

CHRONOSYNTHESIS:
A SITE-SPECIFIC SCULPTURE INSTALLED AT WINDWARD COMMUNITY
COLLEGE, KANE‘OHE, O‘AHU, HAWAI‘I

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Chronosynthesis is a single site-specific public sculpture measuring 24' x 12' x 3', installed at Windward Community College in Kane'ohē, O'ahu. It is in the form of a crescent using geometric elements of steel and glass and references a variety of structures from different cultures whose forms and patterns I see as relating to the theme I was interested in abstracting: navigation and orientation through the marking of time and place.

I was intrigued at the prospect of creating a single architecturally scaled piece at a site that was both visually dramatic and culturally rich, where I could create a synthesis of geometric forms through a focused study of the site, its history and contemporary use.

I was further motivated to undertake the project after reading a Hawaiian tale about the "Bamboo Man" (a literal translation of the place name "Kane'ohē").

In those times in Kane'ohē, and in all other villages, you were basically set in the way you were to live. And in Kane'ohē, you were either a farmer or a fisherman. There were a few other kinds of people, called *E'epa*, or, as we call them, non-conformists. The *E'epa* were people who would wander off throughout the forests trying to find themselves, and with the help of nature they could often become poets or musicians. (Kane'ohē's Bamboo Man)

It goes on to tell of two young people who leave their village to explore the upper forests of Kane'ohē, despite warnings that the Bamboo Man will abduct them.

Ultimately, the youngsters meet the Bamboo Man deep in a forest of great beauty,

where he teaches them to play music on instruments made from the bamboo, including a nose flute and notched bamboo sticks used for keeping time and tempo. He tells the children, "... often, people's creativity loses itself if they don't try to seek it. And that is why, he explained, he had come to the forest to seek his call for creativity." (Kane'ohē's Bamboo Man)

This story reinforced my motivation for escaping the confines of the UH Manoa Art Building, leaving behind the constraints of exhibiting in the University of Hawai'i Commons Gallery, both in terms of physical space limitations and the duration of the exhibit.

in February of 2004, I contacted Toni Lang Martin, the Director of Gallery Iolani at Windward Community College about hosting a sculptural installation. Toni was immediately enthusiastic about the project and introduced me to Angela Meixell, the Campus Chancellor, who was also very supportive of the idea of visual arts enriching the WCC campus environs. It was decided that day that the lawn area bounded by the Paliku Theater, Gallery Iolani, the Humanities Building, the Science Building and the domed Imaginarium held the most potential as an installation site. (See site map, fig.1)

The title for my thesis exhibition, Chronosynthesis, is a word I invented to be expressive of the various aspects of the sculpture. *Chronos* refers to time, personified by the ancient Greeks as the all powerful but fallible god. I saw the different aspects of the sculpture as being related through how we, as humans, mark time as we move through it. The sculpture then became an abstracted structural reference to

charting life's journeys, as well as marking cycles of beginning and ending, departure and arrival, and landmarks necessary for navigation and orientation.

The goal I set was to create an artwork that synthesized geometrically patterned structures with markers specific to the chosen site, integrating ideas of time and navigation. To paraphrase Kevin Lynch, a noted urban designer from Boston, landmarks and visual markers are closely allied with the understanding of a man-made environment (such as the WCC campus) and a corollary sense of psychological sustenance to its inhabitants, including a sense of ownership and belonging, provided that the marker is memorable. (Visual Analysis)

A form or pattern then becomes a significant marker when activated by memory. Cycles in nature are noted by us in this way. As a form, the crescent phase of the moon is used to signify both the beginning and end of a journey, or a sense of renewal and continuity by virtue of a predictable returning to the point of origin. In the sculpture, a crescent form is rendered in edge-lit glass that is illuminated during the evening hours, so that it becomes a floating beacon or an object of quiet contemplation with the falling of night, as the underlying steel structure gradually fades into darkness. Like the moon's cycles, the sculpture transforms itself with predictable regularity. Just as the moon is used to mark other periods of time such as a woman's fertility cycle, or as a subdivision of a larger cycle such as the solar year, the sculpture's daily transformation becomes a marker for the time-based social, educational and cultural activities of the site. These cyclic events, manifesting either as cycles of nature or as rhythmic transformations of form in art, become shared experience by a group or a culture through time, manifesting as collective

memory with shared symbols. As markers, they create/add meaning and significance to the path those individuals tread daily.

