An exploration of reclaiming the monumental in architecture

Steven Alan Blevins

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To the Graduate Council:

I am submitting herewith a thesis written by Steven Alan Blevins entitled "An exploration of reclaiming the monumental in architecture." 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.

Tracy Moir McClean, Major Professor

We have read this thesis and recommend its acceptance:

Jon Coddington, David Fox

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)
To the Graduate Council:

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Tracy Moir McClean, Major Professor

We have read this thesis
And recommend its acceptance:

Accepted for the Council:

Associate Vice Chancellor and
Dean of the Graduate School
An Exploration of Reclaiming the Monumental in Architecture

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

Steven Alan Blevins
August, 2000
Dedication:

This thesis is dedicated to those individuals who have supported me without reservation throughout the process. I am forever grateful to my wife for her patience and encouragement (sometimes insistence) that kept me going. I would like to also thank my two sons for their patience with me for the long hours of study and work. I hope that some of this dedication will inspire them in their future activities.
Acknowledgements:

In many ways this thesis has many authors as this would not be possible if not for the many individuals who contributed to the content, whether through advice, criticism or comments related to my topic. I would like to give a special acknowledgement to my committee members who have been very instrumental in bringing this thesis to a level understanding and discourse worthy of a masters degree. I would also like to thank my class colleagues for their input and suggestions. I should also recognize Taylor Bowers for his willingness to hear my sometimes misdirected ideas. My experience at the University of Tennessee and the College of Architecture and Design has inspired me to produce meaningful Architecture. I will always be grateful to all the faculty and staff as they were always understanding, encouraging and helpful.

Committee members:
Jon Coddington
David Fox
Tracy Moir McClean
Robert French (Advisor)
Abstract:

This is a investigation into the possibility of establishing a meaningful monumental architecture within contemporary society. The thesis explores the relationship of the visible and invisible qualities of monumental architecture, to create a lasting architecture for our time. This is explored through the relationship of monument to earth, monument to man, monument to itself and monument to beyond-man. The project through which these relationships are explored is a weather data collection center located on the abandoned TVA Phipps Bend Nuclear Power Plant site in Hawkins County, Tennessee.
**Thesis Statement:**

The invisible qualities of the monumental encompasses a broad spectrum of topics: A deity (or deities), nature, astronomy, supernatural, and spirit are all part of the beyond-man experiences engaged by monumental architecture. It is the contention of this thesis that it is these invisible qualities that separate non monumental architecture from monumental architecture. This thesis will focus on the design qualities that are inherent in monumental architecture. These qualities of the monumental are related to the earth, man, the monument to itself, and to beyond-man. These qualities are explored through an architectural language, within the context of the monumental.

**Thesis:**

This thesis explores the making of the monumental in contemporary architecture and culture within the context of technology and nature. These will be explored through the following relationships: monument to earth, monument to man, monument to itself, monument to beyond man.
This forward is based upon my knowledge and personal experience of architecture and culture.

My experience in architecture is through working in the field and through study. This engagement of architecture has brought me to a belief in the need for architecture to unify the built environment in the service of cultural expression. Monumental architecture has a special significance, in its ability to simultaneously engage and transcend issues of pragmatics. It would seem more important to focus on the universal and / or simplicity in our age of communication where the saturation of image is prominent, as Neil Leach alludes to in his book; The Anaesthetics of Architecture. If the future is a virtual experience of communication and cyber space, we will have even a greater need for those places where one can experience the physical presence and connection to those beliefs which give identity and places us within a larger community.
Forward:

At a very young age I helped my father with odd jobs as he was a craftsman and carpenter. This experience was one of working with materials and connecting to our natural environment through material and craft. This lead to an affinity of how materials behave, such as how sheet metal bends, through the qualities of stone and wood, and how the intrinsic qualities of the materials can be exposed through their finish as well as providing a sense of their history and durability. Even the smell of construction has been carved into my memory with the possibility of a new beginning from existing material. This interaction with materials and tools has always been of interest to me.

The experience of visiting monumental buildings in Washington D.C. has had a lasting impact on me. This experience is one which the power of architecture overwhelms. It places one in a privileged position, one of participation and pride. It is my belief that to capture this essence of the monumental for others to share and experience, should be the ultimate goal of architecture.
Forward:

We can be inspired by the works of previous monuments and learn from contemporary works which have monumental qualities. Each architectural building is a story or at least part of a story that is instructive. What these structures "instruct" is that the built environment has the capacity to play a vital role in our daily lives. An architecture which informs is more significant than one which is merely different; basic architectural, geometric forms produce unified structures that have more promise to be meaningful and have lasting significance; an architecture that is decorated for the day seems to have less value to the identity of a culture than one which is timeless, and the monumental can be the shared experience that is universally understood through material and simplicity of form.
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. The Need for the monumental</td>
<td>1</td>
</tr>
<tr>
<td>Monumental Defined</td>
<td>1</td>
</tr>
<tr>
<td>Culture</td>
<td>2</td>
</tr>
<tr>
<td>Connecting</td>
<td>4</td>
</tr>
<tr>
<td>Contemporary Works</td>
<td>5</td>
</tr>
<tr>
<td>The Collective Force</td>
<td>8</td>
</tr>
<tr>
<td>II. Monument to Earth</td>
<td>10</td>
</tr>
<tr>
<td>Natural Forces and Landscape</td>
<td>10</td>
</tr>
<tr>
<td>Horizontal and Vertical Forces</td>
<td>16</td>
</tr>
<tr>
<td>Conclusion and Design Issues</td>
<td>22</td>
</tr>
<tr>
<td>III. Monument to Man</td>
<td>24</td>
</tr>
<tr>
<td>Form</td>
<td>25</td>
</tr>
<tr>
<td>Scale</td>
<td>26</td>
</tr>
<tr>
<td>Materials and Technology</td>
<td>29</td>
</tr>
<tr>
<td>Program</td>
<td>33</td>
</tr>
<tr>
<td>Conclusion and Design Implications</td>
<td>35</td>
</tr>
<tr>
<td>IV. Monument to Itself</td>
<td>38</td>
</tr>
<tr>
<td>Monumental Interior Space</td>
<td>40</td>
</tr>
<tr>
<td>Structure</td>
<td>43</td>
</tr>
<tr>
<td>Monolith</td>
<td>44</td>
</tr>
<tr>
<td>State of Enduring Structures</td>
<td>45</td>
</tr>
<tr>
<td>Conclusion and Design Implications</td>
<td>47</td>
</tr>
</tbody>
</table>
Table of Contents:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>V. Monument to Beyond Man</td>
<td>48</td>
</tr>
<tr>
<td>Natural Forces and Direction</td>
<td>49</td>
</tr>
<tr>
<td>Ceremony</td>
<td>51</td>
</tr>
<tr>
<td>Conclusion and Design Implications</td>
<td>57</td>
</tr>
<tr>
<td>VI. Summary</td>
<td>58</td>
</tr>
<tr>
<td>VII. The Site</td>
<td>60</td>
</tr>
<tr>
<td>Location</td>
<td>60</td>
</tr>
<tr>
<td>History</td>
<td>62</td>
</tr>
<tr>
<td>Region</td>
<td>65</td>
</tr>
<tr>
<td>Phipps Bend Project</td>
<td>68</td>
</tr>
<tr>
<td>Basis for the selected site</td>
<td>80</td>
</tr>
<tr>
<td>VIII. Site Design Implications</td>
<td>81</td>
</tr>
<tr>
<td>Connecting to the broader landscape</td>
<td>81</td>
</tr>
<tr>
<td>Horizontal and Vertical Space</td>
<td>92</td>
</tr>
<tr>
<td>Site Photos (By author)</td>
<td>93</td>
</tr>
<tr>
<td>IX. Program</td>
<td>98</td>
</tr>
<tr>
<td>Site</td>
<td>98</td>
</tr>
<tr>
<td>Buildings</td>
<td>101</td>
</tr>
<tr>
<td>Public spaces</td>
<td>103</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>X. The Design</td>
<td>104</td>
</tr>
<tr>
<td>Site</td>
<td>104</td>
</tr>
<tr>
<td>Collective Gathering</td>
<td>105</td>
</tr>
<tr>
<td>Circulation</td>
<td>106</td>
</tr>
<tr>
<td>Site Plans</td>
<td>107</td>
</tr>
<tr>
<td>Site Sections</td>
<td>109</td>
</tr>
<tr>
<td>Site Models</td>
<td>110</td>
</tr>
<tr>
<td>Site Experience Perspectives</td>
<td>114</td>
</tr>
<tr>
<td>Plinth Concept Study</td>
<td>115</td>
</tr>
<tr>
<td>The Plinth</td>
<td>116</td>
</tr>
<tr>
<td>Plinth Models</td>
<td>124</td>
</tr>
<tr>
<td>Program spaces</td>
<td>126</td>
</tr>
<tr>
<td>Building Design</td>
<td>128</td>
</tr>
<tr>
<td>Epilogue</td>
<td>137</td>
</tr>
<tr>
<td>Selected Bibliography</td>
<td>138</td>
</tr>
<tr>
<td>Additional Reading</td>
<td>146</td>
</tr>
<tr>
<td>Vita</td>
<td>147</td>
</tr>
</tbody>
</table>
List of Figures:

Cover composed by author, site aerial source unknown, nuclear power plant plan from *The Architect in the Nuclear Age* (Munce, 1984).

