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# Flexible integration

Chun-Yi Wang

*University of Tennessee, Knoxville*

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To the Graduate Council:

I am submitting herewith a thesis written by Chun-Yi Wang entitled "Flexible integration." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Architecture, with a major in Architecture.

Mark Schimmenti, Major Professor

We have read this thesis and recommend its acceptance:

Scott Wall, Lydia Pulsipher

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

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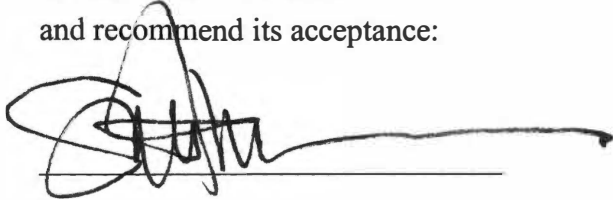
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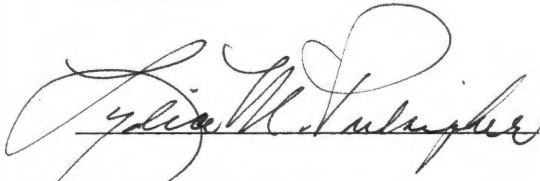


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and recommend its acceptance:



Scott Wall



Lydia Pulsipher

Accepted for the Council:



Vice Chancellor and  
Dean of Graduate Studies

Thesis  
2006  
.WLB

# **FLEXIBLE INTEGRATION**

A Thesis Presented for the Master of Architecture Degree  
University of Tennessee, Knoxville

**Chun-Yi Wang**

August 2006

**ABSTRACT**

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This thesis is an exploration of mixed-used and mixed-density housing through modular design to uncover the possibility of architecture creating a diverse and integrated community that respects the people, local culture and historical traditions. The program of the investigation is a co-housing community in the hurricane devastated city of New Orleans. The construction will be based on the modular design that will give the residents the flexibility of organizing spaces and give them participatory ownership of their home and community. The hurricane disasters will be investigated to understand their impact. The ethnographic information and the demographic trends will be used to understand the culture and the way people live in the area. The traditional shotgun architecture will be considered in designing the housing community. The modular housing of Donald MacDonald, the San Francisco earthquake houses of 1906, the Frank G. Mar housing/commercial complex in Oakland and co-housing complexes in the United States will serve as precedent and case studies.

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## CHAPTER1: THESIS STATEMENT

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I BELIEVE OM UNGERS ONCE SAID IN AN INTERVIEW THAT “IF THERE IS ONE SURE THING IN THE CAREERS OF ARCHITECTS AND URBAN PLANNERS IT IS THAT WE HAVE TO LIVE WITH OUR MISTAKES.” NEXT TIME AROUND, SOME WHERE ELSE, WE HOPE THAT WE LEARN FROM BEFORE AND MAKE BETTER CHOICES. IT IS NOT OFTEN WE GET A SECOND TRY TO CORRECT AN URBAN LANDSCAPE THAT HAS GONE WRONG FOR SO LONG AND IN SO MANY WAYS. THE HURRICANES KATRINA AND RITA WIPED OUT LARGE AMOUNTS OF THE BUILT ENVIRONMENT IN THE GULF COAST STATES AND EXPOSED THE SOCIO-ECONOMIC, URBAN AND ARCHITECTURAL PROBLEMS THAT WERE MUCH OF THE REGION’S HISTORY. HOWEVER UNFORTUNATE AND TRAGIC WERE THE DISASTERS, NOW WE HAVE A CHANCE TO RECONSTRUCT THE REGION WITH MUCH BETTER KNOWLEDGE, TECHNOLOGY AND HINDSIGHT. THIS THESIS WILL DEAL WITH THE QUESTION OF HOUSING, IN PARTICULAR MIXED-USE, MIXED-DENSITY HOUSING FOR A DIVERSE COMMUNITY THAT CAN PROVIDE A FOUNDATION FOR CIVIL SOCIETY. I ARGUE THAT BY USING MODULAR AND PRE-FABRICATED MATERIALS THAT ADHERES TO THE RHYTHMS OF NEW ORLEANS, AN ARCHITECTURE THAT IS FLEXIBLE, MOBILE AND QUICKLY CONSTRUCTED COULD BE CREATED TO ACCOMMODATE THE HOUSING NEEDS OF THE DISPLACED RESIDENTS, AND FURTHER MORE, SERVE TO INTEGRATE THE LARGE SCALE HOUSING DEVELOPMENT TO THE SMALLER SCALE NEIGHBORHOOD HOUSING STOCK AS PART OF THE PERMANENT HOUSING COMMUNITY THAT WILL REFLECT THE HISTORY, TRADITION, CULTURE AND SPIRIT OF

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THE PEOPLE. IN HER EFFORT TO KEEP THE CITY DRY, NEW ORLEANS MADE THE DECISION TO ERECT SERIES OF FLOOD WALLS ALONG THE RIVER. IN EFFECT CUT OFF THE CONNECTION OF THE CITY TO THE RIVER NOT ONLY PHYSICAL, BUT ALSO VISUALLY. THIS PROJECT WILL RECONNECT THE RIVER BACK TO THE CITY THROUGH A SERIES OF PARK AND GREEN SPACES.

## CHAPTER 2: INTRODUCTION

On the morning of August 29th, a hurricane named Katrina made landfalls just east of New Orleans, Louisiana. It was one of the strongest hurricanes ever to hit the United States with heavy rain and damaging winds over 145 miles per hour. The slow moving Katrina dumped massive amounts of rain into the area and pushed storm surges upwards of 20 to 28 feet high into the city. Over a million New Orleanians evacuated. By the end of the day on the 29th, most of the damage from the hurricane was from the strong winds with minimal flooding in the city. Not long after, the levees which protect New Orleans from Lake Pontchartrain and the Mississippi River were breached or undermined. Water rushed into the city and in short order covered over 80 percent of New Orleans. (fig.1) When the water finally receded, the death toll from the disaster stood at 1,322 (Architectural Record Special Coverage: After the Hurricanes, <http://archrecord.construction.com/news/katrina/damage-1.asp>). Much of the rich architectural legacy, including everything from beautiful historical buildings to traditional homes, not to mention the courtyards, gardens and parks, was destroyed. According to the U.S. Army Corps of Engineers, at least 160,000 houses will have to be replaced in New Orleans alone. (fig. 2)

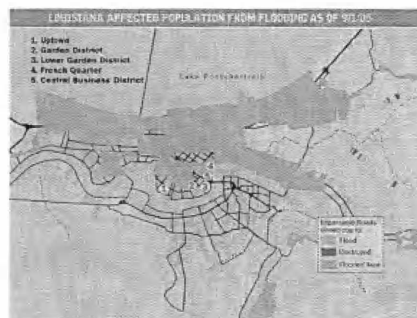


FIGURE 1: FLOODED AREA IN NEW ORLEANS



FIGURE 2: AERIAL OF NEW ORLEANS FLOOD

Now the daunting task at hand is deciding how

best to rebuild New Orleans. It is a particularly difficult question to resolve due to the incredible past of the city. Culturally New Orleans is unlike any other city in the United States with its romantic French, Spanish and Caribbean heritage. Socially it has long experienced great tensions between blacks and whites, rich and poor. Geographically it is at the mouth of the great Mississippi River, a delta formation that under natural conditions would flood and shift its patterns of multiple banks and streams on a yearly basis. Topographically it is under sea level and prone to floods. Climatically New Orleans is hot and humid. Economically it has the second largest port in the country. All these features create a tremendously complex and, at times, mysterious system that en toto is what we all know and love as New Orleans. People of vision are searching for ways to rebuild New Orleans without losing its historical identity while at the same time they are resolving through the rebuilding process, some of the long standing social problems the city faces.

Throughout history, cities have been created, destroyed, and recreated again. Lives have been lost, property destroyed and traditions affected by catastrophic human and natural events. In many cases, destroyed cities have been rebuilt, often in places that remained precarious, but sometimes, rebuilt cit-

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ies have surpassed their predecessors in livability and beauty. The unfortunate hurricane events of 2005 in New Orleans appear to have presented the city with the opportunity to create from the rubble of the old a new city that recaptures the traditional, historical, and cultural identity of the place and produces a better, more integrated, and healthier community.

At the same time, there is also the danger of wanting to rebuild, as fast as possible, what was lost while ignoring the need for sound urban and architectural design. The result could well be a rebuilt city that resembles nothing of the traditional ways, gives no historical reference to the past and does not improve social conditions. Uninspiring architecture could mean that a rebuilt New Orleans would simply blend in with the homogenized non-place of everyday America. Of course, it is not always the overt intension of the politicians, developers, builders and even architects to create such an environment, but after a major disaster when the need is great and outcry for a return to normalcy loud, it can be hard to take the time and care to develop proper designed rebuilding efforts. Sometimes even when care was taken with designs, unforeseen factors may preclude bringing the designs to fruition.

Often the hardest hit victims of the disaster

are the low-income people who are already living in substandard conditions and, after the disaster, have no means to rebuild their homes. They are the ones who need help the most. New Orleans is no different. From the coverage in the media reports, it was easy to see that the hardest hit of the New Orleanians were the poor and the black who were not helped to evacuate, and for whom little help is now available. They are the victims of not only Katrina, but also of longstanding poverty, social discrimination and segregation. The rebuilding process must address the problems of economic and social disparity among the citizens of New Orleans if the city wants to experience a true rebuilding and revitalization of not only its economy and built environment, but also of its human spirit.

### CHAPTER 3: NEW ORLEANS EARLY HISTORY

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Of all of the cities in the country, New Orleans was by far the most enchanting and magical. It was beloved by the residents and praised by visitors. La Nouvelle Orleans was founded in 1719 by Jean Baptiste La Moyne. The city later went into Spanish control and back to the French before the eventual purchase by Thomas Jefferson in The Louisiana Purchase of 1803. From the outset, New Orleans was a planned, not an evolved city. The French engineers laid out a gridiron plan facing the river long before the settlement was fully populated. Although the city of Washington D.C. was designed in a similar way, such attention to urban design was not common on the American frontier. New Orleans represented the new Europe with classical perfection on the barbarian shore (New Orleans, Lewis, 39). This early French influence was partially erased and replaced by Spanish architectural influences. The Spanish acquired New Orleans in the Peace of Paris in 1763 and ruled it until 1800, during which two great fires burned down most of the city. Much of what people associate with French New Orleans- ornamentation with ebullient cast iron and flashes of tropical gardens in interior courtyards are actually Spanish (New Orleans, Lewis 42). Both the French and Spanish were too preoccupied by their own troubled domestic affairs during the Eighteenth Century to promote a healthy colonization or to fully populate New Orleans, and as a re-

sult, there was a chronic labor shortage. Slaves were imported to fill the gap. By the end of the eighteenth century, over half of the city's population was black (New Orleans, Lewis, 41).

Under the Union, New Orleans grew from the fifth largest city to the second largest. Along with the population boom and economic success, New Orleans also had its share of social problems, just like any other large city of its time. In 1836, the city was divided into three self-governing "municipalities": the French Quarter, the white low-income area called Faubourg St. Mary, to where many of the non-Creole Americans moved, and the downtown Creole-cum-immigrant area where both black and white blue collar people lived. The infamous ninth ward lies in the heart of this third municipality (New Orleans, Lewis, 45). Historically, the social segregation between races did not necessarily result in geographic segregation. Many of the most affluent, elite whites in New Orleans lived along the great boulevards that were separated by smaller streets. (fig.3) The domestic servants for the elite whites were often poor blacks who lived behind the big houses sometimes on the same lot, more often just a few blocks away. One way to envision this residential pattern is as large "super blocks" with affluent whites living around the perimeter on grand boulevards, while



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poor blacks inherited the interior spaces .(Fig. 3) The black communities at the core of these blocks were small close-knit, nuclear units and extended family units. The dispersed clusters of black families still remain today (New Orleans, Lewis, 51).

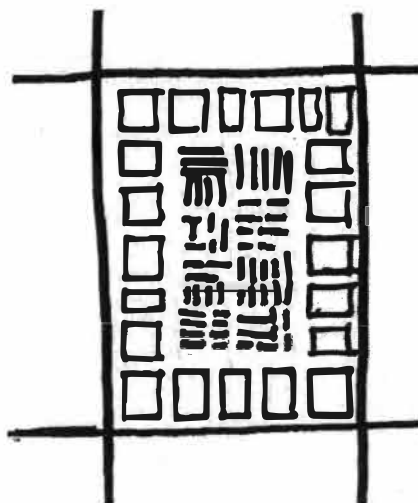


FIGURE 3: SUPER BLOCK DIAGRAM

**CHAPTER 4: DEMOGRAPHIC TRENDS**

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Beyond the elite, but nonetheless rare and class integrated neighborhoods or “super blocks” just described, New Orleans has long been a city where the classes and races lived in mixed residential patterns. For most of the New Orleans history, the blacks lived in the same housing stock as the poor whites, often coexisted in the same neighborhoods. At the docks, and during the building of canals, the blue collar whites and blacks worked side by side. Recreationally, New Orleans also displayed aspects of easy integration and multi-culturalism: black and white jazz and blues musicians played together, and the cuisine of New Orleans is a fusion of soul, Creole, French, African and Caribbean food customs. The architecture of the working class neighborhood is an expression of African, Caribbean, French and Spanish vernacular. The Creoles, originally defined as white settlers of Spanish or French heritage, born in the Americas, did not have the same oppressive attitude toward the black slaves as did some of the other native southern whites. These factors helped in keeping racial tensions at a manageable scale, but nonetheless, persons of color were not treated equally with whites.

It is not difficult to document the progression of racial discrimination and social separation in New Orleans. When the Wood Pump was invented in

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1913, New Orleans suddenly had the ability to drain the swamps and to make much more land available for residential development. Post WW II, highways opened up neighboring areas for suburbanization that were not previously accessible. Whites began to move away from the overcrowded French Quarter and away from the blacks and other immigrants. For the first time racial segregation took on geographic aspects as middle class whites moved to subdivisions up-river on slightly higher ground.

The Supreme Court case of *Brown versus the Board of Education*, despite the intent to desegregate school systems, further increased residential segregation in New Orleans. Wealthy whites, not wanting their children to attend the same school as the blacks, enrolled their children in private schools. The Roman Catholic Church, particularly strong in the New Orleans area, also created schools for their white parishioners. Mid- and even lower-income whites moved into predominantly white neighborhoods where there were only a few blacks in the schools. The blacks were left to live in the center city and on the flood-prone lands along the swampy landscapes where the infrastructure was generally poor and the schools among the worst in the nation. As white flight continued up-river toward the old vacation ground of Lake Pontchartrain, the small black settlements began

to merge together, coming to resemble what in the North might be called a “super ghetto” (New Orleans, Lewis 50-54). As in so many other American cities, the white flight fueled suburban sprawl, racial segregation, and inner-city poverty, meanwhile costing the taxpayers money and draining political power away from the city to the suburbs. The inner city became progressively poorer; the built environment sank into dilapidation and crime. The less fortunate became further segregated from the rest of society. The only exception that kept center city New Orleans from falling into the complete urban decay that plagues other large cities was the economic draw from millions of visitors coming to experience the history, traditions and characteristics of the French Quarter and Garden District.