Experience can also be shared across generations through structures that serve as devices for navigation and orientation. The sweeping geometric patterning of the steel framework of the sculpture is derived, in part, from structure the stick charts used by the Marshallese people as navigation aids for voyaging on the open ocean. The website janesoceania.com describes them as, "... not charts in the western sense but ... instructional and mnemonic devices concerned with swell patterns."

The sculpture references two types of stick charts:

The *Mattang* differs from the conventional European chart in three important respects. Firstly, it is constructed for the purpose of indicating swell lines which the conventional charts ignore. Secondly, the attached shells are able to represent any islands with the stick chart being orientated at the angle most appropriate for the circumstances. Finally, the *mattang* are individual charts constructed by a navigator to suit his own particular requirements. Indeed, an entirely competent navigator cannot, under any circumstances, interpret a chart which he himself has not made. (See fig. 2)

The second form of chart, the *Meddo*, is an extension of the *mattang* chart in that it shows swell patterns in relation to a number of islands. In this respect, the chart itself is an extension of the swell patterns of these islands. The function of the *meddo* is to indicate the position of islands relative to observable swell phenomena, the true distances and directions between the islands being of only secondary importance. (See fig. 3)(Resture)

In the artwork, through the role of artist as navigator, I have created a framework of industrial steel pipe that is a highly abstracted and personal chart within an engineered and highly stable structure. It represents my state of awareness regarding the currents and tides in life experience. It is coded by my unique understanding of how individual events from my life, past and present, form an organized structure, balanced in compression and tension. Visually, the geometry of the structure changes as I change my viewpoint, alerting me to the many variables that must be successfully navigated to reach my intended destination.

Like the stick charts, the patterning of the steel framework communicates and shares an abstracted version of my experience with others. It demonstrates a unique mapping process that each individual must undertake in establishing his or her course. One can then orient to oneself using markers as structural anchor points when conditions undergo unexpected change.

During the creation of the sculpture, I made a formal connection between the Micronesian stick charts and the transmitter/antenna towers that dot the island of O'ahu.. The curved steel truss of the sculpture is a synthesis of the visual elements in the intuitively constructed stick charts and the engineered industrial utility of the towers into a dimensional and rhythmic pattern.

The soaring steel towers are fascinating to me, very tall and stable and yet visually fragile. I think most of us would be hard-pressed to locate them as landmarks, even though their extreme height allows them to visually connect earth and sky. Yet, like stick charts, they are devices for the navigation of waves, as they send and receive

huge quantities of information across the wavelengths of the electromagnetic spectrum. From studio to living room or workplace, they continually relay information we use in our daily lives to orient ourselves to an existence that is in continuous flux.

As the form of the sculpture began developing out of the geometries inherent in structures of navigation and shared memory, there came an awareness of the vehicle for the journey. With the selection of the crescent as a base form for the artwork, a symmetry emerged that was reminiscent of the sailing outrigger canoes of Micronesia. On Michael Schacht's website [The Proafile](#), Euell Gibbons describes this unique geometry from his book *The Beachcomber Afloat*:

It is hard for one who has been accustomed to traditional naval architecture to think straight about the outrigger canoe. We in the West have always thought of a boat as bilaterally symmetric along a fore-and-aft centerline, that is, one side is supposed to be the mirror image of the other.

The outrigger canoe, with its strange appendage jutting out to one side, supported on its outer end with a smaller hull or a float, plainly violates this principle. I have heard people who should know better speak of the outrigger as an asymmetrical craft, but it really is not. The sailing outrigger canoe is just as symmetrical as our boats, but the axis of symmetry has been rotated ninety degrees.

Stand on the outrigger side of one of these canoes that has been correctly built and you will see what I mean. It is the two ends, rather than the two sides,

which are exactly alike. These identical ends serve alternately as bow and stem, and the outrigger is always on the windward side when the boat is under sail.

Not only are these boats symmetrical, but that symmetry has a certain relation to the direction of the wind, and what could be more logical in a sailing craft?"
(Schact)

The seemingly asymmetrical geometry that developed out of this awareness allowed for further expression of departure/arrival, since the directionality of the sculpture as vessel is reversible while maintaining a specific orientation to the site. The curved chords of the sculpture may then also be read as omni-directional great circles, the shortest distance between two points when travelling on the surface of a globe.