Figure

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Monumental Forces and Land forms. 10</td>
</tr>
<tr>
<td>2.2</td>
<td>Pyramids at Giza 10</td>
</tr>
<tr>
<td>2.3</td>
<td>Timanfaya Park Visitors Center 11</td>
</tr>
<tr>
<td>2.4</td>
<td>The Lighting Field 12</td>
</tr>
<tr>
<td>2.5</td>
<td>Norris Dam TVA 12</td>
</tr>
<tr>
<td>2.6</td>
<td>Appalachaing Ridge and Valley 13</td>
</tr>
<tr>
<td>2.7</td>
<td>House of the River Authority, after 1780 14</td>
</tr>
<tr>
<td>2.8</td>
<td>Gelbe Rampe (Yellow Ramp) 15</td>
</tr>
<tr>
<td>2.9</td>
<td>Candlestick Point Cultural Park 15</td>
</tr>
<tr>
<td>2.10</td>
<td>Houses for the dead 15</td>
</tr>
<tr>
<td>2.11</td>
<td>Salk Institute 16</td>
</tr>
<tr>
<td>2.12</td>
<td>Hannsjorg Voth's Field Marks 16</td>
</tr>
<tr>
<td>2.13</td>
<td>Salk Institute 16</td>
</tr>
<tr>
<td>2.14</td>
<td>Albert Speer Colonnade of the Zeppelin-Field 17</td>
</tr>
<tr>
<td>2.15</td>
<td>Path-Space Relationships 17</td>
</tr>
<tr>
<td>2.16</td>
<td>Monumental as marker 18</td>
</tr>
<tr>
<td>2.17</td>
<td>Contemporary Exploration of Monumentality 18</td>
</tr>
<tr>
<td>2.18</td>
<td>University City, Rome 19</td>
</tr>
<tr>
<td>2.19</td>
<td>Halfway Rock Lighthouse in Casco Bay, Maine 19</td>
</tr>
</tbody>
</table>
## List of Figures:

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.20</td>
<td>Piazza of St. Peter</td>
</tr>
<tr>
<td>2.21</td>
<td>Horizontal and vertical forces celebrated though public gathering</td>
</tr>
<tr>
<td>3.1</td>
<td>Earthworks of Hillside Housing.</td>
</tr>
<tr>
<td>3.2</td>
<td>The Avenue, Middelharnais</td>
</tr>
<tr>
<td>3.3</td>
<td>Boullee, Cenotaph for Sir Isaac Newton.</td>
</tr>
<tr>
<td>3.4</td>
<td>Rendez-vous de Chasse, 1778.</td>
</tr>
<tr>
<td>3.5</td>
<td>Emil Fahrenkamp</td>
</tr>
<tr>
<td>3.6</td>
<td>Boullee, Temple of Nature.</td>
</tr>
<tr>
<td>3.7</td>
<td>Dominus Winery, Napa Valley in Northern California.</td>
</tr>
<tr>
<td>3.8</td>
<td>S' Hostal Quarries. Project Lithica.</td>
</tr>
<tr>
<td>3.9</td>
<td>Museum, Italy</td>
</tr>
<tr>
<td>3.10</td>
<td>Monumental Material</td>
</tr>
<tr>
<td>3.11</td>
<td>Monument to communication</td>
</tr>
<tr>
<td>4.1</td>
<td>Plan for the Cenotaph of Newton, Boullee, 1784.</td>
</tr>
<tr>
<td>4.2</td>
<td>Inward focus of the monumental</td>
</tr>
<tr>
<td>4.3</td>
<td>Staircase and rotunda of the Musee des Travaux publics, Paris, 1937</td>
</tr>
<tr>
<td>4.4</td>
<td>Crystal Palace, 1851.</td>
</tr>
<tr>
<td>4.5</td>
<td>Monumental Frame and structural continuity</td>
</tr>
<tr>
<td>4.6</td>
<td>Gathering of forces</td>
</tr>
<tr>
<td>4.7</td>
<td>Caryatids from the south porch of the Erechtheum Athens.</td>
</tr>
<tr>
<td>4.8</td>
<td>Cowperplatz in the Duisburg North landscape park.</td>
</tr>
</tbody>
</table>
List of Figures:

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Land carving</td>
<td>48</td>
</tr>
<tr>
<td>5.2</td>
<td>Copernican</td>
<td>48</td>
</tr>
<tr>
<td>5.3</td>
<td>&quot;City Boundary&quot; (Phoenix and Scottsdale)</td>
<td>49</td>
</tr>
<tr>
<td>5.4</td>
<td>&quot;Court of the Moon&quot;</td>
<td>52</td>
</tr>
<tr>
<td>5.5</td>
<td>Millennium Dome</td>
<td>52</td>
</tr>
<tr>
<td>5.6</td>
<td>Star Axis</td>
<td>53</td>
</tr>
<tr>
<td>5.7</td>
<td>&quot;Endless Column&quot;</td>
<td>54</td>
</tr>
<tr>
<td>5.8</td>
<td>Stone Boat</td>
<td>55</td>
</tr>
<tr>
<td>5.9</td>
<td>A hall of a thousand columns</td>
<td>56</td>
</tr>
<tr>
<td>5.10</td>
<td>Stone Defenses</td>
<td>57</td>
</tr>
<tr>
<td>6.1</td>
<td>Stonehenge</td>
<td>59</td>
</tr>
<tr>
<td>7.1</td>
<td>Location Map</td>
<td>60</td>
</tr>
<tr>
<td>7.2</td>
<td>Vicinity Map</td>
<td>60</td>
</tr>
<tr>
<td>7.3</td>
<td>Site Photo (taken from Hwy. 11W)</td>
<td>61</td>
</tr>
<tr>
<td>7.4</td>
<td>Archaeological sites</td>
<td>64</td>
</tr>
<tr>
<td>7.5</td>
<td>Armstrong House at Stony Point</td>
<td>65</td>
</tr>
<tr>
<td>7.6</td>
<td>Proposed Conservation Areas</td>
<td>66</td>
</tr>
<tr>
<td>7.7</td>
<td>Flood Plain Zones</td>
<td>67</td>
</tr>
<tr>
<td>7.8</td>
<td>Artist Rendering Proposed Site</td>
<td>68</td>
</tr>
<tr>
<td>7.9</td>
<td>Photo Montage</td>
<td>68</td>
</tr>
<tr>
<td>7.10</td>
<td>Construction Site Plan</td>
<td>69</td>
</tr>
<tr>
<td>7.11</td>
<td>Aerial Photo of the site during the early construction phase</td>
<td>69</td>
</tr>
<tr>
<td>7.12</td>
<td>Construction Photos</td>
<td>70</td>
</tr>
<tr>
<td>7.13</td>
<td>Construction Photo</td>
<td>71</td>
</tr>
</tbody>
</table>
**List of Figures:**