In 1941, New Orleans built the nation’s first housing project. It was called the Iberville Complex, located at the former site of Storyville, an ancient center of prostitution and illegal gambling. Iberville is a three-story brick structure of 850 units, with plenty of open space and grassy courtyards shaded by large oaks. Architecturally it was a well designed and pleasant place to live. But it was originally racially segregated for white economic refugees of the city. By the 1960s, about one dozen housing projects were built when the Supreme Court ordered the desegrega-

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tion of federally financed housing projects. When the blacks moved in, all of the whites moved out of the white housing projects. These projects have become the center of the city's most desperate and hopeless poverty, and fertile ground for social disintegration. Police statistics show that they have the city's highest rate of crime (New Orleans, Lewis, 133). Among the factors that contribute to the desperate situation in New Orleans housing projects is the separation of these projects from the main stream New Orleans society. They were purposely located away from middle class New Orleanians so they would not have to experience the many negative sides of these projects. The city also did little to assist the poor and the disadvantaged to raise themselves out of their unfortunate circumstances. The projects were for the most part, just storage facilities, designed and constructed without thoughts to traditional culture, community building, or accommodating to local ways of life and without attention to how architecture could lift human spirits and offer safety to the residents. The situation progressively worsened, and in 1990, the housing projects in New Orleans were considered by the federal government a failure.

The problem with prolonged segregation of the disadvantaged is when all people see around them is the same desperate hopelessness without ever having

interaction with the outside world, they grow weary, distrusting, angry, rejected and may themselves engage in inhumane behavior. The negativity resonates and magnifies and with each passing day, you feel less and less as a human being and more as someone that is insignificant. Often the unfortunate result is that you no longer values and respects others as people who have rights and feelings, thus breeding anti-social and violent behaviors. This is why the crime rates are so high in these segregated areas. On the other hand, the white residents living in segregated circumstances who are more privileged, do not experience and see the inequity and the suffering of the disadvantaged. They have no idea that there is a major problem with their society. They see the problems as something far away from them. Remarkably, the attitude they have towards the disadvantaged is one and the same with that of the disadvantaged: a lack of respect and empathy. These attitudes were manifested at the onset of the hurricane disaster when little assistance for evacuation was offered to the center city residents. The reconstruction of New Orleans must allow for architecture and community design that promotes integration of all diverse group of the society.

The Brookings Institution report in October 2005, *New Orleans After the Storm: Lessons from*

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the Past, a Plan for the Future, states that in year 2000, metropolitan New Orleans had a population of just over 1.3 million, of that about 500,000 residents were in the city limits. In the time frame between the years 1970 to 2000, the city of New Orleans actually lost over 109,000 people, as the people moved to the suburbs. This represents an almost 20 percent decentralization of the area. Employment patterns reflected the population change. Since 1970, the city has seen 3 percent job loss (11,000 jobs), while in the surrounding parishes' job growth mushroomed. The predominantly white Jefferson Parish had a 157 percent job gain (166,000 jobs), and St. Tammany Parish had a 431 percent job gain (69,000 jobs). Since 2000, the overall job growth for the metropolitan area was an astonishing low one percent. Two-thirds of the metro's black population lived within the city limits of New Orleans even though the city contained just 36 percent of the metropolitan region's population. In the same time frame of 1970 to 2000, the economic structure of New Orleans experienced a significant change. The higher paying manufacturing sector declined by 23 percent (the national average of only 3 percent). Meanwhile, the lower paying service sector increased by 136 percent, this had some serious repercussions for New Orleanians: one is the loss of manufacturing jobs, which pay 62 percent higher than the service jobs and the other is that low paid

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service proliferated while good paying jobs open to individuals without a college degree shrank.

Of all of the areas suffering from the hurricanes, the predominantly black parts of Orleans Parish were the hardest hit. Over 105,152 out of 352,849 residents in Orleans Parish did not have access to a car. This meant that they were most likely to use public transportation to get around. Orleans Parish also has over 54 percent rental rate and 30 percent poverty rate. Of all the families in Orleans Parish, 43 percent consisted of children with single parents. The design implications of these demographic data suggest that consideration should be given to an inexpensive and efficient public transit system, and to mixed-used, mixed-density residences to bring together not only people with different social and cultural experiences but also to create different job opportunities. Open green park and recreation areas are needed not only for children to play, but as a democratizing space where people from all walks of life can meet, enjoy each others company, recreate and be in touch with nature. A strong commitment to the public school system will give the children, as they grow to be adults, choices to make regarding their direction in life. Furthermore, an aggressive, affordable housing policy will encourage ownership responsibility to the residents. All these strategies depend on the



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existence of a comprehensive master plan with flexible architecture designs that foster a healthy community.

**CHAPTER 5: ETHNOGRAPHIC INFORMATION**

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IN MANY OF THE WORLD'S CULTURES, FAMILY STRUCTURES ARE PATRIARCHAL WHERE THE POWER AND DECISION MAKING RIGHTS ARE PASSED ON FROM FATHER TO SON. WOMEN ARE EXPECTED TO OPERATE WITHIN THE DOMESTIC SPHERE OF HOUSE KEEPING AND CHILDREARING WHILE THE MEN CONTEND WITH ACTIVITIES IN THE WIDER WORLD OF HUNTING, DOING BUSINESS AND MAKING MANY DECISIONS CRUCIAL FOR THE FAMILY. THIS IS NOT SO AMONG THE BLACK FAMILIES OF NEW ORLEANS, WHERE FAMILY AND EXTENDED-FAMILY CLUSTERS TEND TO BE Matriarchal. THIS FAMILY DEVELOPMENT IS THE LEGACY OF THE SLAVERY TRADITION. ACCORDING TO ANTHROPOLOGIST, MUNRO EDMONSON, AUTHOR OF *THE EIGHTH GENERATION: CULTURE AND PERSONALITIES OF NEW ORLEANS NEGROES* , IT IS THE MOTHER THAT HOLDS THE POWER IN SUCH FAMILIES. DURING THE TIME OF SLAVERY, BLACK MEN AND MALE CHILDREN WERE MOST VALUABLE DUE TO THEIR ABILITY FOR HARD LABOR. OFTEN FAMILIES WERE REPEATEDLY BROKEN APART WHEN MALE SALVES WERE SOLD AND TAKEN AWAY FROM THEIR HOMES OR DIED FROM OVERWORK. BLACK WOMEN WERE EXPECTED TO NOT ONLY WORK IN THE FIELDS AND ATTEND TO DOMESTIC CHORES BUT ALSO BREED MORE SLAVES. SELDOM COULD A BLACK FEMALE REMAIN WITH THE SAME MATE FOR HER ENTIRE LIFE TIME. MORE OFTEN SHE WAS FORCED TO BE WITH MANY MEN WHO WOULD COME AND GO AT THE MASTER'S WHIM. THUS, IT WAS THE FEMALES WHO REMAINED CONTINUOUSLY AT HOME AND WERE RESPONSIBLE FOR

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THE WELL BEING OF THE FAMILY. TODAY, NEW ORLEANS MOTHERS ARE EXTREMELY PROTECTIVE AND CONTROLLING OF THEIR DAUGHTER'S LIFE, BECAUSE IN THE END, IT IS THE DAUGHTERS WHO WILL TAKE CARE OF THE AGING MOTHERS IN THEIR TWILIGHT DAYS. WHEN IT COMES TO MARRIAGE, THE MOTHER IS VERY INFLUENTIAL IN WHICH SUITOR THE DAUGHTER PICKS, BECAUSE IT IS IN THE MOTHER'S BEST INTEREST TO HAVE HER DAUGHTER MARRY SOMEONE WHO CAN BEST PROVIDE FOR HER LATER. THE BOND BETWEEN MOTHERS AND DAUGHTERS IS EXCEPTIONALLY STRONG. IT IS NOT UNUSUAL, IN FACT COMMON, FOR A MAN TO MOVE INTO THE MOTHER-IN-LAW'S HOUSE AFTER MARRIAGE OR HAVE THE MOTHER MOVE IN WITH THE NEWLYWEDS. THIS TYPE OF SOCIAL STRUCTURE THAT CLUSTERS AROUND FAMILY MEMBERS, PROMOTES COOPERATION WITHIN THE IMMEDIATE FAMILY, AS WELL AS BETWEEN EXTENDED FAMILIES AND THE COMMUNITY AT LARGE IN SHARING CHILDREARING, COOKING, EMOTIONAL SUPPORT AND SECURITY. THE RECONSTRUCTION DESIGN SIGNIFICANCE IS THAT THE ARCHITECTURE MUST BE ABLE TO CARRY ON THIS LONG ESTABLISHED TRADITION, PROVIDE FLEXIBILITY TO ACCOMMODATE THE ADDITION OF FAMILY MEMBERS AND ALSO OFFER BOTH PRIVATE AND COMMUNAL SPACE FOR ALL.

## CHAPTER 6: TRADITIONAL HOUSING TYPE



FIGURE 4: TYPICAL SHOTGUN HOUSE



FIGURE 5: SHOTGUN HOUSE DIAGRAM

RESIDENTIAL LAND AT A DESIRABLE HEIGHT ABOVE SEA LEVEL HAS ALWAYS BEEN AT A PREMIUM IN NEW ORLEANS, SO AS THE POPULATION GREW, THE LAND OWNERS, IN ORDER TO FIT AS MANY HOMES ON THE LIMITED SITES, SUBDIVIDED EACH SITE INTO MANY LONG AND EVEN NARROWER LOTS. ELSEWHERE IN THE COUNTRY, CITIES SUCH AS PHILADELPHIA, BALTIMORE AND BOSTON BUILT TWO TO THREE STORY BROWN STONES OR EVEN TALLER APARTMENT BUILDINGS TO ACCOMMODATE THEIR HOUSING NEEDS. NEW ORLEANIANS, HOWEVER, NEVER ACCEPTED APARTMENT LIVING. EVEN THE LARGER ROW HOUSES THAT WERE FOUND IN OTHER SOUTHERN CITIES SUCH AS CHARLESTON AND SAVANNAH WERE NOT MUCH FAVORED, EXCEPT FOR THE PONTALBA BUILDING BUILT IN 1848, WHICH WERE SIXTEEN ROW HOUSES FOR THE ELITE UNDER ONE ROOF AT JACKSON SQUARE (NEW ORLEANS. LEWIS 64).

THE PREDOMINANT RESIDENTIAL ARCHITECTURE BUILT ON THE LONG NARROW LOTS OF NEW ORLEANS WAS THE SHOTGUN HOUSE AND ITS VARIATIONS. (FIG. 4) SHOTGUN HOUSE'S FLEXIBILITY FOR MODIFICATION AND ADAPTATION WILL BE INTEGRAL TO THE RECONSTRUCTION PROCESS. THE SHOTGUN HOUSE IS A SERIES OF ROOMS, ONE BEHIND THE OTHER, LINKED BY DOORS AND WITHOUT HALLWAYS. (FIG. 5) THE HOUSES ARE ALIGNED PERPENDICULAR TO THE STREET. THERE ARE MANY THEORIES ON HOW THESE HOUSES GOT THEIR COLORFUL NAME. ONE EXPLANATION OF THIS DESIGN IS THAT A SHOTGUN COULD

BE FIRED THROUGH THE FRONT DOOR OF THE HOUSE AND BECAUSE OF THE ALIGNMENT OF THE ROOMS AND DOORS, THE PELLETS WOULD EXIT UNIMPEDED, OUT THROUGH THE BACK DOOR. IN REALITY, MOST OF THE SHOTGUN HOUSES HAVE VARIATIONS REGARDING THE LOCATION OF THE INTERIOR DOORS, SO THIS MAY NOT BE HOW THE HOUSE TYPE GOT ITS NAME.

SOME SCHOLARS SAY THE ORIGIN OF SHOTGUN HOUSES IS AFRICAN AND THAT THEY WERE DIFFUSED TO NEW ORLEANS FROM THE CARIBBEAN WHEN THE SLAVES WERE BROUGHT HERE FROM AFRICA VIA THE SUGAR PLANTATIONS OF HAITI. THE BASIC HOUSING TYPE IN HAITI IS CALLED CAILLE. THE CHARACTERISTIC OF THE HAITIAN CAILLE IS ONE ROOM WIDE AND ONE OR MORE ROOMS DEEP, ORIENTED PERPENDICULARLY TO THE ROAD OR PATH. (FIG. 6) THE ENTRANCE TO THE CAILLE IS THROUGH DOUBLE DOORS AT THE END, GENERALLY FROM A PORCH, SHELTERED BY THE PROJECTING GABLE. THE FLOOR IS RAISED TO KEEP DRY FROM THE HEAVY CARIBBEAN RAINS. EVEN THOUGH THERE MIGHT BE DOORS ON THE SIDE OF THE HOUSE, THE MAIN CIRCULATION IS STILL FROM THE FRONT TO THE BACK (ARCHITECTURE IN DEVELOPMENT, FISHER AND VLACH, 13). THIS IS REMARKABLY SIMILAR TO THE SHOTGUN HOUSES IN LOUISIANA. THE CAILLE OWES ITS FORM TO BOTH THE SLAVES FROM THE GUINEA COAST OF WEST AFRICA WHERE THE YORUBAS OF NIGERIA LIVED AND FROM THE ARAWAK AND TAINO INDIANS WHO WERE INDIGENOUS