The sculpture framework is topped with a carved and illuminated glass crescent, an ancient symbol of the start and finish of the lunar cycle in relation to the earth, a marker for the eternal cycle of journeys begun, completed and begun again. It is an accessible form, recognized and variously interpreted by many cultures, and as a marker its interpretation may express both conventional and unconventional notions of object, idea, function or process. As a sculptural form in the context of the Windward Community College site, it speaks of embarking on voyages to new frontiers in the arts, humanities and sciences, of the creative principle connecting worldly knowledge and experience to the realization of lofty dreams.

Conceptually, the sculpture presents the themes of navigation and orientation through the marking of time and place using a highly abstracted geometrical form

that may defy easy interpretation by the casual observer. The form of the crescent serves as an recognizable anchor that gives the piece accessibility and allows for appreciation on a strictly formal basis, while inviting individual interpretation through personal associations with the primary form and its visual connection to lunar myth and legend.

Having established a conceptual foundation for the artwork, and working out a large part of the structure in the form of a 1/6 scale model, I proceeded with the full-scale fabrication of the piece. The scale of the work, 24' x 12' x 3', immediately made itself evident. The first issue was work space. An object that large could not easily be fabricated inside the Art Building. Also, there was very little of the fabrication work that I could carry out strictly on my own, as the piece was too massive and required skills in working with large pieces of steel that were outside my realm of experience. The situation required that I enlist and coordinate each phase of work with others possessed of the skills and equipment necessary to see my vision realized. This was a difficult thing to stay focused on all through the fabrication of the piece, since, like many artists, I wanted to create every part of it with my own hands.

However, I did come to realize during the process that there is an artistic freedom inherent in involving other individuals with expertise in specific areas into the creation of the artwork. Unexpected and elegant solutions to nagging problem areas were often the result. A prime example was working with Craig Sakanashi, the structural engineer. Through his expertise with structure he was able to identify several problem areas that had not occurred to me and gave me confidence that the whole thing wouldn't "collapse like a house of cards in a gust of wind." This feeling was verified after the sculp-

ture was completely welded and I was able to actually experience its stability while moving it around. I also found that Craig and many other individuals I worked with were more than accommodating when I had esthetic concerns that needed technical or structural resolution.

Working with steel, glass and light on an architectural scale was exciting, painful, challenging, scary and profoundly satisfying. The process of working with the material and the people who have expertise with it was a journey reflective of the conceptual foundation of the sculpture. The scale model became the chart I followed all the way through fabrication to the installation of the structure on its base. Every day was a new storm or roadblock to navigate, especially as the date for the opening reception loomed. And all along the way there were people appearing at just the perfect time to offer their assistance. Remaining focused on the final destination of the work, both physically and emotionally, as well as taking note of event markers that needed to be completed in turn along the way, made for a rich and decidedly exhilarating experience.

There were key events during the fabrication and installation of the sculpture that are significant to me in terms of experiencing the process, beginning with the assembly of the three steel arcs that define the basic form. The arcs were initially joined at a point about 12 to 16 inches from the ends with bolts, so they could easily pivot to form a dimensional crescent. I decided to let the ends of the arcs run free instead of bringing them to a single point. I did this to balance the industrial assembly with a reference to hand crafted stick structures. Linear struts were then cut to size and welded into place in an offset triangular pattern that held the arcs in

place and formed a strong, coherent structure in an underlying pattern that I found to be visually exciting.

The edge-lit glass crescent is a key element to the transition of the sculpture from day to night. The glass is laminated plate, fabricated in modules. The lamination using an ultraviolet-setting epoxy resin was tested for shatter resistance and was found to hold the broken glass together as a unit. A steel channel was designed to hold the glass crescent and allow for edge-lighting using a new generation of Light Emitting Diode modules developed for the sign industry. The LED lights transmit a bluish light that is evocative of moonlight. They seem to be an elegant solution to the illumination of the sculpture in that they consume very little power, are small enough to be installed in a 1/2" deep channel and are engineered for outdoor use. At the time of this writing, the final electrical hookup is in progress and will be tied into an ultraviolet sensor that will light the glass with the onset of twilight, shutting down again at dawn. This transition between night and day is more powerful and profound than I had anticipated. Viewers become immersed in the glow of the floating arc.

Transporting the piece from UH Manoa to WCC was a major source of concern throughout the construction. After looking into myriad possibilities, including cutting the finished structure into manageable pieces and reassembling it at the WCC site, I finally decided to hire a professional trucking company. This was probably one of the best decisions I made during the art-making process. The trucking company was able to secure all necessary permits and arrange for police escort, as the transport involved using two traffic lanes because of the sculpture's width. Liability

insurance was included as part of the package, making for an exciting but trouble-free transfer of the sculpture from site to site.