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.14</td>
<td>Construction Photo</td>
</tr>
<tr>
<td>7.15</td>
<td>Land use Plan Construction Period</td>
</tr>
<tr>
<td>7.16</td>
<td>Preliminary Land use Plan. Post Construction Period</td>
</tr>
<tr>
<td>8.1</td>
<td>Site Topography</td>
</tr>
<tr>
<td>8.2</td>
<td>Site Drainage</td>
</tr>
<tr>
<td>8.3</td>
<td>Holston River Water Flow</td>
</tr>
<tr>
<td>8.4</td>
<td>Sediment deposit zone</td>
</tr>
<tr>
<td>8.5</td>
<td>Erosion zones</td>
</tr>
<tr>
<td>8.6</td>
<td>Sun Diagram</td>
</tr>
<tr>
<td>8.7</td>
<td>Annual wind speed and direction</td>
</tr>
<tr>
<td>8.8</td>
<td>Man Cultivated Landscape</td>
</tr>
<tr>
<td>8.9</td>
<td>Holston River Water Flow</td>
</tr>
<tr>
<td>8.10</td>
<td>TVA Transmission System</td>
</tr>
<tr>
<td>8.11</td>
<td>Rail Communication</td>
</tr>
<tr>
<td>8.12</td>
<td>Microwave Communication</td>
</tr>
<tr>
<td>8.13</td>
<td>Plumes Effect on the Environment</td>
</tr>
<tr>
<td>8.14</td>
<td>Principle Plant Communities</td>
</tr>
<tr>
<td>8.15</td>
<td>Boundaries</td>
</tr>
</tbody>
</table>
Relationship Diagrams:

The Monumental

Man

Monumental Architecture

Beyond-man

The Monumental Conditions of Architecture

Monument to Earth

Monument to Man

Monument to Man

Monument to Beyond-man

The act of Building

History

The Monumental Artifact

Relationship Diagrams
Source: Author
I. Need for the monumental:

Monumental Defined:
Historically the word monumental has taken on many meanings and connotations according to George R. Collins (1, p18). Monumental is derived from the word monument which is defined by The New Britannica- webster Dictionary & Reference Guide 1981 ed. Encyclopedia Britannica, inc as:

- monument 1 Memorial erected in memory of a person or event. 2. A work, saying, or deed that last or that is worth preserving 3. A boundary marker (as a stone) 4. Natural feature or historic site set aside and maintained by the government as public property. Latin monumentum, from monere “to remind, warn”

We often think of monumental architecture in terms of giganticism, significance and endurance. To better understand the architectural implications of monumental architecture, one needs to identify those commonalities of past monumental works and the lack of these qualities in contemporary architecture. Because the monumental is an enduring artifact, it is difficult to say precisely what cultural attributes contributed to its design and construction.
I. Need for the monumental:

Monumental structures, including architectural monuments are often among the most enduring gestures in the cultural landscape. That is, they are 'built to last', or at least outlast their contemporary counterparts.

*Monuments are human landmarks which men have created as symbols for their ideals, for their aims, and for their actions. They are intended to outlive the period which originated them, and constitute a heritage for future generations. As such, they form a link between the past and the future.* (Giedion, *Nine Points on Monumentality, no 1, 1944*)

Culture:

Culture can be defined in terms of human settlement, and cultivation. Culture also refers to rituals, skills, craft, technologies and arts that bind us together and allows use to survive. While architecture is primarily a manmade construct for human habitation, occupancy or use, one can also consider its role as a cultural artifact that can find its expression in the monumental. A key component of the monumental is not just the physical dimensions, but also the large, encompassing belief system(s) it engages, i.e.: religious, technology, nature, etc.
I. Need for the monumental:

This belief system forms the foundation of the monumental. Like foundations, these underlying beliefs can be characterized as an invisible support of the monumental. One should also consider that these invisible qualities inform and give shape to the physical construction of a cultural monument. This is an ontological quality of the monumental and is related to that of connecting man with what is beyond-man as well as with a greater whole.

Some of those belief systems are considered for their ability to unite individuals and support community. These beliefs are in the service of culture as a collective identity. Two examples of monuments which were built on a religious and or spiritual belief systems, in support of a collective identity are the temple at Karnack and the Pantheon.

The Acropolis in Athens is an example of this unity and public gathering as Athens united with Ionian cities to form the Delian League, and built the Parthenon, great temple to Athena, also known as the patron goddess of the city.

(Wodenhouse, 1989)
I. Need for the monumental:

*Connecting*:

This collective force transforms the building or structure into that of the monumental. It is through this experience of a shared belief that is supportive of the idea of unity and shared destiny. An example of this becomes evident through stone carvings found in "the houses for the dead", Newgrange, Ireland. Stone carving is the connecting of, and communicating to, the ancestral spirits which are housed in the stone material. *The vertical dimension of our world: we exist on the earth and beneath the sky, belonging to both.* (Harries, 1997) One of the roles of the monumental, is to give form to those beliefs and connect them to a cultural condition of a people. This becomes the means for communicating the aspirations and significance of a culture and its time. The function of the monumental in these terms is similar to that of art, in that: *The work of art points out to humanity new paths and thinks of the future.* (Harries, 1997)
I. Need for the monumental:

Contemporary Works:
Most engineering projects are not monumental architecture in themselves, although they may have monumental qualities. There are no rituals associated with them and while they may reflect our culture, they are not intended to engage the culture. Highway systems, bridges, and skyscrapers, are examples of this. Integral to the monumental is in its program, which is to explicitly engage the culture in which it is placed. It is this lack of engagement in contemporary architecture that prohibits the monumental.

The last hundred years have witnessed the devaluation of monumentality. This does not mean that there is any lack of formal monuments or architectural examples pretending to serve this purpose, but the so-called monuments of recent date have, with rare exceptions, become empty shells. They in no way represent the spirit or the collective feeling of modern times. (Giedion, Nine Points on Monumentality, no 4, 1944)
I. Need for the monumental:

We can consider those technological forces as a new means for engaging the monumental. Dams, and nuclear power plants are monumental in scale and employ contemporary technology and can instruct us in the making of the monumental, although they are not monuments themselves since they do not explicitly express our beliefs in a way that grounds us to environment and place. These public funded structures often engage the landscape and have a direct link to the durability of a region's cultural identity, just as schools, churches, government buildings and memorials have.

Just as there are monumental qualities of man-made constructs, the landscape itself has monumental qualities. Our national parks are part of our heritage that engages our culture in a meaningful way to help shape our identity as a people.

One role of ceremony is to engage the individual in the shared cultural belief of that which is unknown or beyond-man.
I. Need for the monumental:

It is through these civic centers, festal and spectacles that allows us to gather and celebrate the community life as Giedion and Harries have suggested. This use of ceremony has a direct relationship with the local culture and that is reflected in the architectural monument.

These ceremonies can be associated with religions, rituals, and belief systems that connect man with the beyond-man. This association can be considered to have a universal quality that links us with humanity. This can be expressed in architectural terms, as Sir Herbert Read has stated:

*The greatness of Gothic was due to its superhumanity, to the free exploitation of abstract elements...without any purpose other than “the union of the individual with the universal”... Such an aim is not inhuman; on the contrary, it is the liberation of human faculties from the oppression of our personal, limited vision* (Abercrombie, 1975)

In some cases a belief system is capable of overcoming the need for an enduring monumental building.
I. Need for the monumental:

Examples of this would include the Eiffel Tower and the Ise Shrine. These structures are constantly refurbished and in the case of the Ise Shrine, rebuilt on a regular basis.

The Collective Force:
Many contemporary buildings do not fulfill the need for monumentality as they do not represent this collective force of culture. Vittorio Gregotti has pointed out that monuments must not be confused with "corporate image" (Gregotti, 1996).

*Our celebration of the individual at the expense of community continues to diminish the importance of all centers.*  
(Harnes, 1997)

This manifestation of the individual or the company is not likely to transfer into a lasting monumental artifice. A skyscraper would fall within this category of corporate and or individual image.

Many tragic events unite us and allow us to collectively gather and express our ability to preserve community through disasters, such as wars and natural cataclysmic events.
I. Need for the monumental:

These events have been monumentalized, in such structures as the Vietnam Memorial, and Oklahoma City Memorial.

These memorials have a quality of lasting or living beyond the present which reacts against uncertainty, continuous change and the temporary. It is through this collective force joined with the use of current technology which produces the monumental, as Stonehenge and the Pyramids of Giza have shown us.