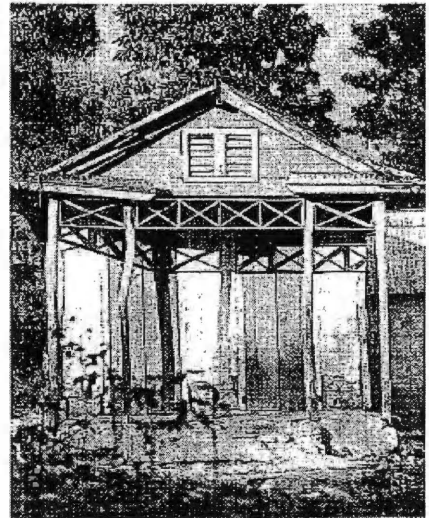


FIGURE 6: HAITIAN CAILLE

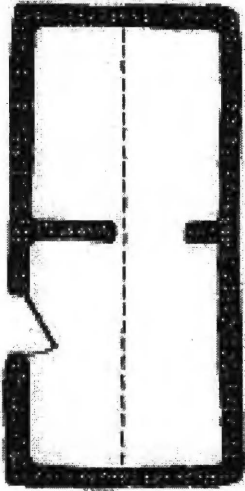


FIGURE 7: TYPICAL NIGERIAN HOUSE

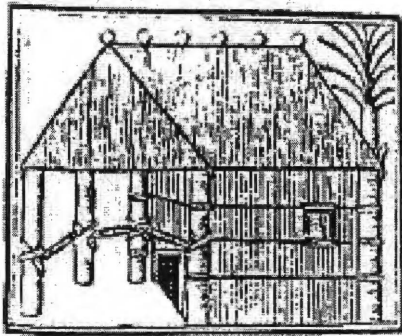


FIGURE 8: WOOD POLE FRAMED DWELLING OF THE ARAWAK AND TAINO INDIANS

TO HAITI. IN NIGERIA AND WEST AFRICA, THE DWELLING IS EXTRAORDINARILY SIMILAR TO THE CAILLE. IT TOO HAS Laterally-grouped rooms with the only marked difference being the entrance is at the long side of the structure instead of at the end. (FIG.7) THE THATCHED ROOF, WOOD POLE-FRAMED DWELLING OF THE ARAWAK AND TAINO INDIANS IS VIRTUALLY IDENTICAL TO THE ONE-ROOM CAILLE OF TODAY WITH A PORCH AND ENTRANCE AT THE END OF THE HOUSE (ARCHITECTURE IN DEVELOPMENT, FISHER AND VLACH, 13) (FIG.8). JOHN VLACH, A PROFESSOR OF AMERICAN STUDIES AND ANTHROPOLOGY AT THE GEORGE WASHINGTON UNIVERSITY ARGUED IN HIS 1975 THESIS, "SOURCE OF THE SHOTGUN HOUSE: AFRICAN AND CARIBBEAN ANTECEDENT FOR AFRO-AMERICAN ARCHITECTURE," THAT THE SHOTGUN FORM WAS BROUGHT TO THE UNITED STATES BY BLACK AND MULATTO HAITIANS WHO IMMIGRATED TO NEW ORLEANS IN CONSIDERABLE NUMBERS DURING THE YEAR FOLLOWING HAITIAN INDEPENDENCE IN 1804. BY MID-CENTURY THE SHOTGUN HOUSE AND ITS VARIANTS HAD SPREAD UP THE MISSISSIPPI RIVER AS FAR AS ST. LOUIS AND WESTWARD TO TEXAS.

IN NEW ORLEANS, THE SHOTGUN FORM WAS PARTICULARLY FITTING TO ITS CLIMATIC, GEOGRAPHIC AND TOPOGRAPHIC LIMITATIONS. THE RAISED FLOOR ADDRESSES THE PROBLEMS OF FLOODING, INSECT CONTROL AND HELPS WITH COOLING IN THE SUBTROPICAL CLIMATE. THE ONE-

ROOM WIDE, LATERAL GEOMETRY NOT ONLY ALLOWS SUFFICIENT DAY LIGHTING AND PROMOTES VENTILATION, BUT IT ALSO FITS PERFECTLY INTO THE LONG AND NARROW LOTS OF NEW ORLEANS.

IN HAITI, THE BASIC CAILLE HAS EVOLVED INTO MANY ELABORATE VARIANTS THAT ALSO MADE THEIR WAY TO NEW ORLEANS. THE LIVING SPACE MAY BE EXTENDED NOT ONLY TO THE BACK, BUT PORCHES AND ROOMS CAN ALSO BE ADDED TO THE SIDES. IN FACT, AT ITS FURTHEST DEVELOPMENT, A MODIFIED CAILLE CAN RESEMBLE A FULLY SYMMETRICAL "PALLADIAN VILLA" (ARCHITECTURE IN DEVELOPMENT, FISHER AND VLACH, 13). IN PORT-AU-PRINCE, TWO-STORY MIXED-USED CAILLES WITH STORES DOWNSTAIRS AND LIVING QUARTERS WITH OVERHANGING BALCONIES ABOVE HAVE THEIR PARALLEL IN THE CAMEL-BACK HOUSE OF NEW ORLEANS. (FIG.9) THE CAMEL-BACK VARIATION HAS A SINGLE SHOTGUN FRONT BUT THE BACK PART OF THE HOUSE IS HIGHER BY 1 ½ TO 2 STORIES. (FIG.10) IT WAS THOUGHT THAT THE FRONT OF THE HOUSE WAS KEPT LOW DUE TO TAX ASSESSMENT REASONS. CAMEL-BACK WAS NOT KNOWN TO HAVE COMMERCIAL USE UP FRONT. ANOTHER VARIANT OF THE SHOTGUN VERNACULAR IS THE DOUBLE SHOTGUN. TWO SHOTGUNS SIDE BY SIDE CONNECTED BY A CENTRAL WALL USE LESS SPACE THAN TWO SHOTGUN HOUSES NEXT TO EACH OTHER. (FIG.11) THE DIFFERENT VARIATIONS OF THE SHOTGUN FORM SHOWS HOW VERSATILE AND FLEXIBLE IT CAN BE TO ACCOMMO-



FIGURE 9: TWO STOREY CAILLE



FIGURE 10: CAMEL-BACK HOUSE



FIGURE 11: DOUBLE SHOTGUN HOUSE

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DATE THE TRADITIONAL AND CULTURAL NEEDS OF THE RES-  
IDENTS WHILE RETAINING ITS CULTURE AND VERNACULAR  
EXPRESSION.



## CHAPTER 7: DIVERSITY AND INTEGRATION

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New Orleans has always had a colorful, diverse history, with its American, European, African and Latin American traditions. Diversity can be heard in the music, seen in the art and architecture, and tasted in the cuisine. It is in the cloth that people wear, in the languages that they speak, and literatures that they write. In effect, diversity manifests itself in all aspects of life and expression. However, diversity in itself does not a healthy community make, rather community health depends on how diversity is distributed and how people from different background interacts. In fact, in today's cities, the socio-economic factors that lead certain group of socially similar people to live in spatial proximity also may lead to the growth of residential and social segregation when certain spaces are identified with a particular group (Marcuse, 2002). It is not the lack of diversity; it is the prevalence of segregation that is the major down fall not only of New Orleans but also of many other cities in the United States.

Immigrants, who move here from non-English speaking countries, may never have an opportunity to learn to speak English in order to interact with the mainstream of society or to enjoy the amenities of community. This is especially true if they only feel secure in segregated same heritage neighborhoods. Segregation, especially exacerbated by poverty and

inequality, breeds distrust, a numbed social responsibility to others, and often open hostility and inhumanity. By 2050, if current demographic trends persist, 50 percent of Americans will not be the traditional Caucasians who trace their heritage back to Western Europe. If we do not want to have the problems that are associated with social, ethnic and racial segregation, in the design of our urban landscape and architecture we must give consideration to the changing faces of our melting pot society. We need to plan for diversities so as to be continually enriched by the difference diversity affords, rather to seek out diversity as something of a weekend novelty.

The actual design implications for a diverse community are not so simply formulated. Aside from the ethnic diversity, a neighborhood needs other diverse groups such as age, gender, income, class and profession in order to remain integrated, healthy and resilient through the many challenges in today's multifaceted world. Architecture alone can not revitalize a neighborhood though it plays a major part in helping people to integrate and feel a part of a community. I believe effective urban planning with creations of community enriching infrastructures such as good schools, parks, green ways, public arts and transportation systems, smart growth patterns that promote pedestrian activity, sensible commercial and

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employments nodes, and night life is fundamental in bringing people to live in an urban community. Architecture that respects the local culture and has the ability to accommodate minor changes that can give residents a sense of personalization is best in creating an integrated community.

New Orleans needs to formulate a comprehensive urban plan that instead of only addressing the immediate outcries in the aftermath of the hurricane disaster, needs to have a longer time horizon and larger vision of where they want New Orleans to be in the future. They need to have a plan that not only deals with the environmental aspect of the surrounding wetlands, swamps, Lake Pontchartrain and the Mississippi delta, but one that also corrects the long standing poverty, social inequities and segregation of the city.

In 1975, Portland, Oregon adopted a strategic plan named Portland, Oregon's Region 2040 plan that looked 65 years down its future. It was the longest plan ever put in motion in the history of the United States. The Oregonians had one goal in their mind, which was to "enhance quality of life" through the management of its urban boundary and a comprehensive public transit system which also serves as commercial corridor, along with integra-

tion of employment, education, environment and public safety in the community (Redesigning Cities, Barnett, 57-61). Once the plan was set in motion, it was monitored, tracked and reevaluated periodically for improvements and revisions. Today, Portland is one of the most integrated, progressive, and desired cities in which to live. Though Portland and New Orleans are not the same, they share a similar goal of improving the lives of their residents and creating an unique place that is the model of community nationwide. Other cities such as Nashville, Tennessee with its "Plan of Nashville", Chattanooga, Tennessee with its revitalization of its riverfront and downtown, Albuquerque New Mexico, Pittsburg, Pennsylvania and many others are all on their way to being more integrated, and vibrant cities through long-term planning processes.

## CHAPTER 8: MODULAR FLEXIBILITY

ON APRIL 18, 1906, A MAJOR EARTHQUAKE, LATER DETERMINED AS 7.9 ON THE RICHTER SCALE, ROCKED SAN FRANCISCO. THE QUAKE TOOK EVERYONE BY SURPRISE WAKING THE CITY AT 5:12 AM. THE QUAKE TOPPLED BUILDINGS AND STARTED FIRES. BY THE TIME IT WAS OVER, 225,000 PEOPLE LOST THEIR HOMES (USGS THE GREAT 1906 SAN FRANCISCO EARTHQUAKE, WWW.QUAKE.WR.USGS.GOV). THE CITY'S PARK DIRECTOR, UNITED STATES ARMY AND RELIEF ORGANIZATIONS JOINED FORCES TO BUILT 5,610 COTTAGES TO HOUSE THE DISPLACED. THESE WERE BASIC 10 FOOT BY 14 FOOT BOXES WITH PITCHED ROOFS. SIMPLE ONE-ROOM WOOD FRAME STRUCTURES WITH WOOD FLOORS, BOARD-AND-BATTEN SIDING PAINTED GREEN, SHINGLE ROOFING AND UNFINISHED INTERIORS. THEY HAD NO PLUMBING, INSULATION OR HEAT EXCEPT FOR A WOOD- AND COAL-BURNING STOVE. (FIG. 12) MOST OF THE COTTAGES WERE ERECTED IN REFUGEE CAMPS IN THE CITY PARKS WITH COMMUNAL KITCHENS AND PUBLIC BATHROOMS. AT ONE POINT, 16,448 DISPLACED PEOPLE LIVED IN THESE COTTAGES (DEMOCRATIC ARCHITECTURE, MACDONALD, 73). THE TENANCY WAS RESTRICTED TO THE PEOPLE THAT NEVER OWNED HOMES, AND IT WAS DECIDED THAT THE COTTAGES WOULD AFFORD THEM THE OPPORTUNITY TO DO SO WHEN THEY WERE LATER TO BE SOLD TO THE TENANTS FOR EVENTUAL REMOVAL TO PRIVATE LOTS. THE MAXIMUM PRICE WAS SIXTY DOLLARS, PAYABLE IN INSTALLMENTS OF TWO DOLLARS A MONTH AS LONG AS THE COTTAGE REMAINED ON THE TEMPORARY SITE. IN AD-

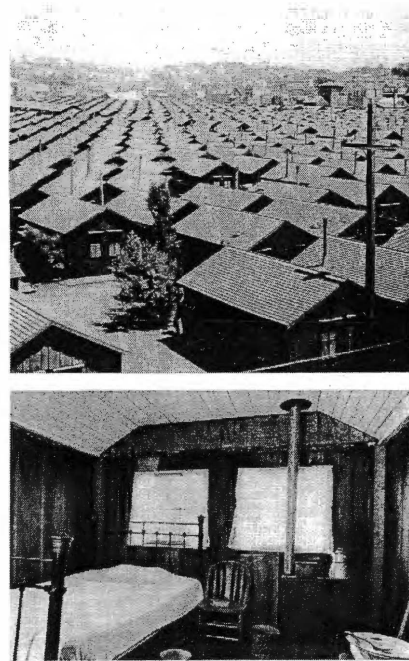


FIGURE 12: SAN FRANCISCO EARTHQUAKE COTTAGES

DITION, THE PAYMENTS WENT INTO A TRUST FUND, WHICH MOST WERE REFUNDED LATER. AT THE END, ALL BUT 276 COTTAGES WERE PURCHASED AND RELOCATED, SOMETIMES PIECE BY PIECE. MANY OF THE COTTAGES BECAME THE NUCLEI OF PROPER HOMES. SOME STILL REMAIN TODAY (DEMOCRATIC ARCHITECTURE, MACDONALD, 74). THIS WAS AN AMAZING PUBLIC POLICY THAT NOT ONLY CREATED TEMPORARY SHELTERS FOR DISPLACED VICTIMS, BUT ALSO GAVE THE OPPORTUNITY OF OWNERSHIP TO PEOPLE WHO NEVER HAD THE CHANCE TO OWN HOMES BEFORE. IT WAS DIGNIFYING AND UPLIFTING. I BELIEVE THE SAN FRANCISCO EARTHQUAKE COTTAGES CAN BE USED AS A MODEL TO DEAL WITH NOT ONLY THE IMMEDIATE SHELTER NEEDS OF THE HURRICANE DISASTERS IN NEW ORLEANS, BUT IT CAN ALSO BECOME A PIECE OF THE PUZZLE IN THE RECONSTRUCTION EFFORT. THE ONE-ROOM COTTAGE IS THE MODULE OF THE TRADITIONAL SHOTGUN HOMES THAT FOUND THEIR HERITAGE IN THE CARIBBEAN AND AFRICA AND BECAME SO PROLIFIC IN NEW ORLEANS. WITH THE FLEXIBILITY TO BE CONVERTED AND MODIFIED, THE MODULE CAN BE ADDED OR SUBTRACTED TO ACCOMMODATE THE INCREASES IN FAMILY MEMBERS SUCH AS THE CASE OF MATRIARCHAL BLACK CLUSTER FAMILIES, OR TO BE CONSTRUCTED TO MEET THE EXPECTATION OF THE DIVERSE CULTURE THAT LIVE IN NEW ORLEANS. THERE ARE QUESTIONS REGARDING WHO AND HOW MANY PEOPLE WILL RETURN TO NEW ORLEANS IN THE AFTERMATH OF THE HURRICANE DISASTER. WITH THE MODULAR DESIGN, THE CITY WOULD BE ABLE TO BUILD

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BASED ON THE NEED.

