Thesis

D. W. Rau
THESIS

Mt. Adams Funicular
Cincinnati, Ohio

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College of Architecture and Planning
Ball State University
Muncie, Indiana

1983
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About writing this thesis

This book, for the most part, is being written in the biased mode of a retrospective and is being set down at my parents home in Kentucky. The project itself took the better part of a year to complete. I now find myself embarking upon a "civilian" life, having completed my studies with this thesis.

I would not impose an account of my escapades upon the reader if I had not been prompted to do so by professorial request and requirement and by a sincere desire on my part to document an intense personal experience. Although I would hope that my building design could speak for itself on matters of firmness, commodity and delight, I present here a report of the processes and philosophies which led to that final form. Throughout the text I use the first person pronoun, the I, without apology for as Thoreau states, "We commonly do not remember that it is, after all, always the first person that is speaking." Likewise, I, myself, can only claim responsibility for my own ideas, though they are necessarily a synthesis of the thoughts of my mentors, both knowing and unknowing. I therefore address my writing to these tutors if they be willing to see what they have made of me and to my friends, my peers who I can only assume are lost with me.

The work, then, is presented as it was completed, by seasonal quarters. Within the framework of each quarter I have tried to determine what was occurring (if anything) along the lines of process and procedure as well as monitor those events which seemed to have had a significant effect on the design or my philosophy. (Of course, as any designer knows, to detail all sensory, mental, and spiritual input is flatly impossible. Consequently, this book is ultimately a meager pastiche of these stimuli.) In these sections I would hope that the reader bear with me and try to grasp the picture as I did, as a fuzzy whole. To help clarify this condition I have included several extraneous articles of pertenance. These are inserted as close to where they chronologically occurred as possible. Each section of the book ends — as the quarter did — with a graphic presentation of the project as it stood at that point in time and mind.

It is not to be assumed from this format that the project itself has come to an end simply because the text has. Rather, the implication should be one of a reflective pause somewhere in the constant development of an infinite number of ideas. Hopefully, this will become obvious as natural in my discussion of each phase of the design work.

What lies at the end of this book then, is no more or less important than any of the thoughts presented along the way. There is no final product. In this respect, the writing of the manuscript has been an exciting exercise because it afforded me with a formal opportunity to examine, define and query my design processes and philosophies. I have ended with an unfinished project that suggests something which may later become more complete but, still never perfect.

D.W. Rau
June 1983
Summer
Choosing a thesis project

The senior thesis project, we are told, is an opportunity for a student of advanced standing to perform a personal examination of his design theories, concepts, processes and general ability in the form of a specific building design. After looking at the projects produced by the class immediately ahead of me and in discussing potential projects with my peers, I began to detect a problem within this notion of individual discovery. The conflict was this: we seem to be encouraged to blindly pick a building type to be placed on a site but then responsibly create a design for that building. If one chose to design a church on a vacant city block then that choice in itself seemed to limit the degree of discovery. Put more positively, the decision of what and where to build are integral parts of the creative design process.

I was additionally concerned about the reactions I received whenever I suggested some generic building type as a potential thesis project. No matter what the building type, everyone seemed to have their own predetermined expectations. And yet, these were the people I would be relying upon for "objective" criticism of my design. I wanted to select a project which would be unique and which would force my critics to judge it purely on its own merit. Whenever I received a state-of-the-art example of a specific building type I tried to understand its success by looking at the unique problems the design attempted to solve.

I concurrently began to develop the thought that if a building and its site are to be successfully linked in design they should be married from the very beginning. For example, I did not want to decide to build a high school and then later choose the site. If anything, the site (and more ideally, Nature herself) ought to suggest the building. In turn, the building would define itself. This is when I seriously began to consider my thesis.
I spent the summer that year with my parents in Cincinnati or more accurately in Fort Mitchell, a Kentucky-side suburb of Cincinnati. Having grown up in and around Cincinnati I had by then developed a deep affection for its unusually dense mid-western downtown, its distinct neighborhoods, its parks and, of course, the Ohio River. I knew Cincinnati would be the logical locale for my thesis project because of this intimacy as well as my grass roots awareness of its history, politics and physical characteristics.

Perhaps Cincinnati’s greatest asset is its topography. As a river town, Cincinnati grew up in a valley and eventually over the surrounding hilltops. These hills define the downtown basin as well as each of the city’s neighborhoods. One of the earliest and most fascinating of these settlements is Mt. Adams. To me Mt. Adams exemplifies the European village “Americanized.” For reasons I was not aware of at the time, it appealed as the perfect spot for my thesis. As a mature neighborhood it had a charming fabric which seemed to dictate landuse naturally. For my site, then, I chose a hole in this fabric—a parking lot which commanded a spectacular view of the city, especially at night.

Rather than immediately formulate a program for a building, I decided to research the history of the site. Surely, in a village so old this land had not always been a parking lot. The assumption was correct; the site had for some time been host to one of Cincinnati’s grandest traditions—the Mt. Adams incline. Actually a funicular, this incline was used to raise trolley cars up the slope from downtown to the top of the hill. This facility in turn supported several businesses including beer gardens, beer halls, restaurants, music halls, a pyrotechnic garden (for fireworks displays) and all types of shops and businesses. At the risk of being nostalgic I began weighing the possibility of recreating such a scene.