With the piece on site, there were then anxious moments as the wet weather appeared to threaten the successful placement of the structure on its base. In fact, the first attempt ended in failure as the forklift installing the piece got stuck in the wet clay of the WCC lawn. The WCC maintenance crew that helped me with this phase were extremely resourceful, however, and arranged for a backhoe from the State Hospital to lift the piece into place the next day. The weather cooperated, and the sculpture was hoisted onto its foundation and welded solid.

At this point, the piece attracted two WCC students who were to become instrumental in the finishing process as they chipped in to apply the finish coats of paint and clean up the site for the opening reception. They later told me that their motivation was to be actively involved in the creative process and that the primary form and siting of the sculpture was the determining factor in their desire to participate. This was an aspect of the chosen crescent form that I had hoped would touch viewers, although I had not imagined it would draw others into the art-making process in quite this way.

The experience of creating a site-specific sculpture has been profound and exciting. It was a communal process, one that involved many others contributing their different skills and attitudes to a complex mix out of which the final piece emerged. Many aspects of this thesis exhibition proved to be successful in that I was able to establish a clear vision of what I wanted to achieve and balance input from others

to see the project through to completion. The resulting experience nurtured a deep appreciation for the skills of visualization, research, planning, communication and coordination as they apply to the making of public art.

Like the crescent moon signifying the ending of one cycle and the beginning of the next, this thesis exhibition marks the conclusion of my journey through the Master's program at the University of Hawai'i and sets a fresh course to realize new expressions in art.

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Figure 1. Site Plan showing location of sculpture installation