*YOU MIGHT START RIGHT FROM THE BEGINNING, LETTING YOUR NEW BUILDINGS GROW FROM THE DAILY LIVES OF THE PEOPLE WHO WILL LIVE IN THEM, SHAPING THE HOUSES TO THE MEASURE OF THE PEOPLE'S SONGS, WEAVING THE PATTERN OF A VILLAGE AS IF ON THE VILLAGE LOOMS, MINDFUL OF THE TREES AND CROPS THAT WILL GROW THERE, RESPECTFUL TO THE SKYLINE AND HUMBLE BEFORE THE SEASONS. THERE MUST BE NEITHER FAKED TRADITION NOR FAKE MODERNITY, BUT AN ARCHITECTURE THAT WILL BE IN THE VISIBLE AND PERMANENT EXPRESSION OF THE CHARACTER OF THE COMMUNITY, ”*

*HASSAN FATHY*

THE ACCOUNTABILITY OF ARCHITECTURE, ASIDE FROM SAFETY AND SECURITY, IS TO SERVE AS A VESSEL TO HOLD LIFE, CULTURE, AND TRADITION. BECAUSE OUR LIVES CHANGE, EVOLVE AND UNFOLD, ARCHITECTURE SHOULD BE FLEXIBLE, AND ACCOMMODATING. THERE ARE TWO MAIN RESPONSIBILITIES ARCHITECTURE HAS TO THE INHABITANTS AND THE COMMUNITY. ONE IS IN THE ARCHITECTURAL FORM THAT SHOULD BE SENSITIVE TO THE REGIONAL VERNACULAR, AND THE OTHER IS TO MAKE THE INHABITANTS FEEL A SENSE OF BELONGING AND GAIN A DISTINCT PERSONALITY.

LE CORBUSIER FIRST ESTABLISHED A CELL OF 14 SQUARE METERS, ABOUT 151 SQUARE FEET, AS THE BASIC HOUSING UNIT FOR WORKERS THAT WOULD LEAD TO THE EXPANSION AND FLOWERING OF MEN'S LIVES IN A MACHINE AGE. HE LATER ADMITS THAT "THE ONE PERSON, WHO WON'T WANT TO LIVE IN THEM, IS THE WORKER! HE HAS NOT BEEN EDUCATED; HE IS NOT READY TO LIVE IN SUCH APARTMENTS." LE CORBUSIER LATER IMPROVED UPON THE BASIC UNIT BY REDUCING IT TO 10 SQUARE METERS. THIS DIMENSION SYSTEM WAS PICKED UP BY THE SOVIET ARCHITECTS WHO ADOPTED LE CORBUSIER'S CONCEPT FOR CONSTRUCTION OF WORKERS' HOUSING IN MOSCOW (DEMOCRATIC ARCHITECTURE, MACDONALD, 28). ANOTHER WAY TO APPROACH THE MODULAR SYSTEM OF ARCHITECTURE IS INSTEAD OF DEFINING AND HAVING TO EDUCATE PEOPLE TO ACCEPT A PREDETERMINED SPATIAL REQUIREMENT, WE CAN FOCUS NOT ON THE SIZE OF THE SPACE, BUT ON CREATION OF LIVING CONDITIONS THAT CAN PROVIDE PRIVATE, SECURE AND CONGENIAL PLACES TO LIVE. THIS IS A SUSTAINABLE CONCEPT OF TAKING AND USING ONLY WHAT YOU NEED. SINCE PEOPLE COME FROM DIVERSE PLACES WITH DIVERSE BACKGROUNDS AND CUSTOMS, THE NEED FOR SPACE WOULD VARY DEPENDING ON EACH INDIVIDUAL AND FAMILY. BY CREATING THE MODULAR SYSTEM THAT IS FLEXIBLE FOR MODIFICATION, EACH FAMILY WOULD BE ABLE TO CONSTRUCT THE RIGHT SPACE FOR THEMSELVES.



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USING THE CONCEPT OF THE SAN FRANCISCO EARTHQUAKE COTTAGE AS THE FOUNDATION GUIDE OF THE MODULAR STRUCTURE, I BELIEVE A SQUARE OF 16 FOOT BY 16 FOOT WITH A SUB MODULE OF 8 FOOT BY 16 FOOT FOR ADDITIONS WOULD BE THE IDEAL DIMENSIONS. THE REASON FOR SQUARE VERSES A RECTANGLE IS THAT A 16 BY 16 FOOT GRID GIVES YOU 64 FEET OF LINEAR WALL WITH 256 SQUARE FEET OF AREA WHILE A 10 FOOT BY 25.6 FOOT RECTANGLE GIVES YOU 71.2 FEET OF LINEAR WALL WITH THE SAME AREA. THOUGH THE SAVINGS PER HOUSE MIGHT BE SMALL, IN A LARGER DEVELOPMENT, IT COULD BE CONSIDERABLE. 16 FEET AND 8 FEET ARE ALSO TYPICAL LUMBER DIMENSIONS, SO THERE WOULD BE MINIMAL WASTE IN MATERIAL. IF A 3 FOOT HALLWAY IS CONSTRUCTED, THERE WOULD STILL BE 13 FEET WIDE LEFT FOR A TYPICAL SIZE BEDROOM. WITH A 4 FOOT TALL WINDOW, DAY LIGHT WOULD PENETRATE ABOUT 10 FEET INTO THE ROOM. IF THE ROOM IS LIT BY WINDOWS ON BOTH SIDES OF THE HOUSE, THEN THE DAY LIGHT FACTOR IN THE HOUSE WOULD BE SUFFICIENT FOR MOST EVERYDAY ACTIVITIES WITHOUT HAVING TO USE ADDITIONAL LIGHT SOURCES. FOR THE MOST PART, BASIC MATERIAL USED IN IMAGINATIVE WAYS WILL BE THE KEY TO THE CONSTRUCTION OF THE HOUSING PROJECT. BY KEEPING THE DESIGN SMART AND TECHNOLOGY LOW, THE HOUSE WILL BE EASY TO MAINTAIN AND MODIFY. THE CONSTRUCTION TECHNIQUE CAN BE TAUGHT TO THE RESIDENTS WHO NEED EXTRA SKILLS TO HELP WITH

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THEIR INCOME AND COULD ALSO BE A PART OF THE REBUILDING EFFORTS OF THEIR DEVASTATED CITY.

USING THIS MODULAR SYSTEM, THE POSSIBILITY OF VARIATIONS IN DESIGN, LAYOUT, DETAILING, AND MASSING WITH OTHER COTTAGES ARE ALMOST ENDLESS. IT CAN BE AS LOW AS A SINGLE STORY HOUSE OR A MULTI STORY APARTMENT. THE PLAN ON EACH LEVEL COULD BE SHIFTED, REVERSED, OFF SET OR ROTATED. THE END RESULT IS A STRUCTURE THAT RESEMBLES THE SHOTGUN VERNACULAR WHILE HAVING VARIATION THAT DID NOT EXIST BEFORE.

NEW ORLEANS BELONGS TO THE SUBTROPICAL CLIMATE WITH THE SUMMER DESIGN TEMPERATURE OF 92 DEGREES AND THE WINTER DESIGN TEMPERATURE OF 34 DEGREES (SUN, WIND AND LIGHT, BROWN AND DEKAY, 301-305). THE WINTER DOES NOT GET TOO COLD WHILE THE SUMMER IS HOT AND HUMID. IT IS MORE IMPORTANT TO DESIGN FOR THE HEAT AND HUMIDITY THAN IT IS FOR COLD. ONE ASPECT OF THE ARCHITECTURE I WOULD LIKE TO DESIGN FOR IS THE OUTDOOR LIVING SPACE. OF ALL THE ASPECTS OF THE NEW ORLEANS ARCHITECTURE THAT IS MOST ROMANTIC IS THE LUSH TROPICAL GARDEN AND GREEN COURTYARDS. TRADITIONALLY PEOPLE SPEND TIME IN THE OUTDOOR LIVING SPACE AT NIGHT TO COOL OFF UNTIL IT IS COMFORTABLE TO SLEEP INSIDE. IT WOULD BE VERY FITTING TO THE CULTURE OF NEW ORLEANS IF THE RECONSTRUCTION CONTINUES THE OUTDOOR LIVING SPACE WITH

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PORCHES, BALCONIES, GALLERIES AND COURTYARDS AS THE EXTENSIONS OF THE INDOOR SPACE. WITH THE FLEXIBLE MODULAR DESIGN OF THE ARCHITECTURE, I BELIEVE THERE WILL BE MANY OPPORTUNITIES TO CREATE OUTDOOR SPACE FOR EVERY HOME.

**CHAPTER 9: PROGRAMING**

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THE PROGRAM THAT I WILL BE FOLLOWING WILL BE THE HIGH DENSITY ON HIGH GROUND HOUSING COMPETITION SPONSORED BY TULANE UNIVERSITY AND ARCHITECTURAL RECORD. THE COMPETITION CALLS FOR A MIXED USED AND MIXED DENSITY HOUSING PROJECT WHICH INCLUDES 160 RESIDENTIAL UNITS, 15,000 TO 30,000 SQUARE FOOT OF RETAIL SPACE, 5,000 SQUARE FOOT OF STUDIO/OFFICE SPACE FOR TULANE ARCHITECTURAL SCHOOL, 3,000 SQUARE FOOT OF COMMUNITY SPACE AND ENOUGH PARKING FOR ALL. IN ADDITION, 20 PERCENT OF THE GROUND MUST BE OPEN AND 20 PERCENT OF THE RESIDENTIAL UNITS MUST BE AFFORDABLE.

## CHAPTER 10: SITE

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THE SITE IS LOCATED IN ORLEANS PARISH AT A NEIGHBORHOOD CALLED BYWATER. BYWATER IS THE AREA OF NEW ORLEANS FURTHEST DOWN THE MISSISSIPPI RIVER ON THE EAST SIDE OF FAUBOURG MARIGNY NEXT TO THE FRENCH QUARTER. THIS AREA FROM BELOW THE INDUSTRIAL CANAL DOWN TO THE ST. BERNARD PARISH LINE IS SOMETIMES CALLED THE LOWER 9TH WARD. THE SITE IS AN ENTIRE BLOCK OF DEMOLISHED LAND WITH RAILROAD TRACKS AND FLOOD WALLS SEPARATING THE BLOCK FROM THE GREAT MISSISSIPPI RIVER. THE BOUNDARY OF THE SITE IS FRAMED BY MONTEGUT STREET TO THE WEST, CHARTER STREET TO THE NORTH, CLOUET STREET TO THE EAST AND THE MISSISSIPPI RIVER TO THE SOUTH. OVERLOOKING THE MISSISSIPPI RIVER, THE SITE HAS A GOOD VIEW OF DOWNTOWN NEW ORLEANS. BYWATER IS A WORKING CLASS NEIGHBORHOOD WITH A RICH MULTI-RACIAL POPULATION. FIRST TO SETTLE THERE WERE CREOLES AND FREE PERSONS OF COLOR. GERMAN, IRISH AND ITALIANS FOLLOWED LATER (BYWATER NEIGHBORHOOD ASSOCIATION, [HTTP://BYWATER.ORG/BWHIST2.HTM](http://bywater.org/bwhist2.htm)). THE NEIGHBORHOOD WAS THE THIRD OLDEST IN NEW ORLEANS. TO THE NORTH, THE SITE IS SURROUNDED BY TRADITIONAL SHOTGUN HOUSES THAT DATE BACK TO THE 1800s, CROSS THE STREET FROM MONTEGUT, THERE ARE THE RICE MILLS THAT WHICH ARE SLATED FOR CONVERSION INTO RESIDENTIAL LOFTS AND ACROSS FROM CLOUET ARE CONCRETE WAREHOUSES. RECENTLY, BYWATER HAS BECOME A BOHEMIAN ENCLAVE DRAWING IN MUSICIANS,

ARTISTS, AND CRAFTSMEN. OTHER DIVERSE GROUPS SUCH AS GAYS AND LESBIANS, ARE ALSO ENTICED BY BYWATER'S CHARMING, CLOSE KNIT AND ECLECTIC COMMUNITY. THE AREA IS HOME TO THE BEST BARBECUE IN NEW ORLEANS CALLED THE BYWATER BARBECUE. MUSICALLY, KERMIT RUFFINS, AN INTERNATIONALLY KNOWN JAZZ TRUMPETER PLAYS AT HIS CLUB VAUGHN'S EVERY THURSDAY WITH HIS BAND THE BARBECUE SWINGERS. OFTEN, STUDENTS, LOCAL TALENTS AND NOTABLE MUSICIANS, SUCH AS WYNTON MARSALIS, WHEN THEY COME THROUGH TOWN SIT IN WITH KERMIT RUFFINS FOR IMPROMPTU GIGS. THE NEW ORLEANS CENTER FOR CONTEMPORARY ARTS RECENTLY BUILT ITS CAMPUS IN BYWATER. THERE IS ALSO A HUGE ART COMMUNITY WITH MANY GALLERIES, SCULPTURE STUDIOS AND A HAND BLOWN GLASS STUDIO. EVERY THIRD SATURDAY, A LARGE OUTDOOR ART MARKET CALLED BYWATER ART MARKET BRINGS IN PEOPLE FROM ALL AROUND. ONE OTHER REASON THAT MAKES BYWATER SUCH A SPECIAL PLACE IS THAT WHILE THE FRENCH QUARTER CATERS TO THE OUT OF TOWN TOURISTS, BYWATER IS GENUINELY LOCAL, UNPRETENTIOUS AND PERSONAL. THE GROWING POPULARITY OF THE BYWATER AREA ATTRACTS NEW RESIDENTS, TRANSPLANTS AND DEVELOPMENTS INTO THE AREA. IT HAS THE UNFORTUNATE EFFECT OF DISPLACING SOME OF THE LOW-INCOME WORKING CLASS RESIDENTS BY RAISING THE PROPERTY VALUES AND RENT OF THE NEIGHBORHOOD.