A visit to the city’s Planning Commission concreted the idea. A plan was already in the works for a project of similar intent. The Cincinnati 2000 Plan called for some type of public transportation system connecting Mt. Adams more directly to downtown and a feasibility study for a suspended tramway was already underway. I was not alone in my expectations for the site.
Summer classes at Northern Kentucky University gave me the leisure to read and reread several books which would later have a profound influence on my thesis and my design philosophy. I list and annotate this literature not as entries in a bibliography but as selected readings. Because they had their effect prior to the commencement of the design, I present them here so that the reader might better understand what follows.

Complicity and Convention: Steps Towards an Architecture of Convention, by Hubbard. A clinical discussion of how we visualize architecture. Makes extensive use of models such as typefaces, the law and games. Uses Goodhue’s rendering techniques as an example of how an architect might create visually believable buildings.

Don Quixote, by Cervantes. Illustrated to me how important Romanticism is in our lives. Don Quixote exemplifies the Shakespearean romantic hero but he is out of place. His tragic, achronistic existence points out man’s unexplainable need for fantasy.

The Leaves of Grass, by Whitman. Beautifully shows how fragile our relationship with Nature can be. The poetic style captures a real requirement in each of us to be attentive to our basic, instinctive needs.

The Praise of Folly, by Erasmus. Points out the ways in which humans are silly to their own benefit. Helped to remind me that I can never reach perfection so I might as well enjoy the trying.

The Timeless Way of Building, by Alexander. A clear concise description of that “Quality without a name” which all truly beautiful architecture seems to have. Helped me to focus my attention on the human aspect of design by explaining how it has been done in the past. A very meaningful book.

Walden, by Thoreau. Helped me resolve problems with democracy, society and individualism in architecture. Thoreau’s naturalist approach to life was a model for me and my life. His discussion of the various ways many Americans squander their freedom was both humorous and enlightening.
Fall
The program

Introduction

Cincinnati is a city of neighborhoods separated geographically by abrupt changes in terrain. Downtown sits below along the Ohio River and is shared by the neighborhoods situated on the surrounding hilltops. Each neighborhood has a character and image all its own, generally determined by the way it clings to its particular hill. Each area is named for the hill it occupies—places like Mt. Auburn, Mt. Lookout, and Mt. Adams.

Historically, these neighborhoods could be reached easily by trolleys through the use of funiculars or inclines. These mechanisms allowed the trolley to park on a platform which then, through a system of cables, traveled up the slope. Once at the top, the trolley simply moved off and on along its route. One neighborhood in particular—Mt. Adams—depended on its incline because of its uniquely isolated situation. Bounded by steep hillsides on three sides and Eden Park, the city’s major urban park on the fourth, its is virtually inaccessible on foot.

Unfortunately, the funiculars are all gone now including the one at Mt. Adams. It was replaced by buses and the private car. But the buses are slow and inefficient because they must weave their way around the sides of the hill to reach the top. And new expressways running along the base of the hill have only cause further isolation.

Meanwhile, Mt. Adams has become a renewed and vital part of the city. A new, active group has moved in and mixed with the old families there. It is the site of much of the city’s rehabilitation. An old monastery has been turned into offices, a pottery has become a restaurant, an abandoned elementary school is now occupied by art studios, a professional playhouse was built at the edge of the park. Mt. Adams is now a place to go, a place to show visitors.

What is needed now and is being proposed by this project is a new and stronger link between downtown Cincinnati and Mt. Adams. This proposal calls for a funicular which would tie together a system of light rail surface vehicles running from Government Square transportation center in Downtown, through Mt. Adams to the overlook in Eden Park. This line would be operated by Queen City Metro, a public corporation. In order to maintain and complement the station for the funicular, as well as utilize the site to its fullest potential, the program includes a small cafe, a restaurant and bar, a beer hall (a function indigenous to the area) and several small shops.
**Project Brief**

**Project**
Mt. Adams Funicular

**Location**
Celestial Street  
Mt. Adams  
Cincinnati, Ohio

**Building Synopsis**
The project is based on funicular systems found previously in Cincinnati and known locally as inclines. Redevelopment of this concept is now being proposed by city officials. This project assumes that a new funicular and station for Mt. Adams will be built on the same site as the original Mt. Adams incline (demolished 1948). The program includes the station and its support areas, a beer hall, a cafe, a restaurant, and several shops. Additionally, considerable public space will be oriented to the spectacular views of the city which the site affords.

**Building Area**

<table>
<thead>
<tr>
<th>Indoor</th>
<th>20,900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covered</td>
<td>56,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>49,100 (sheltered areas at 50%)</td>
</tr>
</tbody>
</table>

**Site Synopsis**
The site is a hillside and plateau in Mt. Adams, a neighborhood of Cincinnati, Ohio. The surroundings include a monastery and the Bohemian context of Mr. Adams to the north, a rehabilitated pottery (Rookwood Pottery) to the west, dramatic views to the south, and a fifteen story apartment block to the east.