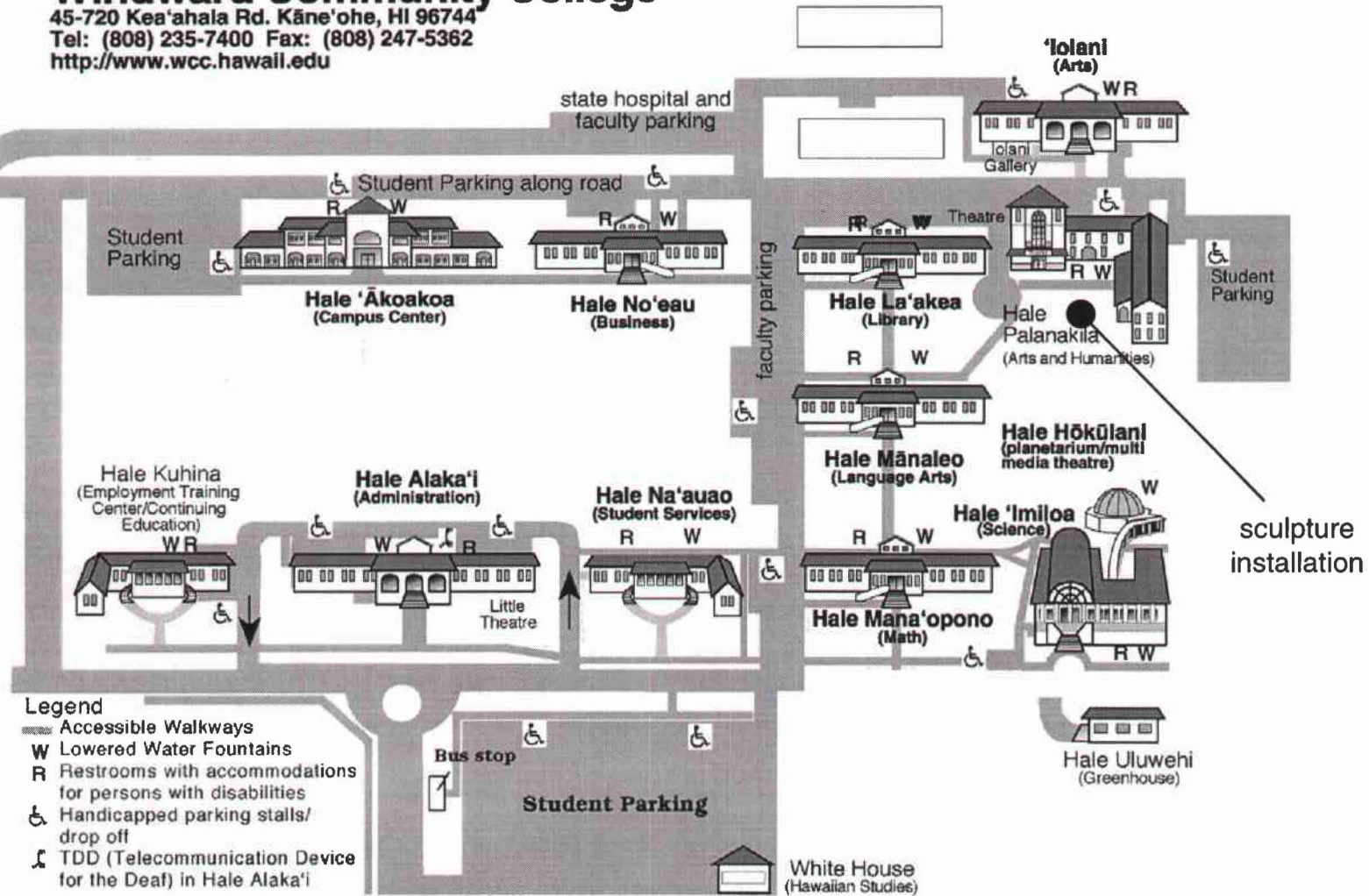


Figure 2

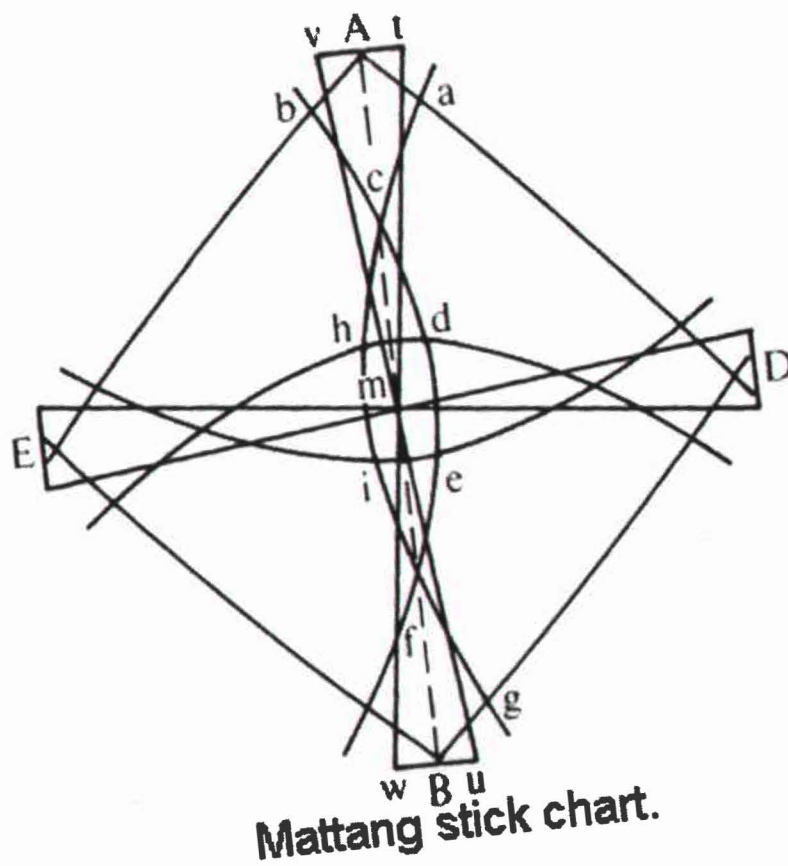


Figure 3

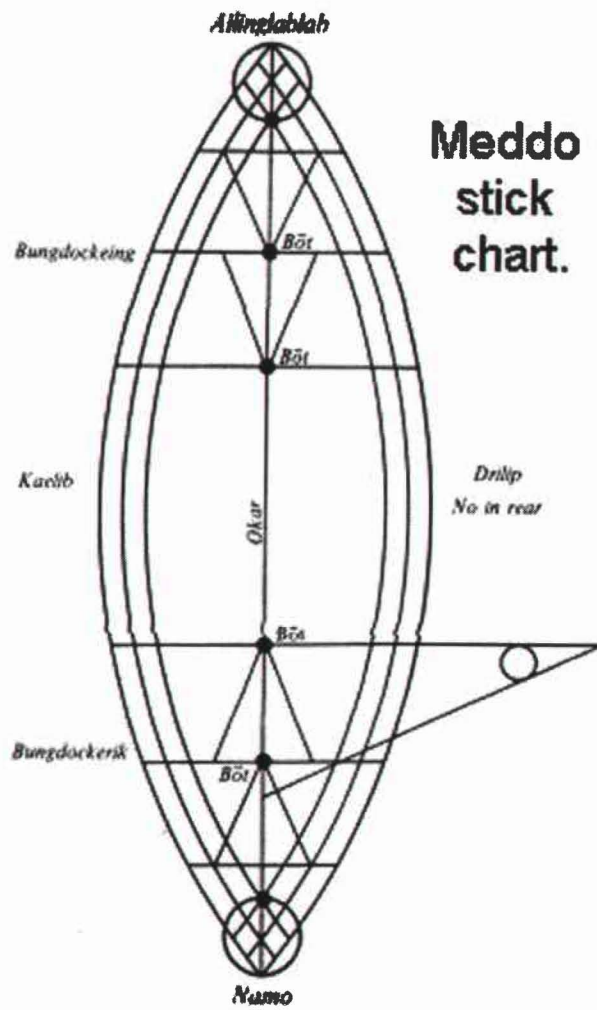