THIS SITE IS FITTING FOR MY PROPOSAL OF FLEXIBLE

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INTEGRATION. IT IS ONE OF HARDEST HIT AREA IN THE RECENT HURRICANE DISASTER. IT HAS A TREMENDOUS DIVERSITY OF PEOPLE FROM ARTIST, MUSICIANS, PROFESSIONALS AND HARDWORKING LOW-INCOME RESIDENTS. LARGE EXTENDED FAMILIES LIVING ALONG WITH SINGLE PARENT FAMILIES. PEOPLE OF ALL DIFFERENT AGES, EDUCATION, SEXUAL ORIENTATION AND RACES ARE ALL PART OF THIS COMMUNITY. BYWATER HAS SHOTGUN HOUSES THAT DATE BACK TO THE 1800s, CREOLE COTTAGES AND CALIFORNIA BUNGALOWS AS THE TRADITIONAL HOUSING STOCK. WITH THE INFLUX OF NEW PEOPLE, CUSTOMS, AND LIFE STYLES THAT ARE COMPETING WITH THE TRADITIONAL LOW-INCOME WORKING CLASS, MULTI-RACIAL, CLOSE KNIT COMMUNITY OF BYWATER, THERE IS A REAL OPPORTUNITY TO CREATE HOUSING THAT CAN BE FLEXIBLE TO ACCOMMODATE THE VARIOUS GROUPS OF PEOPLE AND CAN BE DEMOCRATIC TO INTEGRATE THE DIVERSE BACKGROUNDS OF ALL WITHOUT DESTROY THE CULTURAL TRADITION OF THIS HISTORIC COMMUNITY.

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## **APPENDICES**

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APPENDIX A: PRELIMINARY ANALYSIS - BYWATER SITE

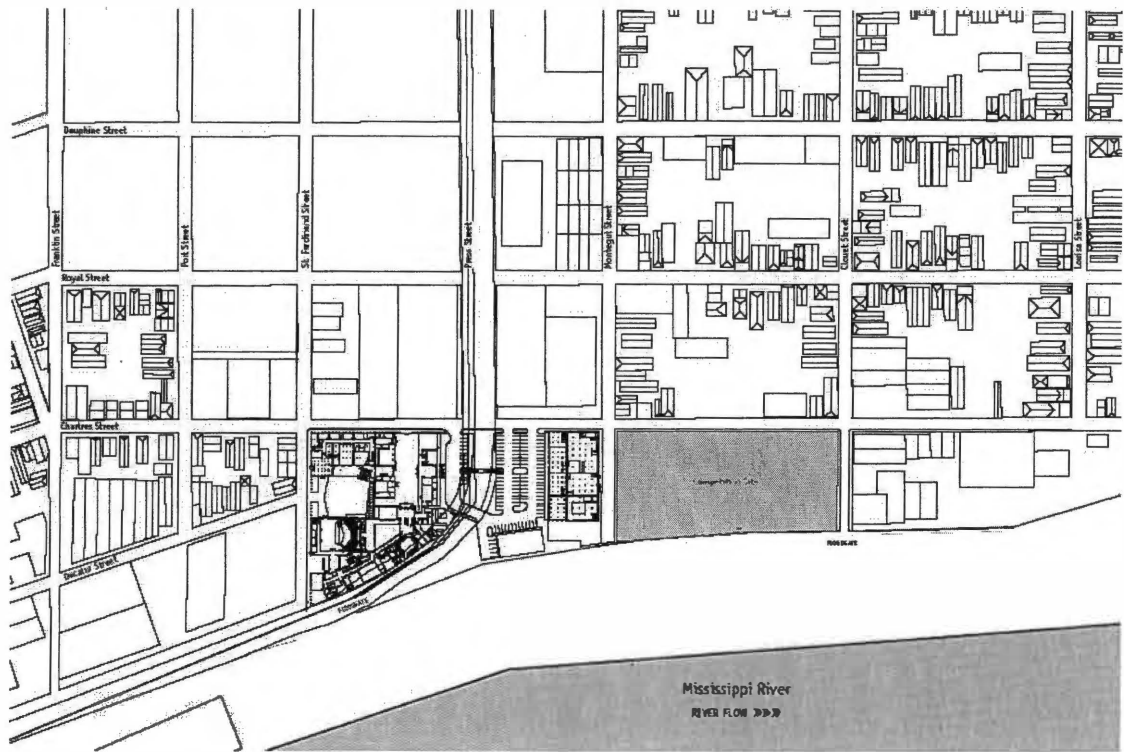


FIGURE 13: SITE CONTEXT PLAN

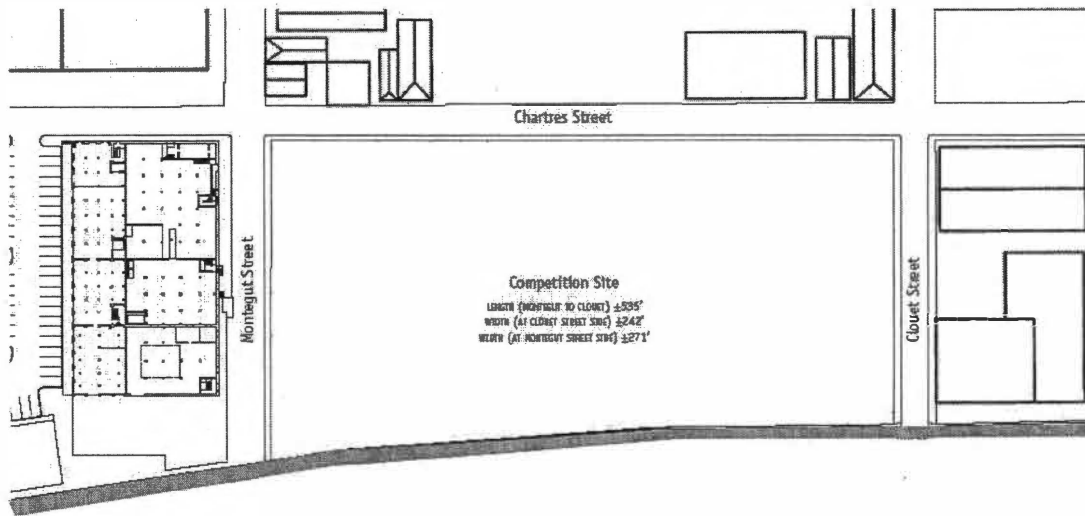


FIGURE 14: SITE DIMENSION AND FLOOD WALL LOCATION

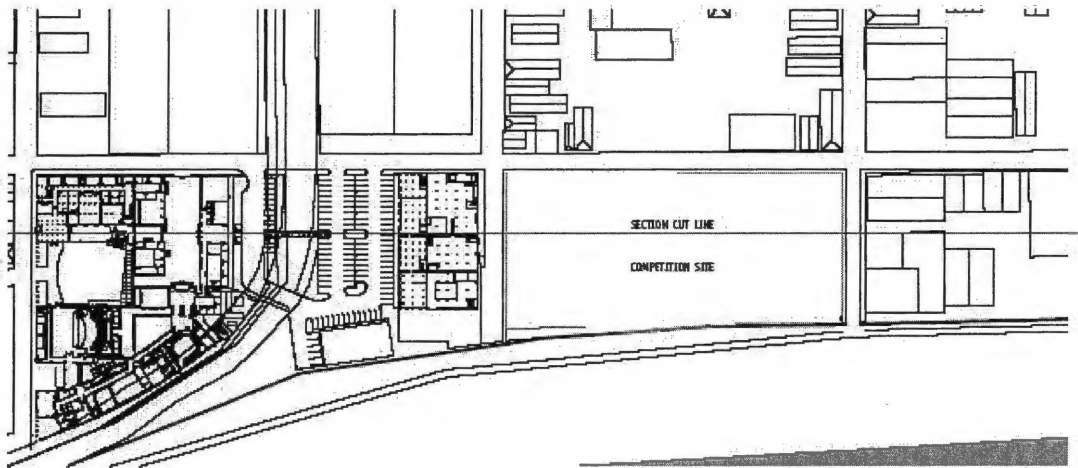
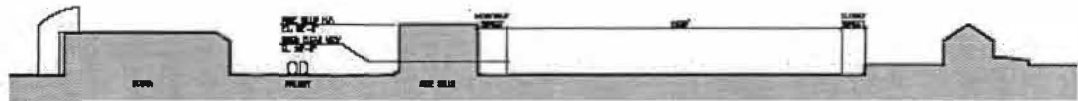


FIGURE 15: LONGITUDINAL SECTION

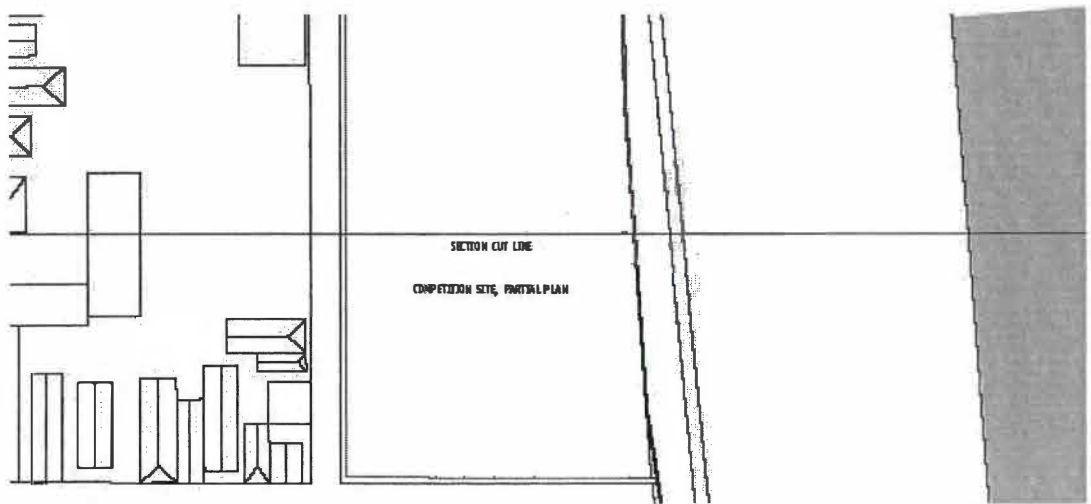
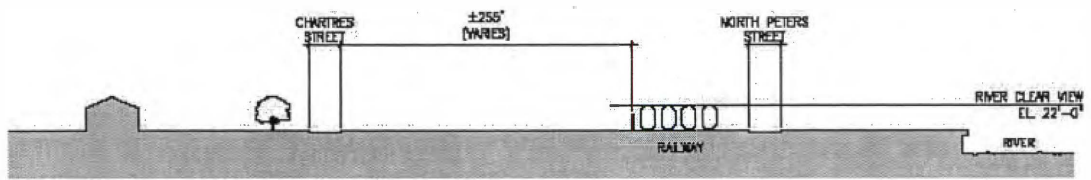