**Site Area**
80,000 sf

**Client**
Queen City Metro, a public corporation which operates Cincinnati’s public transportation.

**Users**
Trolley drivers and operators, trolley passengers, commercial tenants, and their customers.

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**Scope**
The project consists of three major components each consisting of smaller components. It is made up of (1) a viaduct from Fifth Street to Kilgour Street over the expressway, (2) a Funicular up the Mt. Adams hillside past Baum Street and Oregon Street and (3) a station at the top of the incline on Celestial Street.

The Viaduct is a means, somehow, for the cab to move from the east end of Fifth Street to the foot of the Funicular at Kilgour Street. Because of its length and position it must necessarily carry two sets of tracks.

The Funicular carries the car to the top of the hill on a platform which is counterbalanced with a second, descending platform. The system works on a cable controlled at the top in the station and monitored from the top as well as from a small control station at the foot of the Funicular. Kilgour Street, Baum Street, and Oregon Street must all be traversed in some manner.

The Station, on a plateau just below the crest of the hill, contains the only true assignable square footage. It houses the station, some retail spaces including a cafe, beer hall, restaurant and bar, and an observation area. Public areas are largely unassignable and will be determined in design.
Objectives

The creation of a transportation system such as this one affords the designer a unique opportunity to investigate certain architectural ideas. Each one is in itself important to the project; however, in order for the building to truly come alive they all need to work together.

Firstly, the scale and position of the whole system make it a substantial urban issue. The viaduct and funicular will create a major linear corridor not previously there. The movement of the trolley along its path from downtown Cincinnati to the top of Mt. Adams will provide a sense of animation not normally found in architecture. The station itself will serve as a type of portal both to Mt. Adams and to the city below.

Secondly, the funicular and its station will immediately become a landmark creating a node and point of reference both near and far. The site is now out of repair and distracts from the surrounding buildings. There is no use of any sort being made of its spectacular view. The immediate area is undefined and needs to be shaped into a more important part of the Mt. Adams neighborhood.

Thirdly, to be successful this project must allow the people who use it to really live when they do so. Transportation structures are by their own nature places where people extend their emotions to express feelings, take chances and make decisions. This project must allow this nostalgia and fascination for the mystery of travel to come alive.

Building Criteria

The primary function of the building is that of interfacing two modes of transportation — pedestrian and trolley. Also, there is a functional need for ample public space connecting the commercial spaces and observation areas. Accordingly, the building will be composed largely of unassignable space. These areas should be conducive to frequent and convenient use by the public.

A large portion of the building will be open to the elements as outlined in the space requirements and space summary. This necessitates a response to environmental, security and safety considerations. Environmentally, the building acts as a shelter of various degrees depending on the functions within. The amount of enclosure should provide a feasible balance which allows for the desired connection with the exterior and protection from all weather conditions.

Conversely, the building should be capable of being completely closed to the public. This relates to the degree of openness in the design. Again, a reasonable balance should be achieved. Another security issue is that of nighttime use. The facility is expected to have its peak usage during the evening hours. This, combined with the adjacent functions which promote inebriation presents an important concern.

Public safety must be a direct result of the architecture in as much as the trolley system relies on minimal supervision. Therefore, loading zones, track right-of-ways, and transfer points, etc. must be clearly identifiable as places in which to move slowly and be alert. Likewise, crowd control must be considered. Also, a feeling of safety and friendliness should pervade the entire facility. This implies a sensitivity to proper lighting levels, spatial proportioning, materials and their maintenance.

Naturally, the building design should be responsive to current standards of economic and energy efficiency. Although no quantifiable guidelines shall be set the building will, as a public facility, be scrutinized for its use of public funds in its design and maintenance.

<table>
<thead>
<tr>
<th>Trolley system</th>
<th>Beer hall</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Cafe</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shops</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restaurant and bar</td>
<td></td>
</tr>
</tbody>
</table>
Exterior Criteria

Note: exterior spaces are extensive and, as such, several of them have been assigned space requirements.

Generally, the site should be conducive to all types of public and social gatherings. This ranges from a couple taking in the city view to a crowd of 2,000 attending a symphony concert. Provisions for each must be made, as well as all variables in between.

Public access into the site will be from Celestial Street, Oregon Street, and of course, the trolley. Primary emphasis is given to the Celestial Street approach. The Oregon Street access may be more private as it will be used primarily by those residents living downhill from the complex.

Parking access will be shared with the existing facility at the Celestial Apartment building. Although the practice of driving to the facility will be rare, the entry to the parking facility should be as much as is possible in the act of entrance into the building.

Service access should be discreet and efficient. Possible points of access are Celestial Street or the existing alley on the west side of the site. Oregon Street is not considered acceptable due to its excessive drop in elevation.

Miscellaneous amenities on the site shall be provided and are listed below. (It has been noted where the location of an item is specific.)

Paths, walkways and all paved areas. Standard performance requirements should be met to provide safe surfaces which will be virtually maintenance free. All paved surfaces should reflect the character of the building and adjacent context in both material and design. Reference is made to a recent (Winter 1982) sidewalk renovation project in Mt. Adams which utilized square brick pavers.

Planting. An earnest attempt should be made to retain all existing healthy vegetation. Additional plantings are at the discretion of the designer.