Plate I. Installation Site View



Plate II. Installation Site View



Plate III. Installation Site View

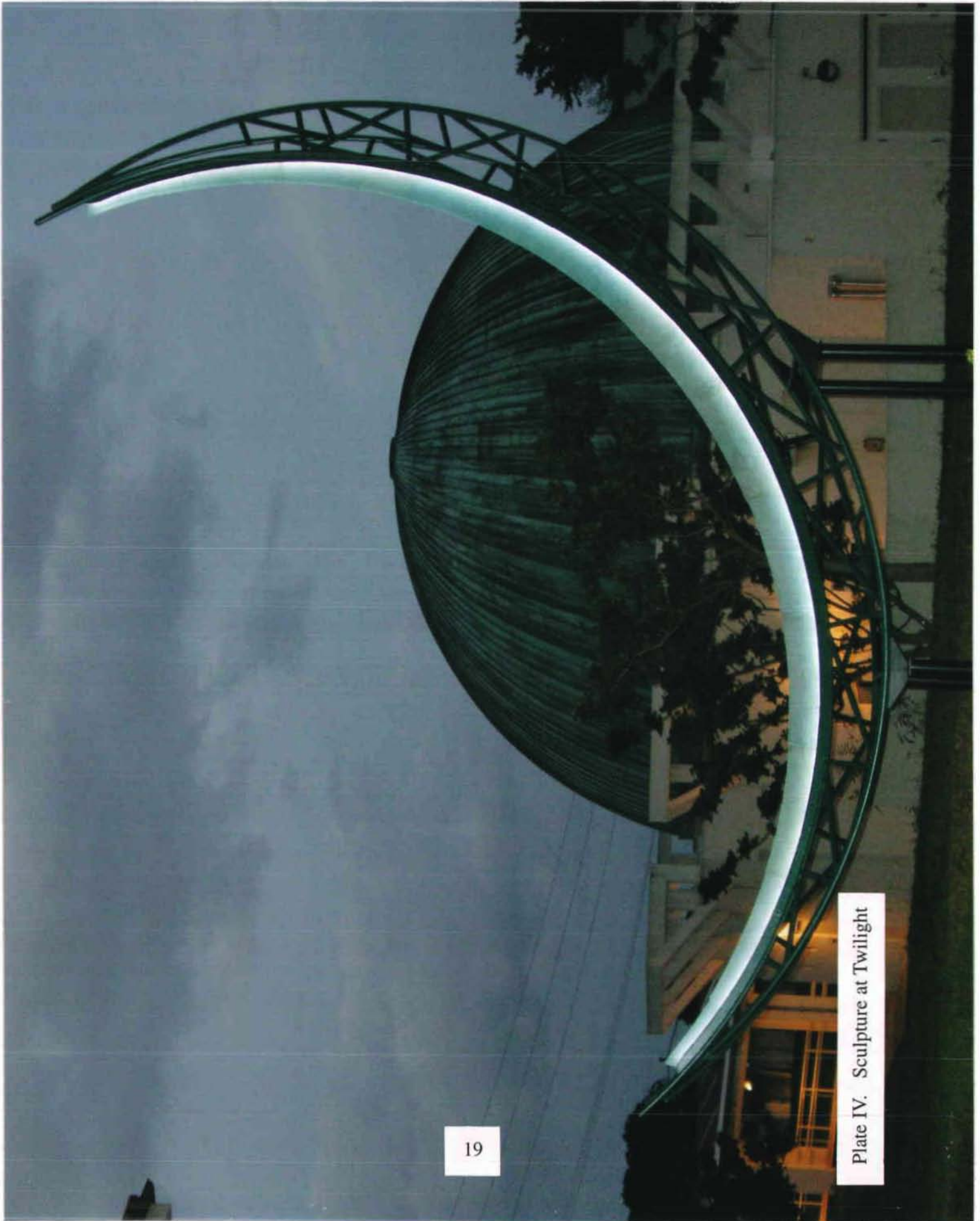