This thesis explores the making of the monumental in contemporary architecture and culture within the context of technology and nature, and will be explored through the following relationships: monument to earth, monument to man, monument to itself, monument to beyond man.
II. Monument to Earth:

Natural Forces and Landscape:
Monumental buildings are often considered for their ability to express a direct relationship to the earth. One way monumental architecture does this is through awareness of the invisible natural forces which shape our environment. (Figure 2.1) Some of these forces that relate architecture to earth include gravity, wind, rain, lightning, volcanoes, and earthquakes. Other forces including inner magma flows, cosmic storms, tectonic movement which are not directly detectable by the senses could also be considered for their ability to inform the monumental, once they are understood and realized.

The Pyramids of Giza are an example of a monumental architecture that expresses a dialog with the earth's natural forces. (Figure 2.2) This is expressed through the shape or form of the structures. The overall geometry of the pyramid is one that promotes a lasting quality, its shape is not easily modified by the natural forces of gravity, wind, or rain. The shape and material is in balance with the surrounding forces and this creates a direct dialog with the landscape, as Norberg-Schulz suggests.
II. Monument to Earth:

He also states that the pyramids recall the mountains in Thebes and their relation to the Nile. (Norberg-Schulz, 1975)

Monumental buildings can express a dialog with those natural forces, which shape the Earth and inform the unique quality of spatial definition, within the immediate landscape. (Figure 2.3) These qualities reinforce the identity of monument and place. It is these qualities which join place and monument, just as the Parthenon is married to the Acropolis and the Eiffel Tower to the city structure of Paris.

Figure 2.3: Timanfaya Park Visitors Center
Source: Landscape Architecture
(Contemporary Architecture engaging Monumental Forces.)
II. Monument to Earth:

The immediate natural landscape plays an important role in monumental architecture. Landscape can be considered for its ability to convey monumental qualities through a unique condition created by cataclysmic forces. These conditions include; mountains created by volcanic or tectonic movement, and valleys carved by erosion or earthquakes. It is these unique qualities of land forms which compel us to visit them. (Thayer, 1994) Just as land forms represent the resolution of conflicting natural forces, the monumental represents a resolution of cultural forces. The greater the resolution, the longer this balance can be maintained, thus enabling the monument to take on an enduring quality. Enduring land forms express the intent of the monumental as a construction to form a corresponding balance. (Figure 2.4, 2.5)

![Figure 2.4: The lighting Field](Image)
Source: Earthworks and Beyond
(The visual experience of natural forces seeking balance.)

![Figure 2.5: Norris Dam TVA](Image)
Source: The Landscape of Man
(Harnessing of natural forces in a monumental way.)
II. Monument to Earth:

The enduring quality of land forms becomes a testament to monumental architecture and act as landmarks that inform identity and place. (Figure 2.6)

Similar to natural landmarks:

Monuments are human landmarks which men have created as symbols for their ideals, for their aims, and for their actions. They are intended to outlive the period which originated them, and constitute a heritage for future generations. As such, they form a link between the past and the future. (Giedion, Nine Points on Monumentality, no. 1, 1944)
II. Monument to Earth:

One should consider monumental architecture for its ability to both form and be informed by these natural land conditions. Land art has this quality of engagement with the landscape, and can be considered for its ability to bring awareness of our natural environment. The direct engagement of an artifact within the natural environment is a requirement for the building of an architectural monument. (Figure 2.7)

Land art also engages us to think beyond the pragmatic, just as the monumental does. One way monumental architecture does this is by transcending the present use, through a direct engagement of the immediate landscape.

Figure 2.7: House of the River Authority, after 1780
Source: Visionary Architecture
(Monumental Architecture engaging natural forces.)
II. Monument to Earth:

The work of art points out to humanity new paths and thinks of the future. (Harries, 1997)

Similar to land art, and its' engagement of the landscape, the monumental can also be understood for its expression of those invisible forces which shape our landscape. (Figures 2.8 - 2.10)
II. Monument to Earth:

*Horizontal and Vertical Forces:*
Monumental architecture has often given meaning though its acknowledgment and indication of direction, associated with horizontal and vertical environmental forces.

*The horizontal, whether line, plane, or slab, ties a building to the earth, just as it ties us humans to the earth when we are asleep or dead.* (Harries, 1997)

This horizontal force can provide direction which is deliberate in both monumental and land art. Whether this line is a result of natural or manmade forces, it has implicit qualities of time through distance and explicit qualities of direction and / or orientation.(Figures 2.11 - 2.13)

Figure 2.12: Hannsjorg Voth's *Field Marks*
Source: *Between Landscape Architecture and Land Art*
(The horizontal is reinforced through this notion of the fragile vertical)

Figure 2.11: Salk Institute
Source: *Precedents in Architecture*
[With author's diagram]
(The horizon reinforces the dialog of building and landscape.)

Figure 2.13: Salk Institute
Source: Author
II. Monument to Earth:

We can consider these architectural elements for their ability to inform monumental architecture. The horizontal is often considered for its' engagement of the landscape. The Salk Institute engages the horizon, with its horizontal slit of water linking the plaza to the horizon, the place where earth and sky meet.

The issue of relating monument to earth and the use of horizontal in the monumental can also be expressed through the use of a plinth, or depressed planes. These architectural elements mimic the natural forces which produce enduring land forms. The use of repetition and vertical elements, can help reinforce this concept of occupied horizontal space. It is this horizontal space in which the collective can gather. (Figures 2.14, 2.15)

Linked to the horizontal and the qualities of monumental architecture is the progressive nature of the path, as path is considered for its linear qualities of time and distance.

*The path enables us not only to move from place to place, to go near to or to cross places, but also helps to remind us of things seen and experienced and to situate us in a wider community.* (Pierre von Meiss)

Figure 2.14: Albert Speer: Colonnade of the Zeppelin-Field
(The repetition of columns producing a monumental horizontal gathering space.)

Figure 2.15: Path-Space Relationships
Source: Architecture: Form, Space, & Order
(The physical space may terminate at the end of the path, however the implied path must continue on to express the idea of unity and shared destiny which are held within the monumental.)
II. Monument to Earth:

The vertical in monumental should mark that place in which the horizontal forces gather, and be celebrated in a collective way. (Figure 2.16)

That is the point where vertical forces overcome the horizontal. Harries has suggested that the vertical reflects a certain intention, that of overcoming the natural horizontal forces. (Harries, 1997)

Many natural land forms are celebrated for their ability to hold a vertical position such as mountains, cliffs and the free standing rock formations of the Grand Canyon. These natural land formations have withstood the affects of erosion created by natural forces (wind, rain, etc.) and become symbolic of durability through their physical properties of mass and the collective unity of material through bonding. Monumental architecture can express this language of durability through the use of material and structure. One way this can be achieved is through the use of stone as structure, that is understood as monolithic and durable. (Figure 2.17)
II. Monument to Earth:

These vertical elements of monumental architecture read as a monolithic mass just as durable land formations represent a solid bound to the earth. (Figure 2.18) Some monuments rely on the durability of cultural identity to give them a lasting quality, even though they may not be constructed durably, such as the Eiffel Tower. Many of these monuments take on a quality of providing security, through their role of durability. The lighthouse is an example of this security through the dialog of the vertical with the natural horizontal forces acting upon the landscape. (Figure 2.19)
II. Monument to Earth:

Just as ships rely on the lighthouse for guidance and direction through locating the land, the monumental provides culture with a symbolic marker in the landscape. These vertical forces are considered for their ability to mark a significant cultural symbol. It is these qualities of translating the collective force of the people into symbols that separate the monumental from the non-monumental.

Monuments are the expression of man's highest cultural needs. They have to satisfy the eternal demand of the people for translation of their collective force into symbols. The most vital monuments are those which express the feeling and thinking of this collective force - the people. (Giedion, Nine Points on Monumentality, no 2, 1944)

This relationship of building to earth, and the horizontal and vertical forces that locate the monumental, establishes a sense of place that has meaning and order. Place making is one of establishing limits, order, and measure within the context of memory which is specific to the present local conditions. The monumental can play a vital role in creating places that unify and express collective beliefs, through cultivating the landscape and its vertical and horizontal forces with a monumental artifact (Figure 220).
II. Monument to Earth:

This ability to identify the monumental as an enduring gesture in the landscape further enables a monument's ability to transcend the pragmatic qualities of contemporary architecture. Some examples include the Eiffel Tower, Parthenon, and the St. Louis Arch Gateway. These architectural monuments bring together those horizontal and vertical forces in a collective way, which is celebrated through public gathering (Figure 2.21).