Lighting. Sufficient lighting should be provided to assure safety and security as outlined in Building Criteria.

Seating. Numerous places to sit are considered by the programmer to be prime requirements for the success of a public space. Variety of seating types and environments should be considered.

Bus Stop. A covered area at or very near the bus loading zone.

Map/Information Area. Preferably near the main exterior entrance. May be part of a system of map and information kiosks located throughout the building and elsewhere along the trolley line.

Fountain. Focus of main public space at the intersection of trolley, bus and auto zones is suggested.

Space Relationships

<table>
<thead>
<tr>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant and Bar</td>
</tr>
<tr>
<td>Beer Garden</td>
</tr>
<tr>
<td>Cafe</td>
</tr>
<tr>
<td>Beer Hall</td>
</tr>
<tr>
<td>Trolley Station</td>
</tr>
<tr>
<td>Shops</td>
</tr>
<tr>
<td>Street</td>
</tr>
</tbody>
</table>
Space Summary

Indoor Areas

<table>
<thead>
<tr>
<th>Station</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Room</td>
<td>500 sf</td>
</tr>
<tr>
<td>Manager's Office</td>
<td>150</td>
</tr>
<tr>
<td>Secretary</td>
<td>100</td>
</tr>
<tr>
<td>Lounge</td>
<td>500</td>
</tr>
<tr>
<td>Restroom</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retail</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shops (5 @ 400 sf)</td>
<td>2000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cafe</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchen</td>
<td>800</td>
</tr>
<tr>
<td>Storage</td>
<td>250</td>
</tr>
<tr>
<td>Restrooms (2 @ 100 sf)</td>
<td>200</td>
</tr>
<tr>
<td>Janitor</td>
<td>100</td>
</tr>
</tbody>
</table>

(For dining space see Sheltered Areas)

<table>
<thead>
<tr>
<th>Restaurant and Bar</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Dining</td>
<td>2000</td>
</tr>
<tr>
<td>Bar</td>
<td>500</td>
</tr>
<tr>
<td>Reception</td>
<td>250</td>
</tr>
<tr>
<td>Kitchen</td>
<td>1500</td>
</tr>
<tr>
<td>Storage</td>
<td>250</td>
</tr>
<tr>
<td>Restrooms (2 @ 100 sf)</td>
<td>200</td>
</tr>
<tr>
<td>Employee Restroom</td>
<td>50</td>
</tr>
<tr>
<td>Cashier</td>
<td>50</td>
</tr>
<tr>
<td>Office</td>
<td>120</td>
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</tbody>
</table>

(For outdoor dining space see Outdoor Areas)

<table>
<thead>
<tr>
<th>Beer Hall</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Beer Hall (500 seats w/tables)</td>
<td>10,000</td>
</tr>
<tr>
<td>Reception</td>
<td>250</td>
</tr>
<tr>
<td>Cashier</td>
<td>50</td>
</tr>
<tr>
<td>Kitchen</td>
<td>500</td>
</tr>
<tr>
<td>Restrooms</td>
<td>240</td>
</tr>
<tr>
<td>Janitor</td>
<td>50</td>
</tr>
</tbody>
</table>

Miscellaneous

| Public Restrooms (2 @ 120 sf) | 240 |

TOTAL INDOOR AREAS 20,900

Sheltered Areas

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Parking Garage</td>
<td>45,000</td>
</tr>
<tr>
<td>Trolley Garage</td>
<td>3,000</td>
</tr>
<tr>
<td>Shopping Arcade</td>
<td>3,500</td>
</tr>
<tr>
<td>Boarding Platform</td>
<td>2,700</td>
</tr>
<tr>
<td>Cafe seating (40 seats w/tables)</td>
<td>800</td>
</tr>
<tr>
<td>Observation Tower (5 levels @ 200 sf)</td>
<td>1,000</td>
</tr>
<tr>
<td>Band Shell</td>
<td>400</td>
</tr>
</tbody>
</table>

TOTAL SHELTERED AREAS 56,400

TOTAL BUILDING AREA (sheltered areas @ 50%) 49,100

OUTDOOR AREAS (Only those which are assignable)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Ampitheatre</td>
<td>5,000</td>
</tr>
<tr>
<td>Beer Garden (150 seats w/tables)</td>
<td>3,000</td>
</tr>
<tr>
<td>Dining Terrace (40 seats w/tables)</td>
<td>800</td>
</tr>
<tr>
<td>Courtyard (100 seats w/tables)</td>
<td>2,000</td>
</tr>
</tbody>
</table>

TOTAL OUTDOOR AREAS 10,800

GROSS AREA (BUILDING)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Total building area</td>
<td>49,100</td>
</tr>
<tr>
<td>25% Circulation</td>
<td>12,275</td>
</tr>
<tr>
<td>15% Mechanical</td>
<td>7,365</td>
</tr>
<tr>
<td>10% Structure</td>
<td>4,910</td>
</tr>
</tbody>
</table>

TOTAL GROSS AREA 73,650
Site Summary

A historical marker located across the street from the site perhaps best describes the history of the area. It reads:

