CONCLUSION

Though the future of Lloydminster is particular to its people and its place in the world, many small cities in North America share the issues of homogenous design and rapid growth that characterize this one. Immediate intervention should be taken to address these concerns, but it should be done with respect to our past and our future growth. Rossi argues that urban artifacts come to identify a city through their characteristics of individuality, locus, design, and memory. The buildings proposed in this thesis attempt to address those specifics of urban artifacts. Through the collage method the homes search for an individuality of architecture, but one that does not forget its past. Relics of the oil industry not only provide structure for new ways of living but pay homage to a past when there was oil. But what of the box stores such as Wal-Mart?

It is hard to imagine these buildings becoming urban artifacts. They lack every defining characteristic of an urban artifact defined by Rossi. Yet, there is so much possibility in these large stores, it is difficult to imagine a program that would not work within their walls. As Rossi writes, "The physical form of the past has assumed different functions and has continued to function, conditioning the urban area in which it stands and continuing to constitute an important urban focus" (Rossi, 1982:60). Certainly the physical form of these buildings will remain for some time, but it is not certain how they will be interpreted in the future. Will they become monuments of the past or will they simply fade away? As part of the fabric of the city, it seems appropriate that they become reintegrated and reimagined.

While this thesis attempts to investigate the future problems of Lloydminster through the use of narratives, it is also firmly rooted in the realities of the present day. By dreaming of the future, current concerns can be magnified and isolated for resolution. The artifacts

of the oil industry and an increase in the elderly population are known facts that can be predicted with some degree of accuracy. The aging population is a concern today and will persist in Canada's future. Elderly people are aging differently than the generation before them. They are more mobile, in better health and participating more in the community and paid labour force. Their homes and communities should accommodate these changes and facilitate these current and future trends.

Lloydminster faces significant challenges and this project does not claim to offer solutions for all of them. Instead, my aim was to critique current trends and envision an alternative to the present course. By offering thoughtful architecture, rooted in a specific place, this project recognizes that, as Rossi writes, "the beauty [of urban artifacts] resides both in the laws of architecture which they embody and in the collective's reasons for desiring them" (Rossi, 1982:126). There is an opportunity that exists in the artifacts of the oil industry. This thesis aims to envision these artifacts transmogrified as better homes, and better communities, "after the oil".

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