The dialog of the monumental and its place within the landscape must be planned.

Sites for monuments must be planned. This will be possible once replanning is undertaken on a large scale which will create vast open spaces in the now decaying areas of our cities. In these open spaces, monumental architecture will find its appropriate setting which now does not exist. Monumental buildings will then be able to stand in space, for, like trees or plants, monumental buildings cannot be crowded in upon any odd lot in any district. Only when this space is achieved can the new urban centers come to life. (Giedion, Nine Points on Monumentality, no 8)
II. Monument to Earth:

It is these qualities of the monumental representing enduring forms created by natural and manmade forces, which produce the monumental space for the architectural monument. Stonehenge, the Acropolis and even the TVA dams and nuclear power plants express this dialog of the monumental with its landscape.

Conclusion and Design Issues.
The design of a monumental artifact should engage and acknowledge those significant horizontal and vertical forces found in the landscape which produce the sites in which the monumental can be located. Using the durability of the landscape as precedence, the monumental should be constructed in a direct way that reflects durability through use of monolithic material and simple geometric forms. The landscape and monument should be connected in a way that gives direction, just as natural invisible forces give direction to the land forms. These are the important issues of the monumental that place a collective force in the landscape and connect us to a greater whole.
II. Monument to Earth:

The use of form should give direction and meaning, with mass and material. These visible attributes work in tandem and bring awareness to those invisible forces that create and bring understanding to the physical and cultural landscape.
III. Monument to Man:

Stanley Abercrombie has suggested that the building to man relationship is one of interaction and control of both physical and psychological states. The relationship of monument to man is to engage those qualities which reinforce the idea of unity and the collective. This unity can be recognized as a unifying belief of a significant culture within its period. Monumental architecture can play a role in this expression of a unifying belief system through the qualities of form, scale and material. These qualities are bound to the monumental through cultivation, technology, craft, and time as they are experienced through program and ceremony.

Our relationship to monumental architecture can be thought of as a cultivated expression of environmental forces. Farmers cultivate the landscape and in turn become part of a regional expression that is associated with place. The landscape can be both cultivated and cultivating, that is by the latter we are controlled to a certain degree by the land forms which surround us. This relationship of monument to man is interlocked with that of man to environment. (Figures 3.1 and 3.2)
III. Monument to Man:

Form:
Monumental forms are distinguished by their presence within the open landscape, just as natural land forms produced by monumental forces are. Man reacts to the environment by producing durable structures which take on the quality of form. Many monumental structures use form together with mass to convey a lasting gesture. The Pyramids of Giza are an example of this. Norberg-Schulz says their, "Megalithic masses and precision of form give them a singular strength and power." (Norburg-Schulz, 1975) This can be interpreted as a unified representation of the cultural belief system that built them. Monumental forms express a precision and intent that is cultivated into the manmade landscape. The use of monumental form is to convey a clear representation of the local belief system, through the use of simple forms which allow for understanding the monument as a totality, and is universally understood. The Cenotaph for Sir Isaac Newton by Boullee being an example, as space and structure are in agreement with form. (Figure 3.3, 3.4)
III. Monument to Man:

Scale:
We often associate monumental with things that are extraordinarily oversized compared to a standard or human scale. (Figure 3.5) Scale is the result of measure and comparison:

A proportion determining the relationship of a representation to that which it represents. Also, a certain proportionate size, extent, or degree, usually judged in relation to some standard or point of reference. (Ching, 1996)

Monumentality can be considered at many different scales, as any building can have a monumental scale and not be monumental, as defined by Giedion. This has also been pointed out by Vittorio Gregotti in his discussion of monuments and the "corporate image", as these skyscrapers by themselves do not reflect the spirit of the collective force. (Gregotti, 1996)

However, a combined assembly of skyscrapers, such as the New York City skyline represents a collective cultural effort that is monumental.
III. Monument to Man:

The scale of space in the monumental is considered for its ability to reinforce the idea of unity and the universal. The space around and within buildings can be monumentalized through the design of structures that support open space around the monument and large internal spaces within the structure. (Figure 3.6) Many of these spaces are considered for their supportive role of gathering and expression of significant cultural events. The space within the gothic cathedral is an example of internal monumental space. This use of scale and simplicity of internal form allows space to be read as object, reinforcing the unifying notion of a monumental building.

Figure 3.6: Boullee, Temple of Nature
Source: Visionary Architecture
(Interior monumental scale.)

Figure 3.7: Dominus Winery, Napa Valley in Northern California
Source: Architecture, June 1998
(The monolithic form, its relationship of monumental and engagement with the cultivated landscape.)
III. Monument to Man:

Many monumental buildings represent a scale of cultural effort to both produce and maintain them. This is expressed in the work of Louis Kahn in his design for the National Assembly Building in Bangladesh. Kahn used local labor and skill to construct the monumental scaled brick arches. These bricks were carried to the site by individual workers, which represents the monumental scale of cultural effort required to construct this structure. (Giurgola, 1975) Many monumental buildings required labor beyond any individual effort. This is represented by the use of megalithic construction to build past monuments, as they used the latest technology together with the collective force of construction workers. This use of local labor also results in a pride of craft which is transferred to the monumental and gives significance to the structure. Kahn used exposed unfinished concrete as a means of controlling workmanship in the building of the Salk Institute. Monumental architecture is almost always constructed using the most contemporary technological means at a culture's disposal. It is not a borrowed technology, but one that springs from the culture's own tradition and aspirations.
III. Monument to Man:

*Materials and Technology:*
It is the shaping and crafting of material by the hand of man which informs the monumental through durable materials and technology. Just as the farmer interacts with the soil, we interact with the materials of building, both in its construction and our experience of the built condition. This interaction with materials is what places us in the palpable world. (Figure 3.8)

When material is shaped and carved by man in the service of making a monument, a link is formed with man and nature through technology. This use of technology is expressed through the intention of craft and art through construction.

*Figure 3.8: S’Hostal Quarries, Project Lithica*  
*Source: Landscape Architecture*  
(The monolithic stone created by monumental forces, and carved by man for building material.)
III. Monument to Man:

The use of stone in monumental architecture represents this enduring quality, one that must outlast the generation which assembled it as Giedion suggests. The use of stone also represents a commitment to the enduring quality of design that informs us about the culture that created it; we expect to be lasting representations of a local culture and its most strongly held beliefs. Stone tells a story not just of the culture but of the historical experience through exposing of the layers of its making over time. (Figure 3.9)
III. Monument to Man:

Where stone is considered as a natural material, glass can be considered as a manmade monumental material. In architecture, glass is often considered for its transparency and its ability to connect one with the outdoor environment. Glass in monumental architecture can be thought of as a manmade material that is read as monolith similar to the qualities of stone. (Figure 3.10) The monumental use of glass is considered as a monolithic material that appears self supporting, unlike its contemporary use, which allows the frame to dominate. The use of glass in monumental architecture is to connect us and communicate with those environmental forces which shape our environment, and inform our culture. (Figure 3.11)

Figure 3.10: Monumental Material
Source: The Monumental Era: European Architecture and design 1929-1939 (p.183)
(Glass as a monolithic self supporting material)

Figure 3.11: Monument to communication
(The monolithic glass form as a communicator of man and landscape.)
III. Monument to Man:

Through finish these monumental materials have the ability to inform and connect us with our cultural belief systems. For example the type of finish that is applied to stone tells a different story. If the stone is unpolished it takes on a weathered look and has qualities of absorbing through the sun's radiant energy. The use of a polished finish has both a reflective and absorbing quality. This absorbing and reflecting quality of materials can support the monumental through expression of culture while simultaneously reflecting the landscape. Glass has similar qualities and allows for a direct visual connection to the landscape and projection. This dual role of material allows us to connect with our environment, in a monumental way through transparency and reflection.

This ability to mold and carve and give shape to these monumental materials is what connects culture to its environment in a lasting way. These monumental materials express their experience through exposure over time and take on patina of cultural interaction with its environment.
III. Monument to Man:

Program:

Program should be directly linked to site forces through event, just as Stonehenge does through solstices and the atrium did at Old St Peters. Many monumental buildings are programmed through ceremonious events, particularly religious buildings. The isle and nave are examples of gathering programmed space in early Byzantine Architecture. The program of the monumental can engage those qualities of gathering, collecting cultural forces in a manner that expresses community life.