"Originally called Mr. Ida, Mr. Adams was a significant section of the Nicholas Longworth Vineyard, which developed the Catawba grape from which America's first champagne was produced. The name was changed to Mr. Adams in 1843 to honor President John Quincy Adams who visited here to dedicate the Cincinnati Observatory. In mid-19th century, Mr. Adams became the home of German and Irish immigrants. Following examples of earlier winter cottages, they built homes conforming to the steeple topography with wood and stone from local quarries. Many homes had a garden, vineyard, spring, and smokehouse. Archbishop Purcell established Immaculata Church (1859) for the German speaking population. The Irish attended Holy Cross Monastery (1873) and Church (1893). Pilgrim Chapel, a Presbyterian teaching station, was built in 1886. Numerous beer gardens and amusement places including the famous Highland House (1875) and the Pyrotechnic Gardens (1850) were built. Residents and visitors traveled to and from downtown via the Mr. Adams Incline (1874-1948). With the addition of Rookwood Pottery (1882), Sterling Cut Glass (1902) and the nearby Art Museum (1881) and academy (1869), many artists chose to reside here.

Topography, architecture and history combine to give Mr. Adams a unique atmosphere and focus among Cincinnati's legendary hills and neighborhoods."

Mr. Adams is actually a large hill overlooking the Ohio River. Its hillsides are stable primarily due to the dense vegetation which has been allowed to grow on the unbuildable land. Much of the land is in fact unbuildable by conventional means due to the severe slopes.

Mr. Adams is also a neighborhood laid out on a rough grid frequently broken to accept the irregularities of the terrain. The neighborhood is now home to mostly a new gentry which has refurbished the homes and businesses. There are numerous restaurants and bars in the vicinity providing an active night life. The houses are for the most part of an older stock, one to four stories in height, and of traditional townhouse design. Most new structures make an attempt to maintain this aesthetic; however, there is one newer high rise apartment building located adjacent to the site.

Beyond this neighborhood but still on the hill is Eden Park, Cincinnati's major urban park. It contains several cultural facilities including the Playhouse in the Park, Thompson Shelterhouse Theater, the Cincinnati Art Museum, the Seasongood Pavilion Amphitheater, Cincinnati Museum of Natural History and Krohn Conservatory, as well as various park amenities such as an ice skating pond, a gazebo, and an overlook. All of this is within walking distance (15 minutes) of the site.

Accordingly, the people who live in Mr. Adams take great pride in their neighborhood. Indeed, people from all around the city appreciate "the Mount" and frequently utilize its amenities.

Site Description

Specifically, the site is on Celestial Street along the edge of a plateau on Mr. Adams in Cincinnati. This plateau is shared by Rookwood Pottery (now a restaurant and offices) to the north and The Celestial (a modern apartment building with a restaurant on top) to the east. The site extends southwest down the hillside past the houses on Oregon Street, Baum Street and Kilgour Street and finally across a network of expressway ramps to connect with Fifth Street as it emerges from Downtown.

The change in elevation from Celestial Street to Fifth Street is 225 ft. The distance between these two points is approximately 1/3 mile. The expressway is then depressed another 50 ft. from the city datum. Shown on the maps as being under construction, these ramps are now nearly complete.

The site for the upper station is roughly 40,000 sf in area, or about 1.5 football fields. It is basically flat on the portion fronting Celestial Street and steeply sloped along Oregon Street. The site provides ample space for the programmatic needs of the project.
Climate

The region's weather is moderate, typical of an American midwestern city. Due to the large body of water nearby (the Ohio River) and the extreme elevation changes, the site is susceptible to abrupt weather changes.

Temperature

<table>
<thead>
<tr>
<th></th>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
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<td>75</td>
<td>109</td>
<td>79</td>
<td>77</td>
<td>71</td>
<td>60</td>
<td>46</td>
</tr>
</tbody>
</table>

Winds

North ↑
Fall quarter design studio was a testing ground both for the design idea and the student. The main objectives of the course were to finalize a facility program, complete a building type analysis, clarify intentions, perform an analysis of the site and then premiate a preliminary design. With all but the last objective met, I began looking for the building form.

My priorities for the initial design were to establish a character for the building, define the building’s site placement and develop surrounding site uses. Circulation immediately became a major concern especially in respect to the approach to the trolleys themselves. Also, visual clues and framed views as devices were developing early on.

My process for this quarter of design relied on a relaxed atmosphere of experimentation. Although spatial concepts were formulated and then tried out, no strong, overriding idea carried the design of the building. Meanwhile, I attempted to fix parameters for the building’s spatial volumes, levels and zones. These were arrived at chiefly through the use of Christopher Alexander’s helpful book *A Pattern Language.*

Fall Studio Critics
Paul Laseau, Architecture
Fred Johnson, Landscape Architecture
Jeff Culp, Structural and Mechanical

Outside Critic
Dan Woodfin, Architecture
Winter
During winter quarter design studio we were required to further develop the design in two stages. The first stage was an informal presentation which dealt with a redefining and clarification of the initial, fall quarter scheme. Strengths and weaknesses, as well as possible alternatives were discussed. The quarter’s final presentation was to be a firm delineation of what the building would ultimately become. That is, the design ought to be nearly complete (except for finer detail) by quarter's end.