Plate IV. Sculpture at Twilight

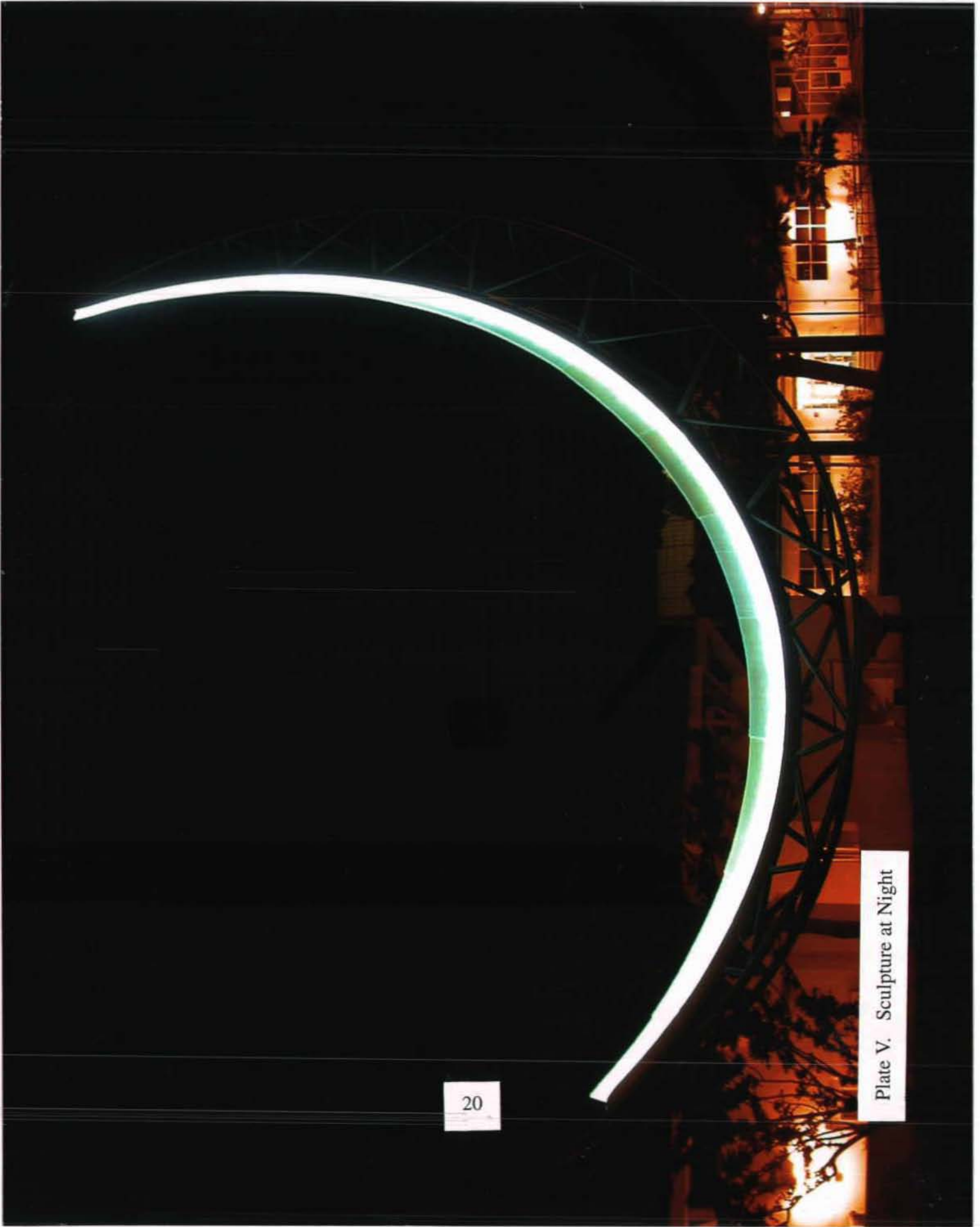


Plate V. Sculpture at Night

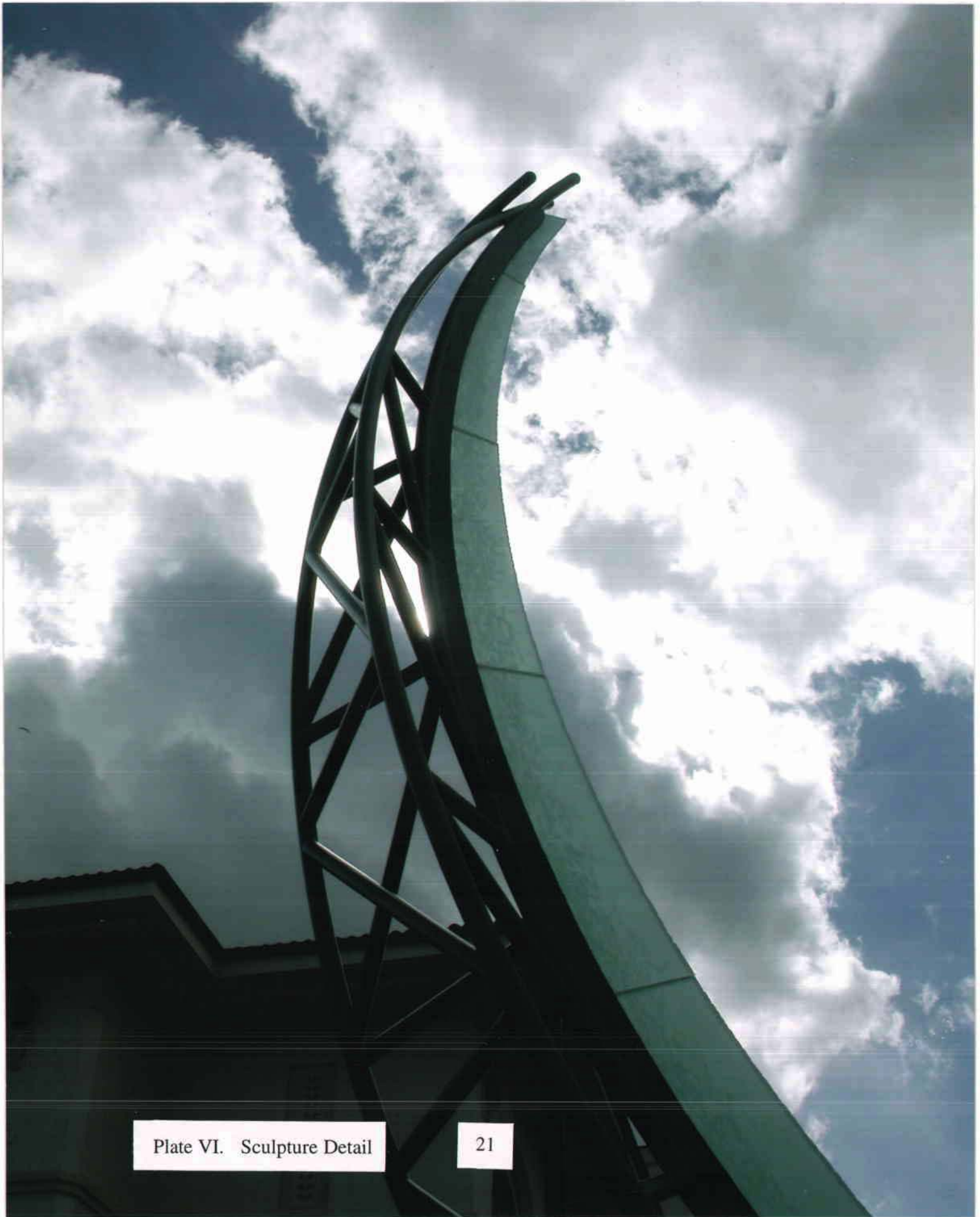


Plate VI. Sculpture Detail



Plate VII. Sculpture Detail



Plate VIII. Sculpture Detail

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