While it is difficult to say what events may warrant a monumental gesture in the landscape, one way of addressing this may be to consider those forces that produce cataclysmic events. Many of these cataclysmic events, hurricanes, earthquakes and volcanic eruptions are associated with disaster throwing a culture into imbalance. In response to such events, many communities pull together and become united as a way of preserving culture and community. This event becomes part of memory, which can then be used for program, through its testimonial quality.
III. Monument to Man:

These events that remind us of the invisible forces that produce our landscape, are linked with environment and are acknowledged through perception. One could consider this awareness as one way of exploring program. Many of the binding qualities of culture are associated with ceremony.

Our relationship to the monumental is to connect the individual to a shared identity, a collective belief that is manifest in a lasting way:

*The people want the buildings that represent their social and community life to give more than functional fulfillment. They want their aspiration for monumentality, joy, pride and excitement to be satisfied.*

*The fulfillment of this demand can be accomplished, with the new means of expression at hand, though it is no easy task. The following conditions are essential for it: A monument being the integration of the work of the planner, architect, painter, sculptor, and landscapist demands close collaboration between all of them.*

..

*(Giedion, *Nine Points on Monumentality*, no 7, 1944)*
III. Monument to Man:

Historically monumental architecture expressed the knowledge and beliefs of the culture that originated it. Tombs and religious beliefs supported the works of monumental architecture. Contemporary society has become more secular and we should look for new means of generating architecture.

There is a continuing need for the creation of festal places on the ground of everyday dwellings, places where individuals come together and affirm themselves as members of the community, as they join in public reenactments of the essential: celebrations of those central aspects of our life that maintain and give meaning to existence. The highest function of architecture remains what has always been: to invite such festivals (Harries p 365)

Conclusion and Design Implications:
Architecture and in particular monumental works are a reflection of our beliefs and represent those values we place on our environment, both natural and manmade. The role of this relationship of building to man is to express the collective quality of monumental buildings. One way this can be achieved is through the use of form, scale and mass, as they emphasize the importance of unity.
III. Monument to Man:

The monumental building should engage those qualities which connect us to a shared destiny and recognize those events which binds us to community. This can be achieved through the use of ceremony which includes rituals, skills, craft, technology. This use of craft and technology is applied in an artful manor to the materials of monumental structure, such as stone and glass. Monumental architecture can reflect the current technological thinking of construction, that balances man and environment in a lasting way.

It is though this engagement of material and technological forces that build the contemporary monumental artifact. This could be achieved through monumentalizing technology in a way that allows for spectacle and public reenactments of weather events. These events can be celebrated through monumental architecture and festal places. This may be achieved through the recognition of environmental forces as a unifying belief, and technology as the collective invisible belief of knowledge.
III. Monument to Man:

We can look to abandoned industrial sites that have inherent monumental qualities, as new potential places to explore this idea of a contemporary monumental architecture. These are the places we have left in the wake of the new era of technology. These sites can be revisited and reconnected to the landscape in a monumental way through the use of form, scale, material, and craft, that supports the program of the monumental. These are places where community can gather and collectively be re-engaged with monumental architecture and those forces which help shape our environment.
IV. Monument to Itself:

Monumental buildings take on a quality of self reliance, this is possibly due to its enduring qualities. The ideas and values which are imbued in form of a monument are considered to be so strong by those who conceived the monument, that these ideas and values empower the monumental to stand alone - not to be seemingly dependent on another source. Monuments are self sufficient. (Figure 4.1)

This inward focus of the monumental object can be considered for its disengagement with the surrounding building context. (Figure 4.2) The Pantheon in Rome is an example of this interior focus of a monumental space. When we arrive at the main gathering space of the interior, we are completely unaware of the surrounding buildings and we are only connected to the outside by the twenty-seven foot oculus.

The exterior of the cylinder shaped building does not respond to the context. Many temples take on this wholeness linked to self sufficiency quality as C.H. Reilly confirms. "...the appeal as a whole, unity of conception and mass..." (Collins, 1981)

Figure 4.1: Plan for the Cenotaph of Newton, Boullee, 1784.
Source: Elements of Architecture: From form to place
(The use of internal space as a self sufficient monumental language.)

Figure 4.2: Inward focus of the monumental Source: Author
(Gathering and inward focus of space.)
IV. Monument to Itself:

The Pantheon was always intended to be an object building, calling attention to itself by its' difference from the surroundings. Monuments, as objects, especially self sufficient objects, need space around them to distance themselves from their everyday surroundings.

Sites for monuments must be planned. This will be possible once replanning is undertaken on a large scale which will create vast open spaces in the now decaying areas of our cities. In these open spaces, monumental architecture will find its appropriate setting which now does not exist. Monumental buildings will then be able to stand in space, for, like trees or plants, monumental buildings cannot be crowded in upon any odd lot in any district. Only when this space is achieved can the new urban centers come to life.

Giedion from Nine points on monumentality, no 8, 1944

Monumental buildings have this ability to express unity through its self sufficient, unifying inward focus. Other examples include St. Peters, Hagia Sophia, Galleria Vittorio Emanuelle and Penn Station, with their interior monumental spaces.
IV. Monument to Itself:

Monumental Interior Space:

Many of these interior spaces of monumental buildings can support another level of monumentality, the monumental stair for example. (Figure 4.3) This ability to form interior monumental elements within the interior is linked to art though its role as expressive object. Just as the object is monumentalized, the space itself can be monumental through the unity of interior gathering space through structure. (Figure 4.4)

Figure 4.3: Staircase and rotunda of the Musée des Travaux publics, Paris, 1937
(The monumental stair and its participation within the occupied space is a celebration of the vertical in a monumental way.)

Figure 4.4: Crystal Palace, 1851
Source: Elements of Architecture: From form to place
(The monumental qualities of interior space, as an expression of building structure.)
IV. Monument to Itself:

Many contemporary buildings serving as malls and retail spaces have lost this essence of monumental space though a diminished use of material and the arbitrary use of detail to lure the consumer. A mall is dependent upon people to activate its space and an unoccupied mall, one with closed storefronts is not a pleasant place to be. On the other hand a gothic cathedral, occupied by one or many, remains interesting and engaging. These serve the purpose of a private investor and not the collective unity needed for a monumental work of architecture. The beliefs and inspiration that build past temples and churches represented a greater cultural commitment than these more private contemporary counterparts. We can not simply copy past monuments, to build a true monument.

Kahn refers to the monumental as enigmatic, although he recognizes the monumental qualities that help inform it.

"..our architectural monuments indicate a striving for structural perfection which has contributed in great part to their impressiveness, clarity of form, and logical scale."
(Kahn, 1944)
IV. Monument to Itself:

The aspirations and will of a culture is required. With this implication of internal unity and *clarity of form* (Kahn, 1944; see Ockman, 1993) monumentality can be expressed through structure. (Figure 4.5)

Figure 4.5 Monumental Frame and structural continuity
Source *Monumentality, Louis I. Kahn*, 1944
see Ockman, 1993
(The monumental qualities of structure and expression of the joint as the column becomes part of the beam)
IV. Monument to Itself:

Structure:
Structure is a way for a monument to acknowledge the forces of nature such as gravity and gather it in a meaningful way. Monumental structures can resist / distance / defy nature, since structure resists gravity, and with many monuments it seems the resistance will endure over the ages. This inward use of frame is an expression of those invisible forces which act upon the form of the building's interior. These forces are gathered and collect at the column base. (Figure 4.6, 4.7) It is this expression in which Kahn and Ledoux give meaning to structure. Kahn uses the column as a vertical means of support as well as vertical circulation. This circulation serves as an integrated element that accommodates people and mechanical systems. The frame in monumental architecture can express this language of individual components participating in a collective way. The frame gives direction to those forces which are greater than the individual. Thickness and form give a physical expression to this idea, just as the flying buttress in a Gothic Cathedral or the thick walls of the Pantheon do. The purpose of structure is to protect the interior spatial form, its occupants and interior objects.
IV. Monument to Itself:

Structure is to endure and preserve the monumental, by protecting and isolating the building’s exterior from those forces which reduces its life.