The design for my building matured considerably during this period, especially in the last two weeks. The exact reason for this “breakthrough” remains a mystery although several developments seemed to have played their part. First, a definite idea had taken hold concerning materials, structure and systems and there might suggest building form and character. In this respect I tried to relate myself to culturally resolved processes. Stone was used instead of concrete. Steel trusses were used in a traditional way. Still, unique spaces were being formed. Second, a positive approach was taken in the spatial layering and relationship development of both the interior and exterior. This enabled each space to become real and tangible. Third, although the concept of a gateway had been identified early on, only now had I realized a means of exploiting it. Once I had gotten a grasp on the project’s solids and voids the real meaning of the concept was much clearer.

The final presentation for this quarter then was completed in a sort of avalanche. Suddenly, the design seemed to solve problems for itself. An idea about “found architecture” developed in my head (more on this later) and a whole new scenographic attitude about architecture occurred to me. At this point the design was basically complete, lacking only finite maturity in its elevations and details.

**Winter Studio Critics**

Paul Laseau, Architecture
Jeff Hall, Landscape Architecture
Jeff Culp, Structural and Mechanical

Outside Critic
Dan Woodfin, Architecture
Spring
During the Spring quarter design studio I decided to accept an opportunity to compete in the Paris Prize competition held by the National Institute for Architectural Educators. This competition was executed in six weeks in a special "competition studio." The program was for a World Bibliographic Center in Chicago, Illinois.

This interlude was a welcome opportunity to begin fresh with a new project and try some of the design methods I had learned from my thesis experience. For this design I first developed a strong, contextual site which seemed to complete (or rather add to) a composition that already was existing. Next I worked with the visual image of the building in perspective sketches. Although the program was always in mind and actually did prompt building forms, I never allowed functions to dictate the image.

Projects were submitted 14 March 1983. The result of the judging was not available at the time of this writing.
Philosophy of Architecture
Final Examination

When asked "As an architect, what is your philosophical and intellectual responsibility?" I responded:

"My most sincere goal is that as an architect I would never be unnecessarily philosophical nor intellectual — responsible, yes. By this I mean to say that I firmly believe that an architect does have the responsibility to inform himself, test ideas, discuss, examine and intellectualize, et. al. However, during design (or the actual act of being an architect) this must all be subconscious. In other words, the philosophical thoughts of an architect should be so totally internalized that the design flows naturally out of his cultural history.

"Perhaps an illustration would help. First of all, anyone can build. When a tribe of nomads relocates and begins to build a new settlement, very little about its design is consciously conceptualized or philosophized. Everyone can begin to build with confidence and without fear of "ruining" the design because they all understand how it must be done. This is not to say that there is no guiding thought as to plan and organization or that there cannot be powerful philosophical meaning within the design. The construction is successful because the society is working from a shared cultural system. In nature we see this everywhere — bees can build in mass with total coordination; birds construct nests from instinct. I believe that men, as creatures of Nature, are like this too, regardless of their individual cultural history, specific locale or current technological mode.

"To build something one must touch what one builds. To this extent, any of the architect's mental pyrotechnics are pointless. Indeed, any of his tools — the parallel bar, the model — are useless. Consequently, I prefer not to monopolize myself with philosophy (that is, concern myself with extra-cultural thoughts) during design."

To the question "As an architect, what should you do to contribute to and/or improve society?" I replied:

"I believe my contribution to society should ultimately be an anonymous one. I would like to be so steeped in my own culture that any buildings I might produce would be so totally natural as to go unnoticed — or rather, not obvious. The exception to this, of course, is the one or two buildings one might produce in a lifetime which require true self-consciousness.

"I would hope that I can attain a type of 'egolessness'; something like Charles Moore's 'large ego' that takes joy in letting the most people possible feel as though they designed the building. For me, this is very difficult to do — especially after being edu-
The great cathedrals (indeed any of the preIndustrial buildings which we call great) could never have been produced without highly developed trades and crafts. I see no logic in the abandonment of them simply because of a change in technology. Note the Bauhaus, originally intended as a school which would integrate the arts and industry and which at first placed so much value on the arts and crafts movement.

"Working like this gives us buildings that live. When we walk along a street and discover a place constructed like this it is alive. Found architecture is imperfect and does not try to be perfect. As such, it is immune to the fine-tooth-combing, labeling and name calling that 'modern' architecture must endure. A found building grows nobler with age. Buildings like this are still all around us and I want to keep them and build some more. There can never be enough of them."

I regret that in my responses the question of the architect's responsibility (or at least mine) was not clearly addressed. To this end my professor asks, "What are you willing to take responsibility for, if anything?" I would briefly say that I want only to take responsibility for the conduction of architecture from the ideas, desires and needs of the client by way of a shared cultural base to the formation of a natural, "found" architecture created by skilled and knowledgeable craftsmen.
Spring quarter design studio is traditionally used to finalize the thesis design, prepare finished drawings and write a book on the process and product. In my case this procedure was condensed into about a month of activity because of my involvement with the Paris Prize competition. Nevertheless, I tried to meet all the thesis requirements.

By this time I had developed a strong moral philosophy about design. It was a joy to return to the project and be able to more objectively critique its merits and shortcomings. Decisions came easily. Some verbal messages were applied to the building as well as some non-verbal cultural messages. Details, wall sections and fixtures were all finalized.