FIGURE 16: TRANSVERSE SECTION

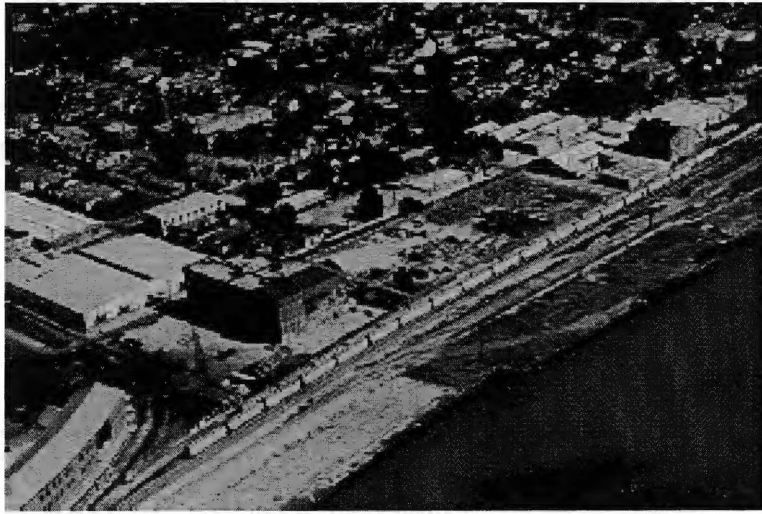


FIGURE 17: AERIAL 1

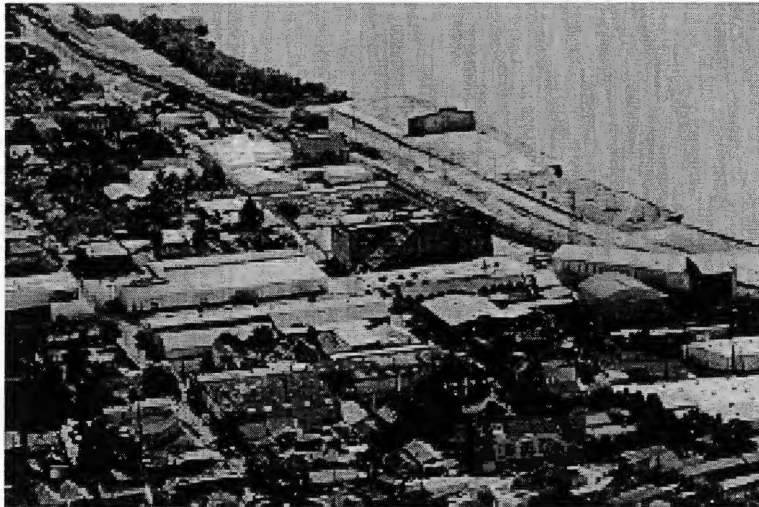


FIGURE 18: AERIAL 2

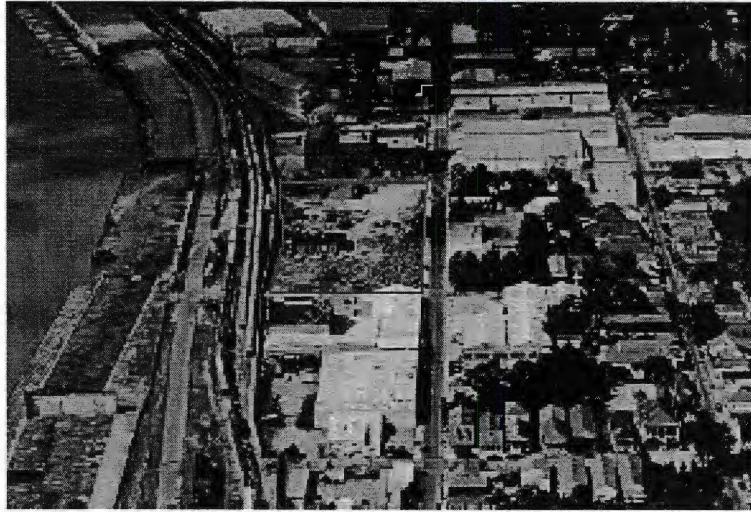


FIGURE 19: AERIAL 3

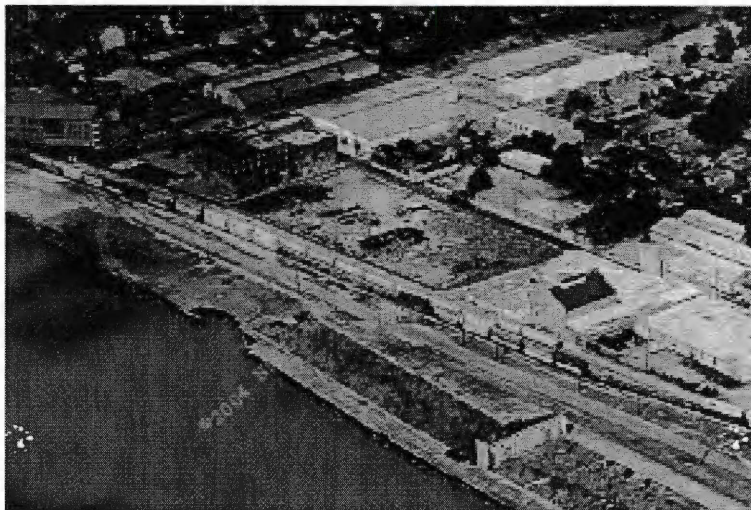


FIGURE 20: AERIAL 4



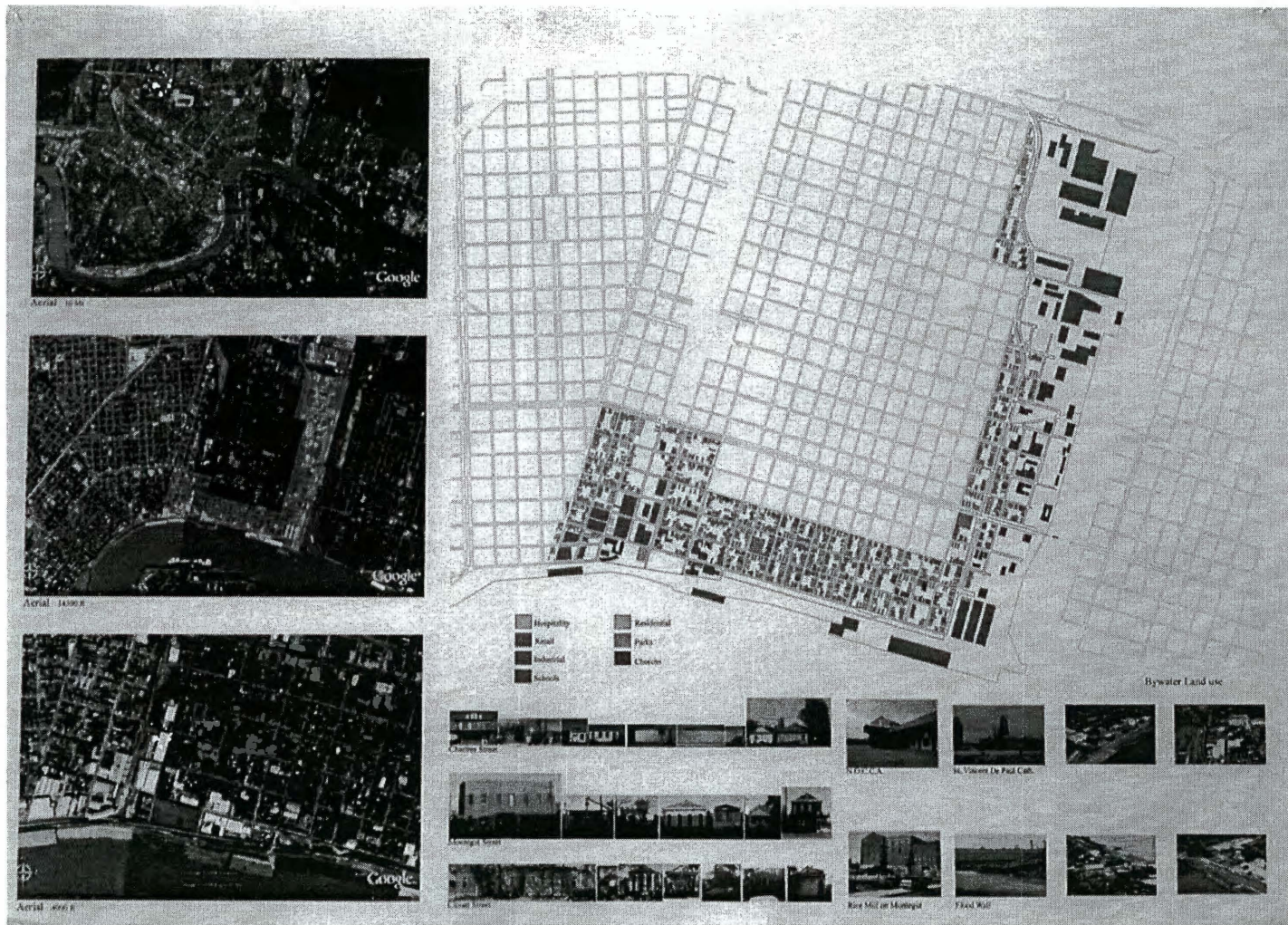


FIGURE 21: AERIALS AND BUILDING USAGE

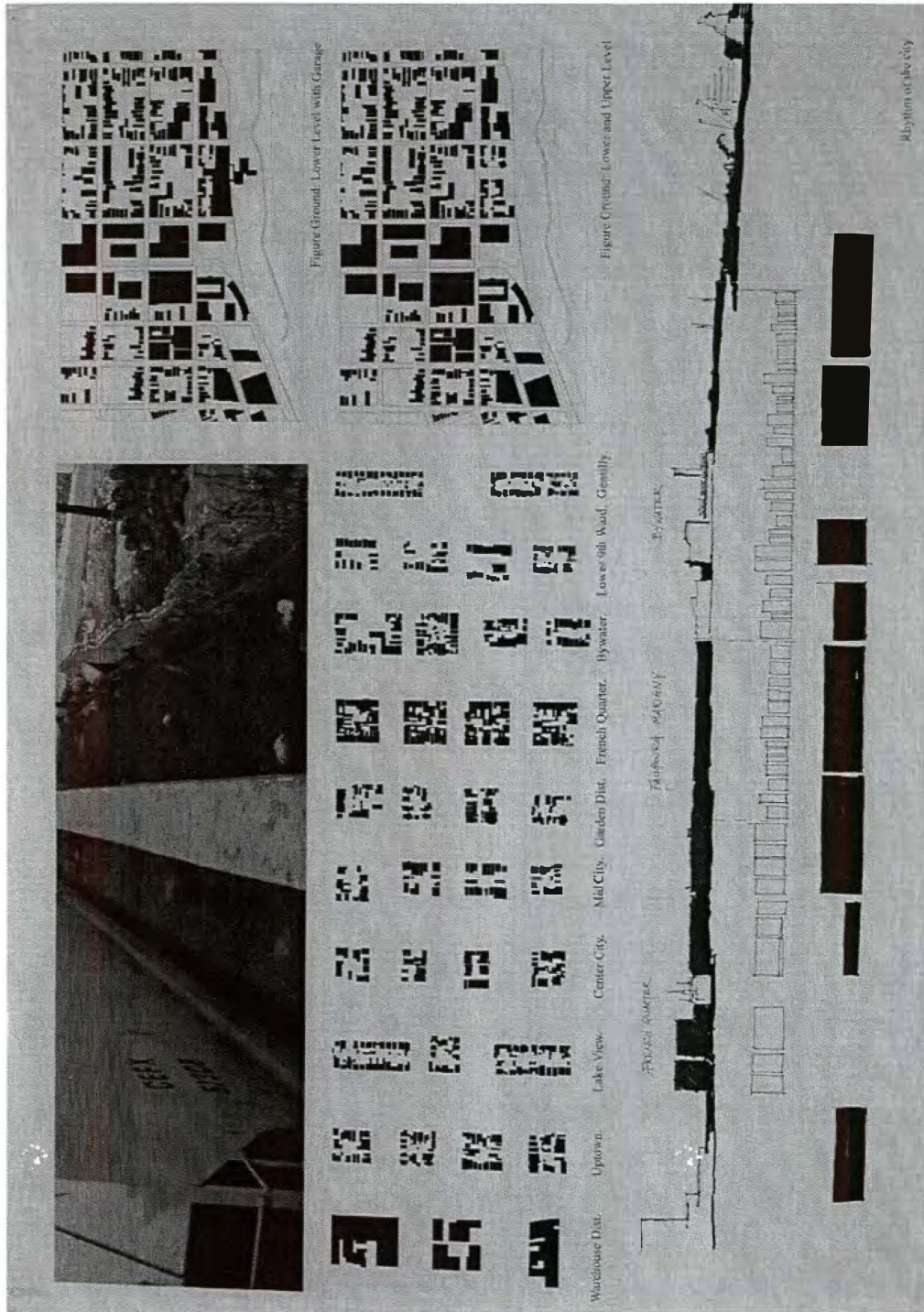


FIGURE 22: FIGURE AND GROUND

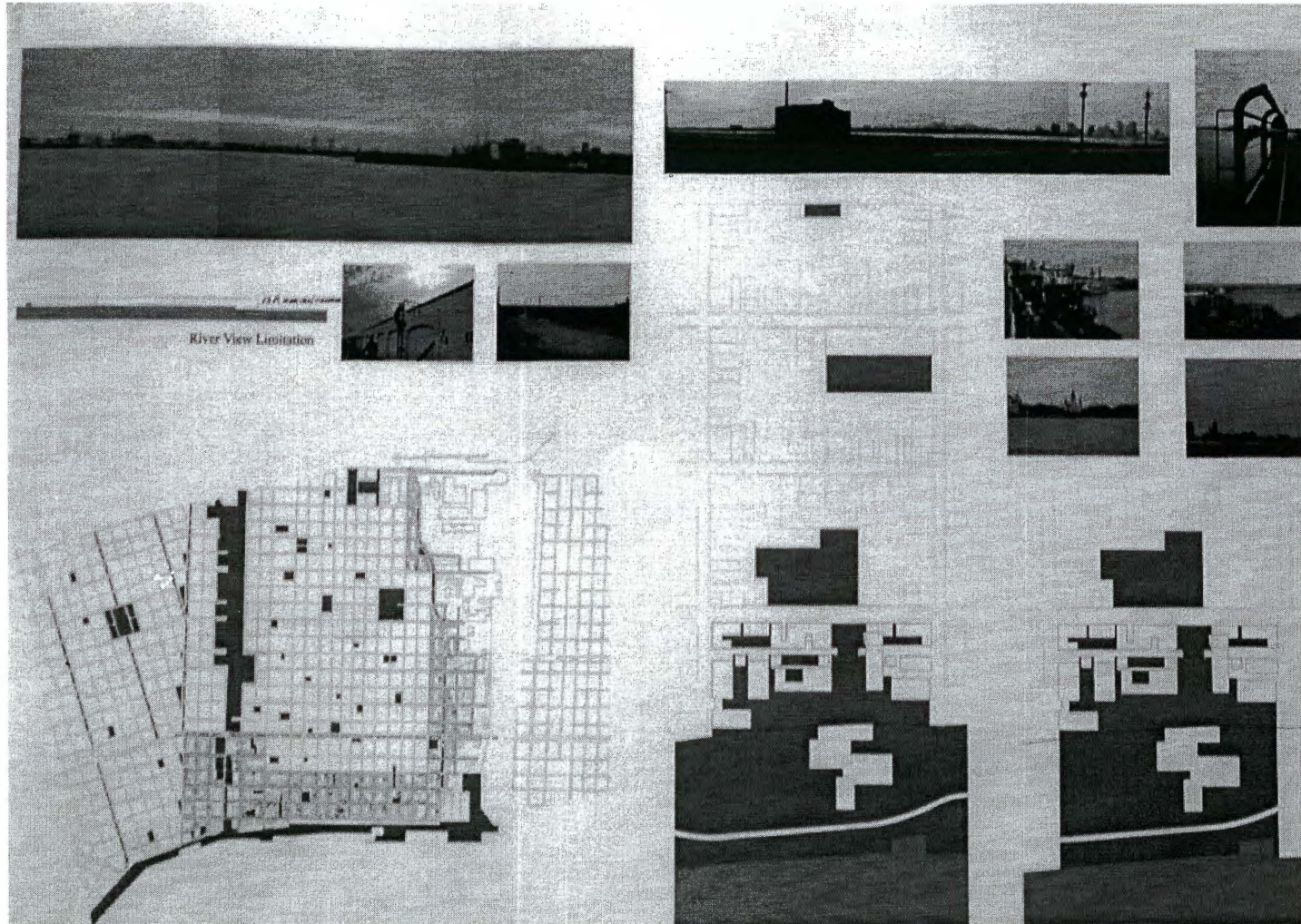


FIGURE 23: THE RIVER AND THE PROPOSED GREEN SPACE PLAN