*Monolith*:

Just as the inward focus can control the interior monumental space, the outward focus can direct and give order to monumental qualities. One quality that allows a building to express unity is the use of simple forms. These forms have a monolithic quality that is associated to the monumental through durability. This monolithic quality is expressed in the work of Michael Graves’s Municipal Service Building in Portland, Oregon. The use of small window openings being subservient to the building mass and not linked to building function helps demonstrate the primacy of the monolithic in this public building (Safdie, 1986). This can be considered for its collective role in support of the monumental building to itself. Ledoux and Boulee produce similar affects with their work.
IV. Monument to Itself:

Aldo Rossi also expresses this monolithic quality in his design of San Calaldo Cemetery, Modena Italy. Monolithic forms have the ability to stand on their own and are not dependent upon the temporal context.

This monolithic quality comes from an understanding of material. We perceive the quality and texture of material through the use of natural light. Natural light is an invisible force which informs the monumental though communication. This light informs us of the physical properties of the material and helps orient us within our environment. The language of building to itself can be considered for its enduring qualities of material, as they are expressed in light and form.

State of Enduring Structures:
The ability for a structure to maintain its form is linked to the exposure of natural forces over time. Monumental buildings that last over time, take on a patina which confirm this ability to endure. This enduring quality connects us with a structure that has outlasted the generation which built it.
IV. Monument to Itself:

Ruins and abandoned structures attract our attention because of their temporal quality reflecting both the temporary and everlasting qualities of life. (Figure 4.8) In a state of ruin or abandonment, these structures express the ability to transcend the pragmatics of utility and function and take on a new meaning, that which informs the present.

Figure 4.8: Cowperplatz in the Duisburg
North landscape park.
Source: Between Landscape Architecture
and Land Art.
IV. Monument to Itself:

Conclusion and Design Implications.
The collective values as expressed in durable structure, materials, simplicity of form and space, and engagement of time enable / empower the monument to be self sufficient. The monument exists within itself, thus establishing a strong and lasting relationship of monument to itself. This relationship of building to itself also expresses a enduring quality that transcends its' pragmatic use. This lasting quality can be considered as "the building's will to exist" according to Kahn. The structural members should be a participant of form and represent those collective forces even in a state of ruin. A monumental structural frame can be experienced and celebrated. The monumental becomes an artifact and has value worth protecting, thereby objectifying its reading.
V. Monument to Beyond Man:

We can think of the beyond man as those forces that we can not individually directly control or understand. Historically monumental structures were erected with this engagement of the beyond man. Tombs and temples are examples, such as the Pyramids of Giza and the Pantheon. This beyond man and monumental architecture are often associated with a collective belief that is a unifying conscience as Giedion proposed. Many past architectural monuments were based on religious beliefs, such as St. Peters and Haga Sophia.

It is the quality of connecting to a greater force that often supports monumental architecture. This is a collective belief that produces a monumental work which is beyond individual ability. Many of these land carvings which provide a means of communicating to those that are beyond life, are examples of this. (Figure 5.1) Many of these belief systems are linked to the greater whole through their association with the universe and beliefs about our place in it. (Figure 5.2)
V. Monument to Beyond Man:

Natural Forces and Direction:
Other sources for monumental work can be related to the natural forces acting upon the earth. Some of these would include worshipping of mountains such as Mount Fuji and Mount Vesuvius. Many natural conditions such as summer and winter solstice have influenced monumental work through a precise alignment of components, with a reoccurring event. It is through this alignment of forces, that can give direction to monumental architecture allowing a culture to connect itself beyond its immediate boundaries to the heavens themselves. The precision and alignment of the Pyramids at Giza and the alignment of the stones at Stonehenge are examples of this. Monumental architecture can engage these forces and participate with the natural conditions of environment. (Figure 5.3)
V. Monument to Beyond Man:

The ellipse as an expressive geometry took on additional meaning once it was understood that planets circled the sun in an elliptical pattern, allowing man to understand the possibility of multiple centers, both literal and metaphorical. Such geometries have implications for the monumental:

Such conjectures should recognize both poles of my ellipse, recognize not only the community but also the individual, as well as the inevitable tensions between the two, just as they should recognize the inevitable tension between spirit and nature. (Harries, 1997)

Boundary can be considered in terms of the physical and the nonphysical manifestations of the monumental. When we talk of the physical boundary, one of the conditions we are concerned with is that of establishing limits. These limits are generally associated with that of the physical conditions of site. Some of these conditions include natural land formations and waterways. These are associated with the experience of the site as a tactile space(s) that is limited by natural barriers. The role of this relationship of building to beyond-man is to acknowledge those boundaries that are beyond our reach and understanding.
V. Monument to Beyond Man:

One way this can be accomplished is through recognizing those forces which create cataclysmic events.

Together with program the monumental should reflect this beyond-man boundary and engage the environment and its totality in a direct way. This beyond-man condition is considered for its ability to communicate to the collective through ceremony or event. For instance, one could accommodate this through animating surfaces with light in which interacts with the building structure, program and site to create spectacle.

Ceremony:
Monumental architecture is often central in supporting some of a culture's most important rituals and ceremonies. These rites affirm the values and traditions of a culture and hence find their embodiment in monumental architecture. Occurring over time these rites connect the durability of the ceremony to the durability of the monument, allowing the individual to be part of something much larger, beyond man.
V. Monument to Beyond Man:

Many ceremonies celebrate astronomical beliefs. (Figure 5.4) Worship of the sun is one in which ancient Egyptians as well as native Americans have practiced. Many ritual events are associated with the summer and winter solstices. This notion of ceremony and festival is one that is relevant to modern architecture (Figure 5.5):

There is a continuing need for the creation of festal places on the ground of everyday dwellings, places where individuals come together and affirm themselves as members of the community, as they join in public reenactments of the essential: celebrations of those central aspects of our life that maintain and give meaning to existence. The highest function of architecture remains what it has always been: to invite such festival. (Harries, 1997)
V. Monument to Beyond Man:

The Navajo worship the winds and the water courses in ceremonial dances. The Pueblo use ceremony to bring rain and good crops. Such ceremonies are cross cultured and have occurred throughout time, and across the earth. We can also consider the act of building as ceremonious. One need only think of the rebuilding of the Ise Shrine every 30 years, as an example of linking the act of building to ritual. The traditional ground breaking ceremony or building top-offs rituals are additional rituals associated with architecture and ceremony that may be considered for its cultural tie(s). Ritual and ceremony are considered as a recurring festival.

We can engage monumental through ceremonious events, as they shape our culture, based on natural events, such as weather and season. (Figure 5.6) Monumental architecture can engage these beyond man abilities through technology as a superhuman force, just as the Pyramids of Giza and Stonehenge have surpassed the individual human ability through applied collective effort and technology.
V. Monument to Beyond Man:

It is through this technology as a collective belief / effort that allows us to communicate with the enduring and thus have a dialog with those forces which produce a lasting artifice. This engagement should react to the participation of natural forces.

Those beyond man engagements can provide the middle ground for those festal spaces as places for ceremony in which we celebrate the linkage of technological and natural forces. One gathering ceremony that can be considered is an event which allows for reenactments and testimony of previous encounters with cataclysmic natural forces. This could be executed as animated surfaces that reproduce an image of the event as recorded, providing a didactic experience which connects us to the environment. This would be part of that acknowledgment of forces which are ongoing and represent a continuum, such as space, time and energy. (Figure 5.7) Monumental architecture expresses technology informed by craft and art, which can remind us of how the Earth is connected and balanced through nature.

Figure 5.7: "Endless Column"  
Source: Modern Landscape Architecture  
(The vertical forces are gathered in a collective way that reinforces this idea of a cultural marker.)
V. Monument to Beyond Man:

Land art can inform us about collecting and connecting through a manmade intervention. (Figure 5.8) Data collection together with ceremony that allows technology to participate with the beyond man and thus connect us with the monumental of this time.

Figure 5.8: Stone Boat
Source: Landscape Architecture
(We can be connected to those invisible forces which form a belief system.)
V. Monument to Beyond Man:

This would represent a celebration of the natural forces connecting to societal need which unite us as a community. (Figure 5.9) One should also consider a way to integrate technology in a way that does not threaten space and place.

Technology's danger to man is not first and foremost from lethal machines or weapons of mass destruction, as Heidegger has noted, but from technological thinking that does not allow man his essential manner of relating to the world and to each other.... (McCarter, 1994)

One could think of a contemporary monument as one in which technology is a beyond man force, and is expressed in a way which brings virtual to a reality through architecture and landscape.