Much of my building's design cannot be explained or excused in the traditional academic manner fostered by modernist thought. Many of the forms and details are cultural. Although shapes may look familiar or recognizable, they make no conscious reference to a specific source. I personally enjoy its statement of a cultural naturalism.

Spring Studio Critics

Jack Wyman, Architecture

Omar Faruque, Landscape Architecture

Jeff Culp, Structural and Mechanical
Conclusion
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Leaving design

The architectural community today seems far too interested in the product as an artifact. Granted, a design must at some time come to maturity so that it might be built but the current fetishes for seductive renderings and requisit models (sometimes at the expense of good design) come dangerously close to propaganda. A well made building remains so whether it is in the mind of the designer or standing erect on the site. Still, communication is essential. As a tool of communication, a drawing or model need only be clear to the extent of its content. The architect who further embellishes his work is indulging in an unbecoming egotism which causes a false sense of preciousness and finality in the work. I have often seen supposedly finished projects which are little more than well rendered concepts.

For me it is impossible to finalize any design for I see architecture as a continually changing craft. To say the building presented here is finished is as ridiculous as saying a seedling is complete. Nevertheless, it seems necessary to at least acknowledge its maturation and move on.

As I have mentioned previously, the great value of a thesis project for me was the leisure it gave me to explore my processes and develop philosophically. I am now painfully aware of how little (and how much I think) I know. To document these feelings I have written a (comic) article entitled Found Architecture: it will be found at the end of this conclusion. Although I present this article after five years of secondary education and with a Bachelors degree of Architecture, in hand, I must insist that it contains only a moment's worth of thought—already changed and inaccurate.

Although I have tried desperately to maintain a pose of "egolessness" throughout this project, I cannot help but be proud of my work. Personally, I am most satisfied with my thesis, particularly in the definition I have been able to give my fledgling philosophy. I humbly acknowledge that success.

Any notion I have ever had is a synthesis of the thoughts expressed by those around me and in the books I have read. I have already mentioned the influential literature; grateful acknowledgement is made to those persons who constantly reminded me I was wrong as well as to those who agreed with me—the latter being the most frightening. Without categorizing I extend genuine gratitude to my thesis professors Jack Wyman and Paul Laseau; to my classmates Allan McGuire, Steve Mouzon, Joe Rexing and Cathy Weatherford; and of course to my roommate Oscar Garcia. Special thanks to Linda Nelson, Biff Fellows and Dan Woodfin for timely words and concern.

Finally, I extend love and thanks to my family who taught me to believe in myself until it sometimes hurt, and to Marne for more love than I could ever repay.
CONCLUSION

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Found architecture

There exists today a simple, natural way to architecture. It has always existed. It is deep within each of us. It is uniquely human and yet is a part of all of Nature. It is easy and reasonable and sensible. It is irrational and therefore imperfect.

It is always changing; it cannot be planned. It grows quietly from the people inside and outside and gradually defines itself. As a result it produces buildings which are alive.

It is sustainable. It is technologically suitable. It follows the laws of Nature in its sincerity and economy. It is a joy to use and care for. It grows old with grace and dies and is replaced with sorrow and happiness.

It frees man and women. It protects them, it humors them, it is there own. It can surprise, intimidate and bore. It can be elegant, gaudy, homely, efficient or ramshackle. It can be classical or vernacular. Still, it never imposes.

It allows diversity within uniformity; profanity within the sacred. It never tries to be noble although it always is. It is serious but never dull. It is indisputable but always worthy of contemplation.

Above all, it is the simplest thing in the world.

I am aware of this instinct in myself. I do not brag about having found this "way" for those of us who have rediscovered it within ourselves realize how simple, obvious and universal it is. It is like coming home.

Any man who has ever built a building—a barn, a house, a shop; anything—knows all about this way. It is unavoidable. It is purely natural. Just as a man feels hunger, lust or happiness, so he feels this way. Man builds no matter what the climate or environment. How man builds is instinctive; this has been proven by all architectural thought before the creation of a modernist dogma abolishing tradition. Every pre-modernist culture (not necessarily pre-industrial) is founded in this common, instinctive architecture.

However, because man is an animal of intellect and can communicate articulately, he has often times attempted to subjugate his instinctual urges. In other words, man is a creature of civilization; the degree and detail of his civilization is his culture. Unfortunately, in our culture we have suppressed our natural architectural instinct to the point that it has produced a neurosis. Architects appear to be most guilty of this extreme suppression by divorcing architecture from (or at least only paying lip service to) Nature and therefore man himself. This separation of architecture from Nature has come about from a preoccupation with the development of architecture into a Fine Art.

Architecture, to be successful, then, needs only return to Nature and the human instinct to build. When Thoreau built his hut at Walden Pond he exercised this means to architecture in a most poetic manner. His materials were simple—boards, shingles, laths—but also included relatively extravagant items such as bricks and hair. All these things were either purchased from a known, culturally defined technological base or
they were found and claimed by squatter's rights. The resultant building was not the product of a conscious statement invented in Thoreau's mind. The desire to build was not linked with a decision to moralize. Still, there is clearly a powerful statement for those who look. Thoreau's life and manners make the statement. In his architecture, he realized the beauty of Nature. He believed in, cherished, and in "Walden" preaches the way of American Freedom. Translated into generic terms we might call this freedom Cultural Naturalism; that is, the precarious stance of being at once a part of a society with all its benefits, responsibilities and morals and an individual with that condition's implications of freedom, creativity and depravity.