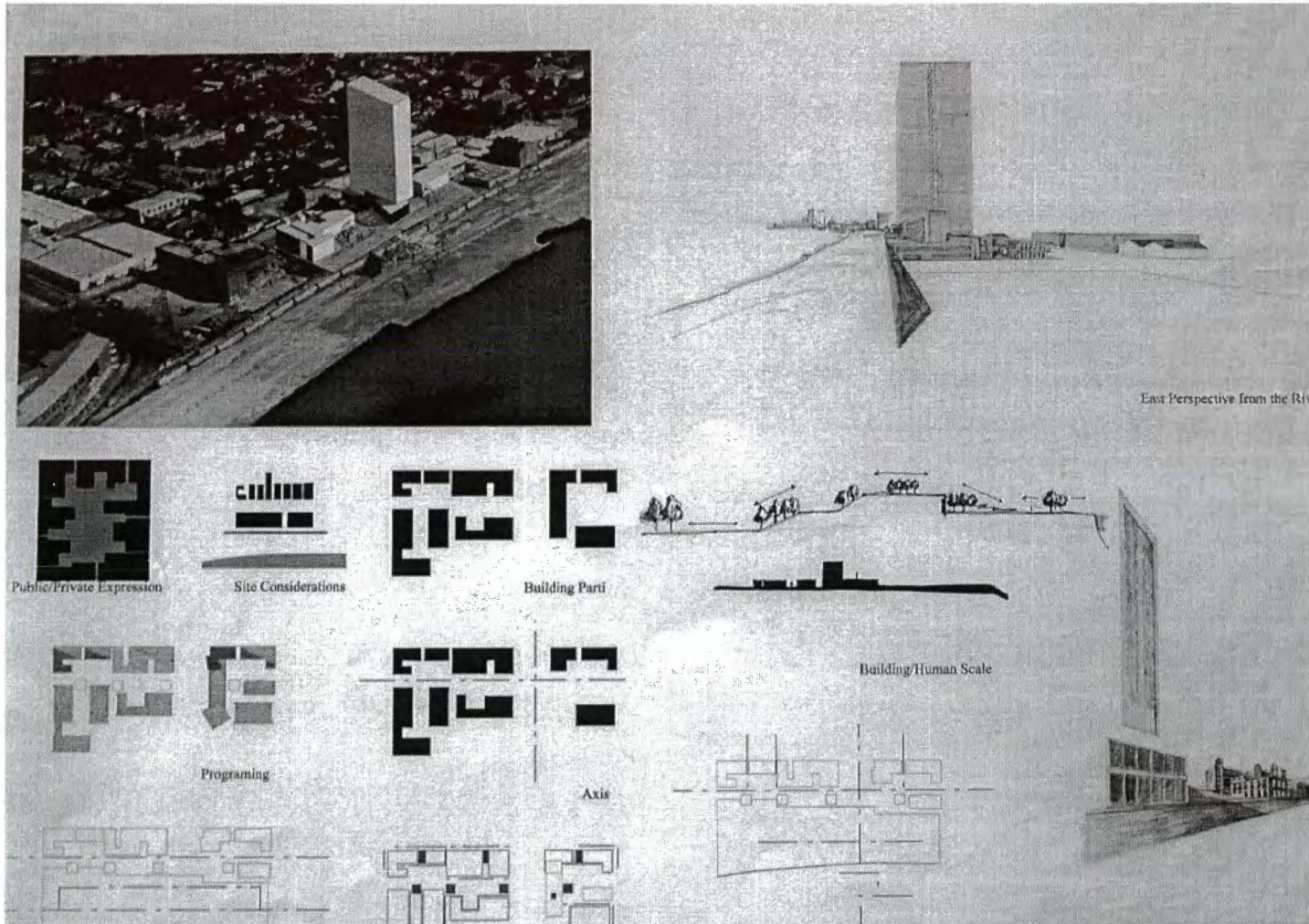


FIGURE 24: DIAGRAMS AND PERSPECTIVES

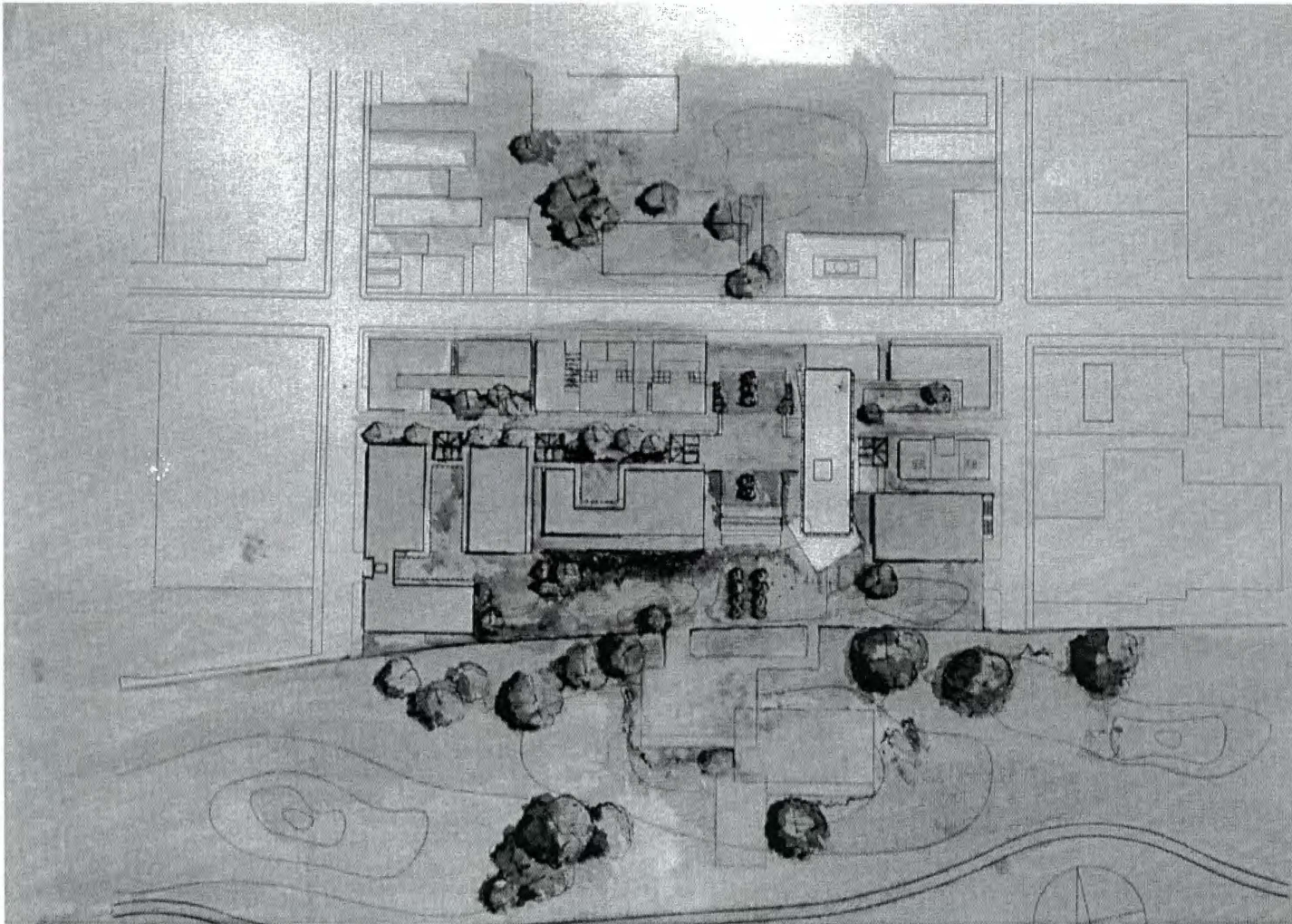


FIGURE 25: SITE/ROOF PLAN

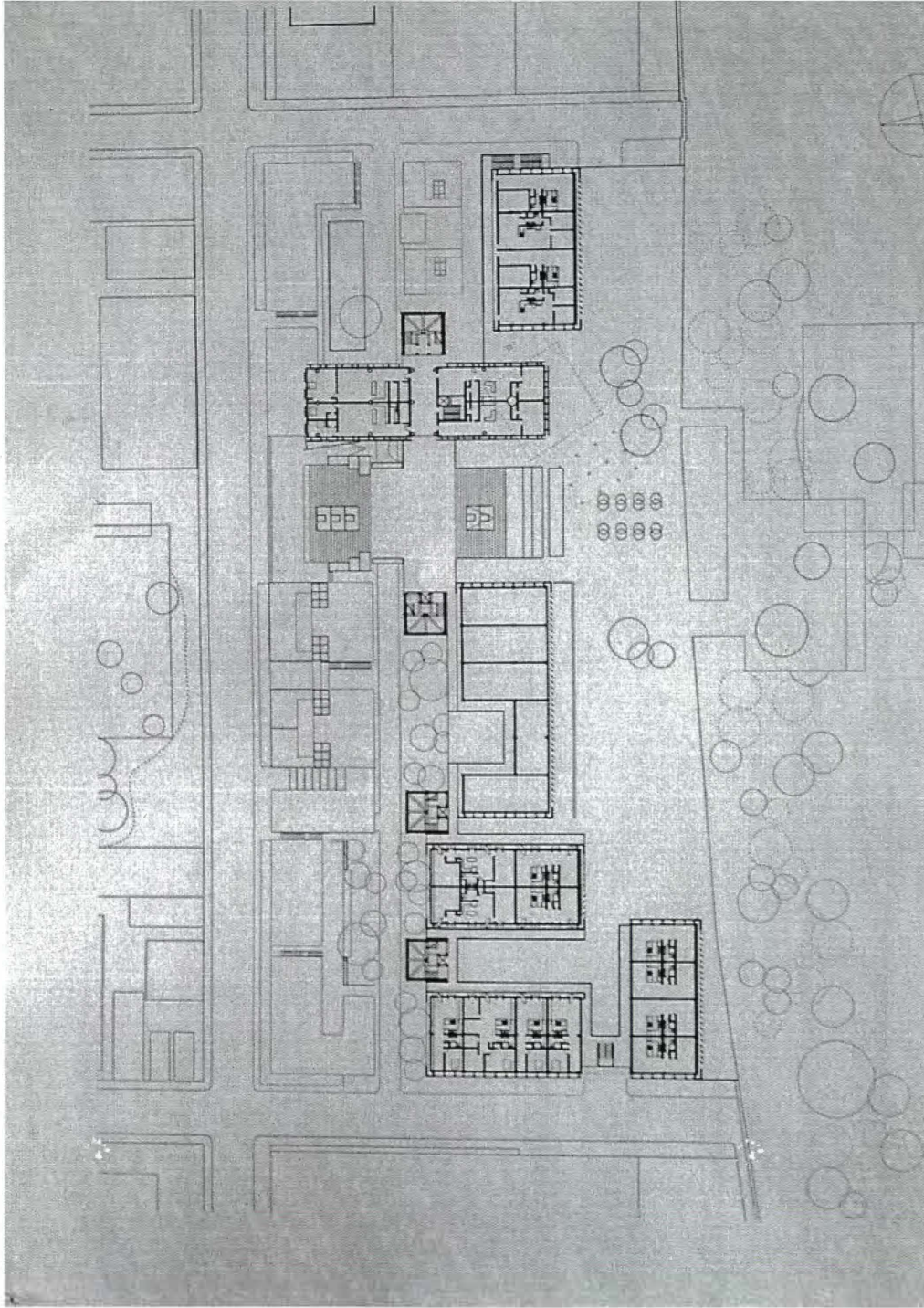


FIGURE 26: UPPER LEVEL PLAN

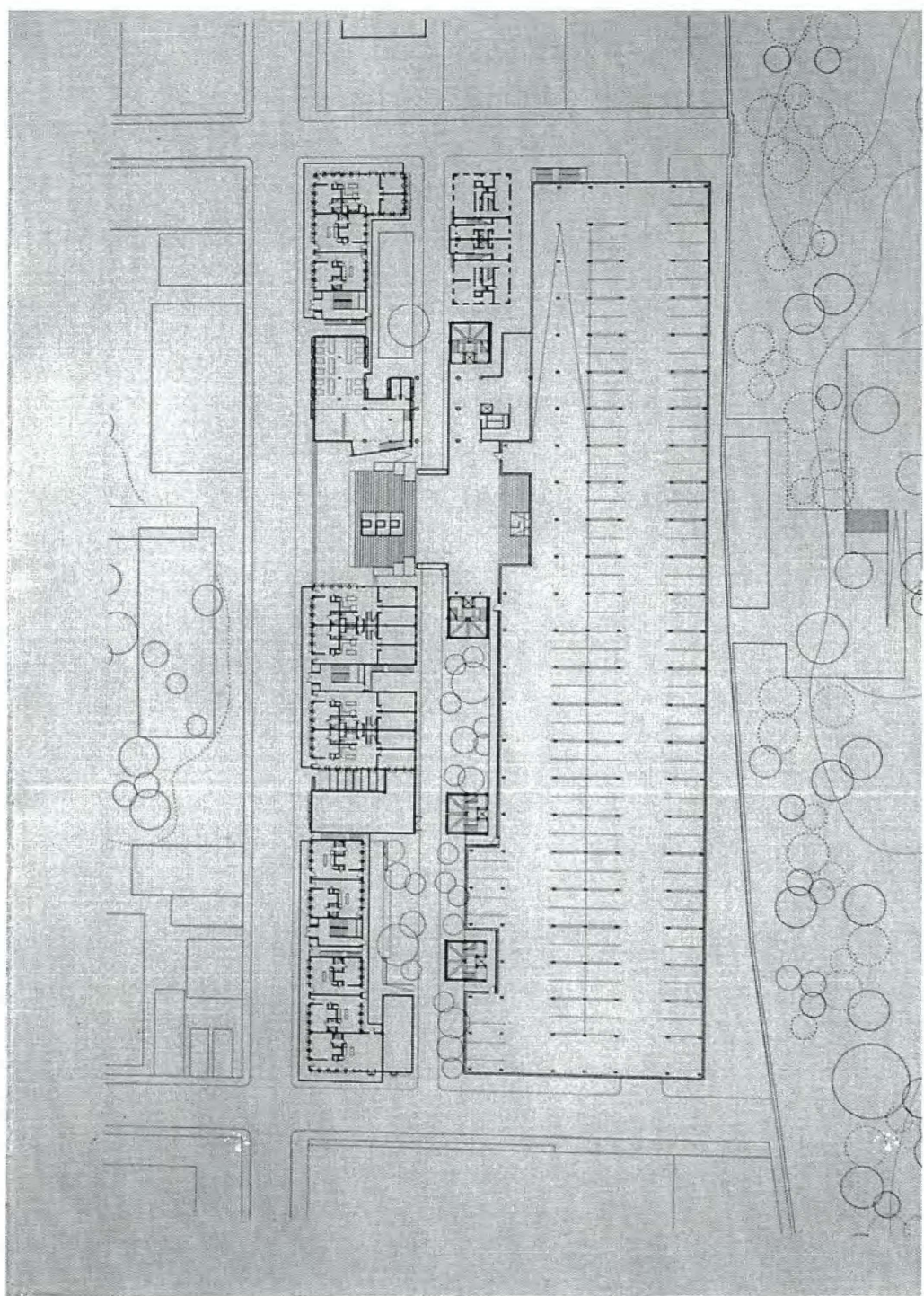


FIGURE 27: MID LEVEL PLAN

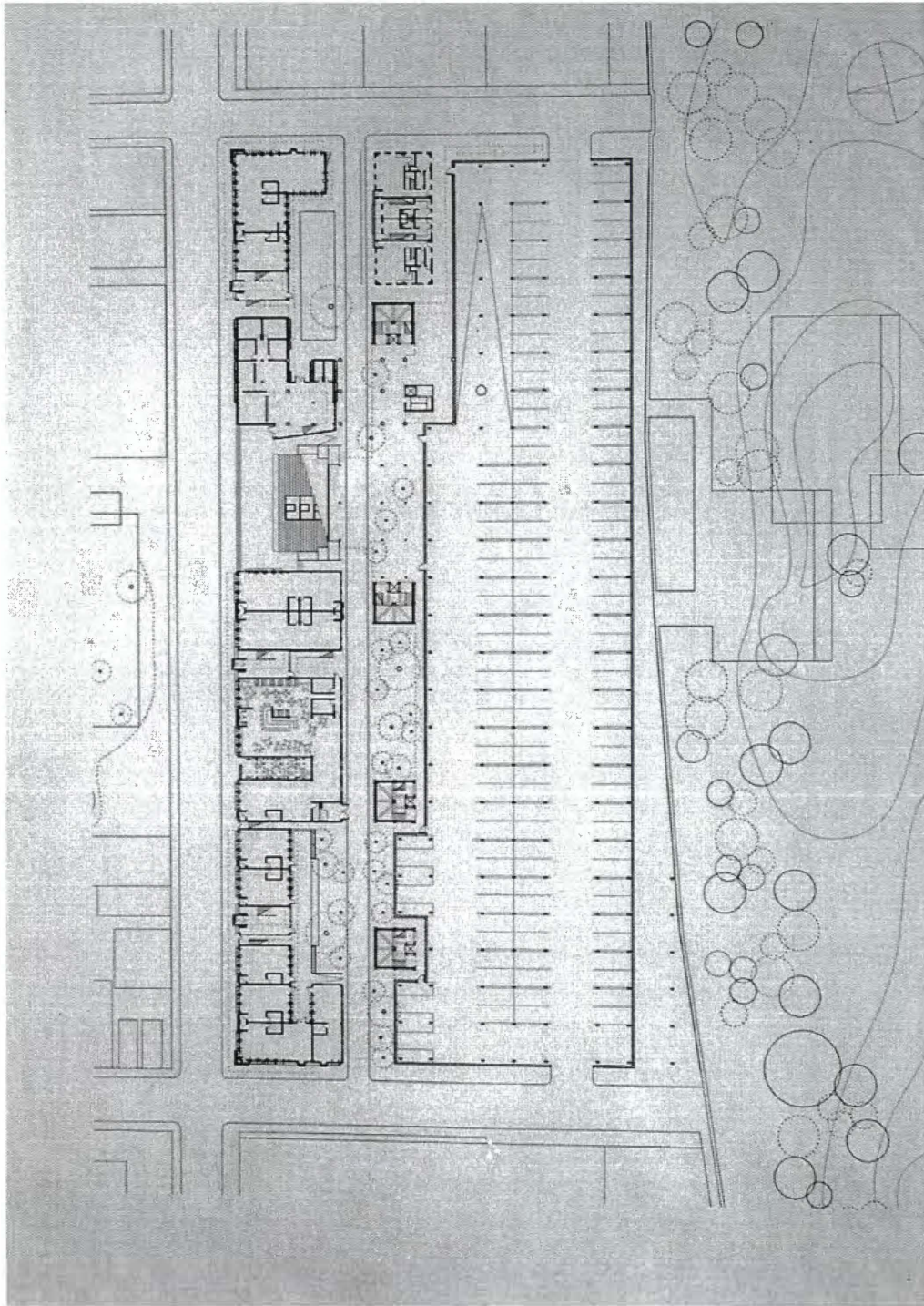


FIGURE 28: LOWER LEVEL PLAN



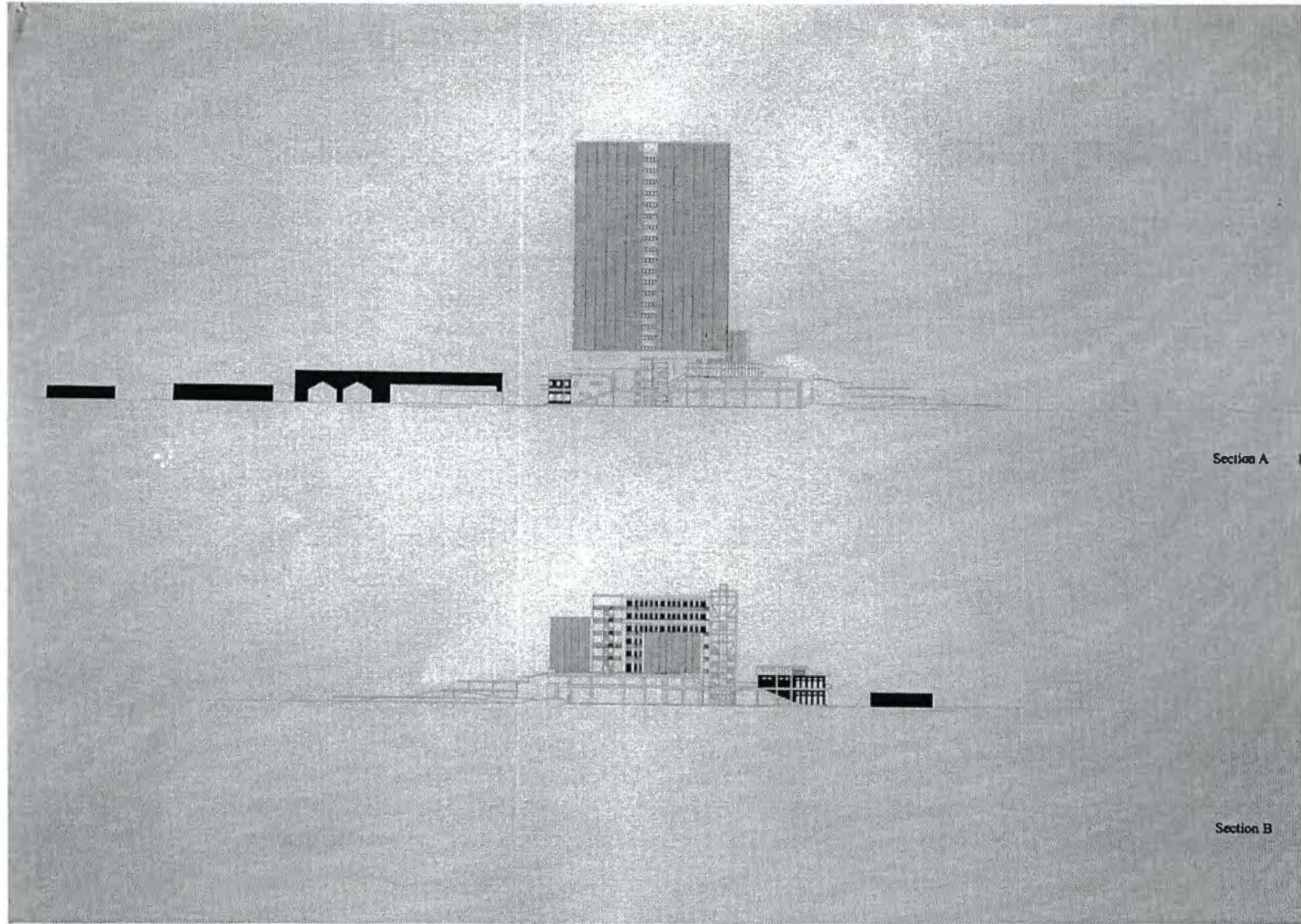
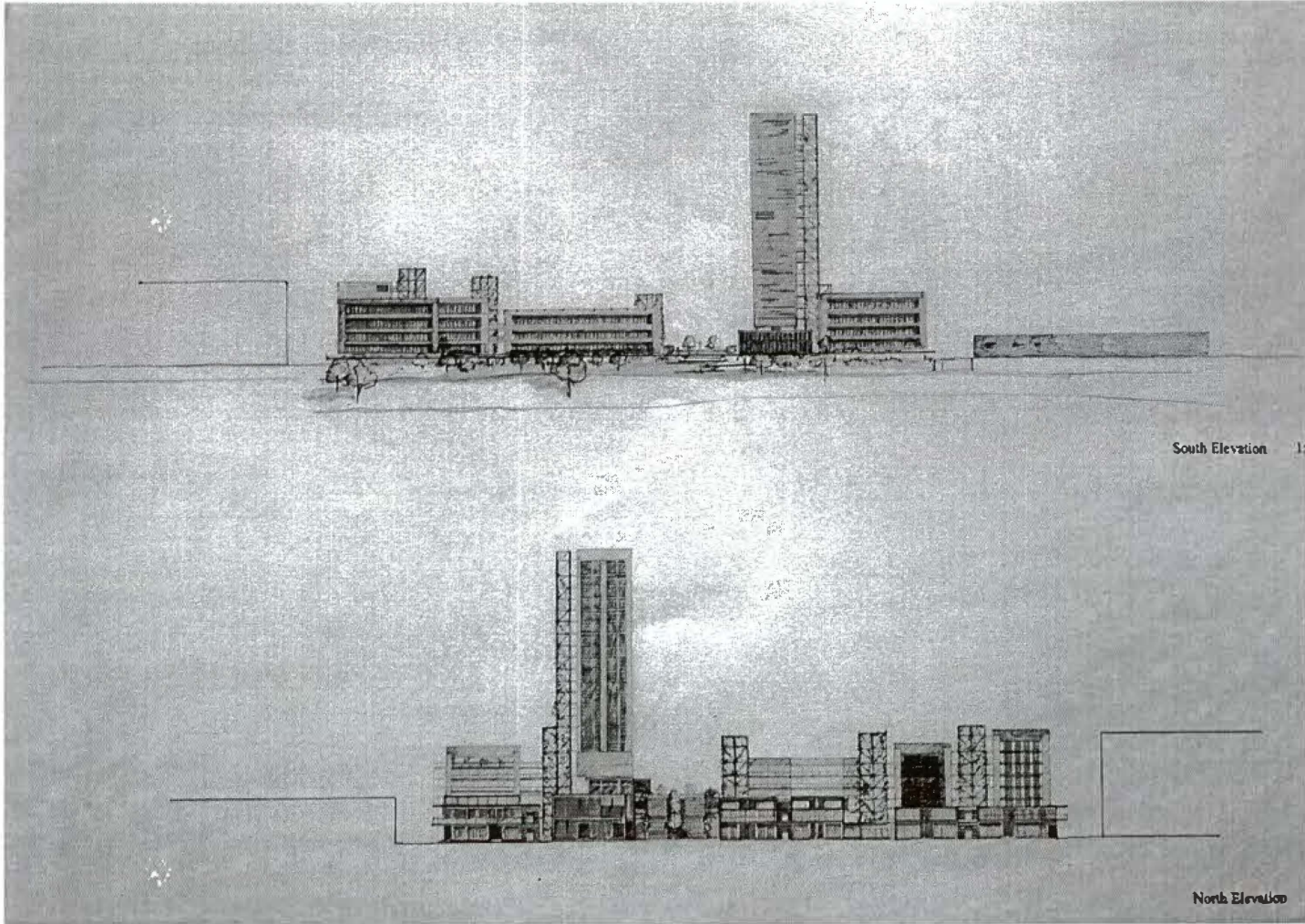


FIGURE 29: SECTIONS



South Elevation

North Elevation