Each of us must walk a line between societal responsibility and individual freedom in everything we do. Still, many designers choose to consciously ignore their cultural liability. As Gordon Cullen tells us in his book "Townscape," in any design there is "an aesthetic manipulation within scientific tolerances." So when we design using only scientific tolerances and too personal meanings the buildings raison d'être can easily come under criticism by anyone who is not intimately acquainted with the "big idea." In this mode architecture degenerates to a petty art where science or technology is merely an excuse for novel form.

By definition Art is a human effort to imitate, supplement, alter or counteract the work of Nature. Conversely, it is clear that for architecture to be more than just clever it must become a part of Nature (if a beaver's dam is part of Nature then is not a man's home?). To assume that architecture is an Art per se, then, is clearly a contradiction. The failure of architecture as Art ultimately lies in its scale and responsibility to relationships. When a school is built along a street it is not as if another work of art had been placed in a museum. Instead, that school becomes a part of the street. Likewise, the street is no more independent than the school; it is a part of the city and so on.

Architecture should more accurately be referred to as a craft. A craft implies all that architecture most naturally is: handwork, proficiency, variety within repetition, intimacy with materials. Just as a bear crafts a den so should a man craft a building.

This is not to say that the work of a craftsman cannot become a work of Art. When the product of a trade or craft "becomes" a piece of Art it is generally appraised as such after it has first naturally fulfilled cultural needs. In other words, the shaker chair has become an Art piece because of the naivete inherent in its design, not because the chair maker was intending meaningful sculpture. Mies, on the other hand, designed an objet d'art for the Barcelona Pavilion which coincidentally happened to be a chair. The intent was Art; furniture is boiled down to science and then becomes an excuse for the Art.

Language is a common metaphor for architecture. It is most useful perhaps not in its construction or grammar but in the way in which we learn it. When a child is raised and taught a language system it enables him to communicate with others of his own culture. For example, the French, by learning their language, are inevitably tied to French culture. Similarly, Cuban refugees living in Miami are raising children who must learn two languages and are consequently members of a hybrid culture. Regardless of the specific circumstances, a natural desire to communicate leads to an early, permanent cultural language within which one can cultivate personal ideas. That is, although we are bound by a common cultural grammar, that does not mean that all thoughts are necessarily the same. Architecture appears to work under these same premises. The fact that our cultural expectations of a door are conventional does not mean that the door cannot be unique (so long as it remains understandable as a door). A man who feels he must invent the door will be successful only if he creates a door which maintains a cultural dialogue with those who might use it. And, although I might appreciate a Chinese moon gate (or learn Chinese), it will always be foreign to me.

When we listen to music we are similarly linked to our society. In western cultures we are accustomed to the octave and the eight note scale. This sounds natural to us. Of course, each of the notes are "natural," it is just that our culture has dictated their relationships. When we hear music based on other tonal scales we can immediately detect it. Although we may appreciate the new sounds, we are ultimately foreign to it. Further, if a composition is played which seems to reject all cultural ties, we become disinterested and disoriented. The music becomes meaningless noise despite its meaning.

For a more concrete metaphor we might turn to the design of tableware. In America we eat from a plate
with a knife and fork. Now, the anonymous inventor of this set up created it to fulfill a need—one which remains fundamentally the same today as it was then. There are most certainly other ways to satisfy this need but if any of them were genuinely better wouldn't they have occurred naturally? A plate however is just fine. It can be manufactured no matter what the technology base. We can make it any shape, color or pattern we wish so long as it remains fundamentally a plate. And if we so desire, we can leave the plate and dine in another cultural manner and understand it for its own societal response to a natural need. Still, there are those "form-givers" who would put any notion of the plate out of mind and begin again. Surely, they will rediscover the plate. Or perhaps they would supercharge the work with meaning and present us instead with Art.

So we can now see how a society's architecture is defined not by artists but craftsmen (including architects) and not by Art but by Nature and the culture to which the craftsman is wed. Cultural naturalism is the balance of society and Nature where the individual rejoices in being a special part of the whole. It is contextual without being conspicuously so. This occurs with the same improvisation and purpose with which a tree grows in the forest.

An architecture which is natural and cultural, scientific and aesthetic, free and responsible, creative and common, depraved and moral is a found architecture. Buildings like this rise above criticism. They are at ease with us and with other found architecture. They can grow and when they grow too old or obsolete they are easily replaced with the confidence that something new and equally natural can be built. They need not be preserved—the loss will be turned into gain. Their form never dictates function (except life). There are many, many buildings like this and whenever we visit one we know that this is how all buildings—regardless of time or technology—ought to be: popularly generic and gloriously singular.

Our architecture is the result of the society, not just the society's needs. As such, we cannot apply the notion of obsolescence to it. As it continues to grow, it changes and we respond to the noise.

To the plate