FIGURE 30: ELEVATIONS

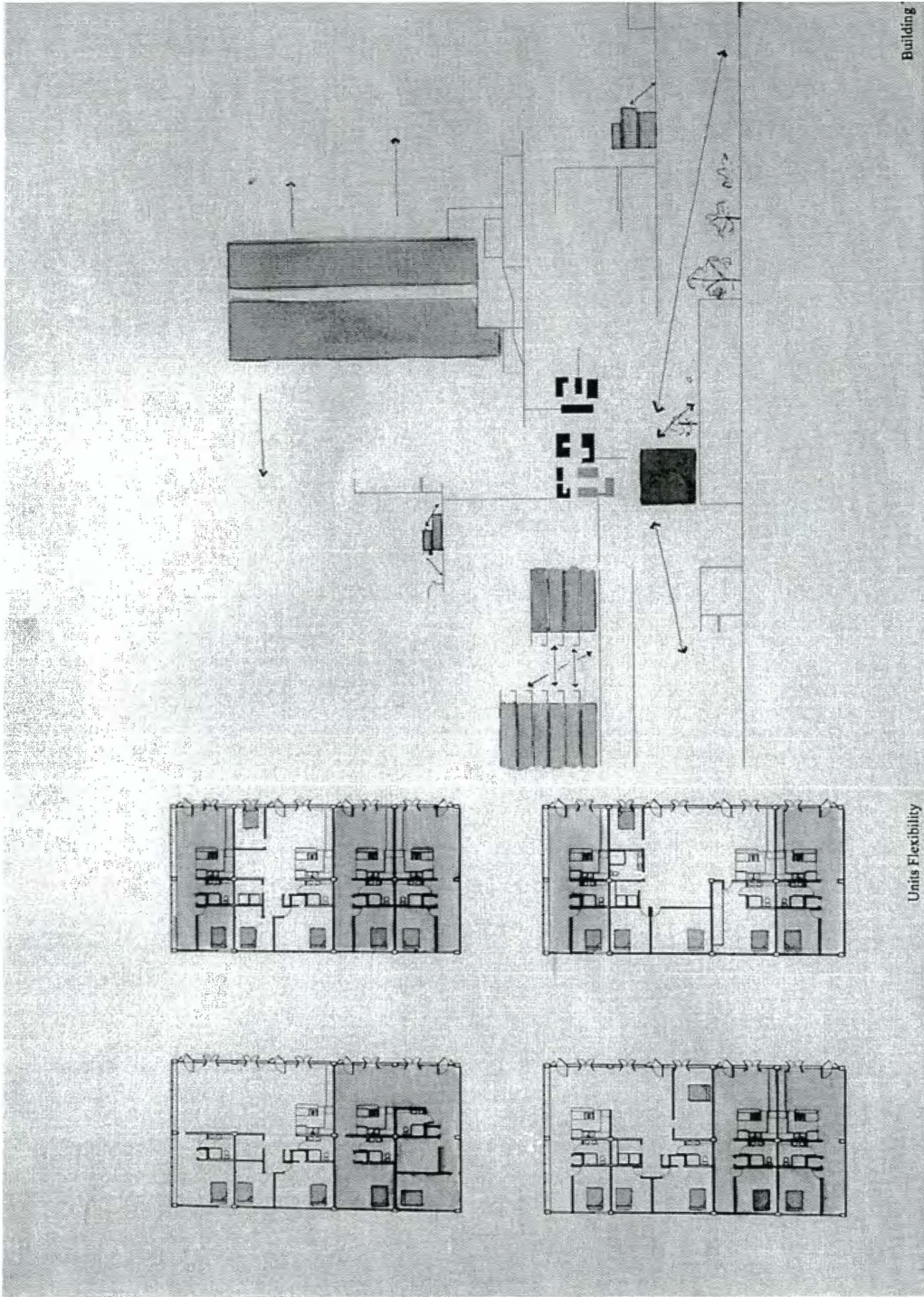


FIGURE 31: UNIT FLEXIBILITY AND HOUSING TYPES

VITA

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CHUN-YI WANG WAS BORN IN TAIPEI, TAIWAN ON OCT 10, 1970. HE MOVED TO UNITED STATES IN 1983. HE RECEIVED HIS BACHELOR OF ARTS AS A COLLEGE SCHOLAR FROM THE UNIVERSITY OF TENNESSEE, KNOXVILLE IN 2004. IN 2006 MR. WANG EARNED HIS MASTER OF ARCHITECTURE DEGREE FROM THE UNIVERSITY OF TENNESSEE, KNOXVILLE.

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