Figure 5.9: A hall of a thousand columns
Source: Architecture as Art
(Columns gather and participate in the landscape.)
V. Monument to Beyond Man:

Conclusion and Design Implications:
We can consider monumental architecture for its ability to direct us through beyond man experiences. Some of those beyond man experiences include communicating with forces which are beyond life and consequently understanding. This can be acknowledged through establishing boundaries that are beyond traditional physical experiences, which can be engaged through a collective ceremony. (Figure 5.10) Ceremony is that which links a cultural belief or value with community. Monumental architecture is to engage the separation of the physical to the intangible through the use of technology and natural forces.

Figure 5.10: Stone Defenses
Source: Ireland Through the Ages
(Monumental boundaries include both physical and metaphorical.)
VI. Summary:

Those forces that generate monumental architecture are associated with a collective belief system. This belief system is one that correlates a community with its identity as a culture. We should consider art, technology and craft as a means to bind individuals to a collective belief. The role of monumental architecture would be to connect technology and environment in a way that expresses what is significant to a culture. Those monuments that have engaged in establishing clear relationships of Monument to Earth, Man, Itself, and Beyond-Man, have endured over time. The thesis project should be gauged by the effectiveness of these relationships through design.

One can be connected to the earth in a direct meaningful way, through cultivating the immediate landscape that unifies us with the environment. This cultivation can be considered through its engagement with natural and manmade forces, using material, scale and form in ways that support the intrinsic enduring qualities of monumental architecture.
VI. Summary:

This can be achieved through the use of the values that hold a community together, as they are often found in ceremony and rituals and find expression in art, craft, and technology.

It is those binders that give meaning to the monumental, as they collect and connect culture and give identity to a belief system though an enduring monumental artifact. The role of the monumental artifact is to endure and maintain meaning over time. The monumental should retain its meaning even in a state of ruin, using space, structure and monolithic form. We can look at past monuments which still inform us about past cultures and their beliefs. (Figure 6.1) Monumental structures take on a “life of their own” and express their history and events through time and weathering. This weathering is both cultural and environmental and can be expressed through use and patina. Monumental architecture connects us to those invisible beliefs that are beyond man, often manifest in a culture’s religion(s). This beyond man experience is one that binds us to a greater whole and gives meaning to shared destiny.
VII. The Site:

Location:
These issues are explored through the abandoned T.V.A. nuclear power plant site at Phipps Bend, Surgoinsville, Tennessee. (Figure 7.1, 7.2)

The site is located in the Northeast Tennessee Region just southwest of the Tri-Cities (Bristol, Johnson City and Kingsport.) in Hawkins County. The area is defined by the natural land forms and the cultivated landscape with the Holston River flowing from the northeast along the base of Bays Mountain Ridge.

Figure 7.1: Location Map
Source: Microsoft Encarta Encyclopedia, 1999

Figure 7.2: Vicinity Map
Source: TVA
VII. The Site:

This site is considered for its’ inherent monumental qualities. The immediate site is defined by the Bays Mountain Ridge, connecting with the Appalachian Mountains running northwest. These mountains are the result of horizontal forces resolved to a vertical formation, resulting a continuous ridge which directs and aligns one with the greater Appalachian region. (Figure 7.3) A site feature created by the natural flow of the Holston River creates unique bends in the valley basin. This bend is called Phipps Bend.

![Bays Mountain](image-url)

Figure 7.3: Site Photo (taken from Hwy. 11W)
Source: Author
VII. The Site:

History:
Culture is tied to the region through archaeological artifacts. These can be integrated into the program of the monumental site. Historically the site is noted for its' gathering and collecting qualities of resources as the study by the University of Alabama has pointed out

1 The site is composed of a series of terraces and sloughs with different associated biota.

2 The early woodland settlement pattern in Phipps Bend appears to have been structured to have allowed access to the maximum amount of different resources. The largest sites are at the junctions of the major streams with the Holston River. Stony Point Creek allowed for the easiest access to the limestone and chert in the hinterland.

3 From the location and size of the cobble found on the site indicates the flow of the river was much faster and took a more direct straighter route.

4 Cultural evolutionary theory has the impact of intensifying land utilization due to population increase. Geertz 1963. "agricultural involution" Involution involves an established pattern within which change and elaboration continue to take place.
VII. The Site:

The process of agricultural involution is similar to the process of technological ephemeralization. This process is "... the doing of ever more with less, per given resource units of pounds, time and energy".

5. The predominant kind of facility found in the Early Woodland at Phipps Bend consisted of large deep pits. This kind of facility suggest stability in the use of the area and the likelihood of storing something easily storable like nuts. The quantity of nuts that could have been contained in these strongly suggest the sites could have been occupied though the wintertime. Nut shells were found commonly within buried remains.

(University of Alabama, TVA Library, Knoxville, Tennessee)
VII. The Site:

The use of archeological sites reinforces that binding of culture to place. This cultural binding is one of the requirements of monumental architecture. (Figure 7.4)

Figure 7.4: Archaeological sites
Source: TVA
**VII. The Site:**

*Region:*
The region has a diverse population of local rural farming community and workers commuting to nearby industrial sites, within the Tri-Cities area. Nearby at Stony Point, the Armstrong House is the oldest brick house in Hawkins County and one of the first ones built in Tennessee. It is on the *National Register of Historic places.* (Fig 7.5) There is an abundance of natural wildlife, low traffic and unobstructed scenery within this region. The site has the convenience of access from a major road and rail access, as well as a complete high voltage trunk line infrastructure. Climate is linked to region like the monumental is to culture.
VII. The Site:

The site can maintain open space required for the monumental though cultural intervention. One way this can be achieved is through conservation regulations. This site has the potential for wetlands protection as well as farming conservation. (Figure 7.6)
VII. The Site:

Natural land forms and waterways can also preserve open space by creating flood plain zones. (Figure 7.7)
VII. The Site:

*Phipps Bend Project:*

The Phipps Bend project started construction in the late 70's, with the construction of a two unit reactor, nuclear power plant. (Figures 7.8 - 7.12)

![Artist Rendering Proposed Site](image1)

*Figure 7.8: Artist Rendering Proposed Site*

*Source: TVA*

![Photo Montage](image2)

*Figure 7.9: Photo Montage*

*Source: TVA*
VII. The Site:

Figure 7.10: Construction Site Plan
Source: TVA

Figure 7.11: Aerial Photo of the site during the early construction phase.
Source: TVA (with permission.)
VII. The Site:

Figure 7.12: Construction Photos
Source: TVA (with permission)
VII. The Site:

The manmade landscape is an expression of those cultural forces which binds us together as community. This can be expressed through the clearing, carving and ordering of the immediate landscape with the intent of unifying a culture with its landscape. (Figure 7.13)
VII. The Site:

To create an enduring gesture in the landscape, requires a collective effort, skill and cultural belief in the significance of building monumental structures. Many structures involved the most technologically advanced methods and were often unproved, as many nuclear reactors were. (Figure 7.14)
VII. The Site:

We can establish limits and boundaries based upon the natural and manmade order. The natural order can be driven by climate and season, the manmade by datum and construction. These boundaries are established and their effects are echoed across the landscape, influencing all in its path. These limits and boundaries can be controlled through use planning. (Figure 7.15)
VII. The Site:

Planning can also be utilized to maintain the space and intent of the monumental design. Planning can also provide direction and guidance to all participants needed for the design of the monumental. (Figure 7.16)

Figure 7.16: Preliminary Land use Plan: Post Construction Period
Source: TVA
VII. The Site:

Site Photos
Source: Author
(Approach to the site from Hwy. 11w Looking south.)
VII. The Site:

Site Photos
Source: Author

(Top looking at cooling tower base, lower looking west at proposed spray pond.)
VII. The Site:

Site Photos
Source: Author
(Top looking southeast at power grid, with the cultivated landscape in the foreground, lower looking south.)
VII. The Site:

Site Photos
Source: Author
(Top looking east at cooling tower base, lower looking north.)
VII. The Site:

Site Photos
Source: Author
(Top panoramic looking south, lower panoramic within the cooling tower base.)
VII. The Site:

*Basis for the selected site:*

- Enduring land forms that are a result of natural cataclysmic forces, which links this place to a larger region of the Appalachian Mountain.

- The natural conditions that preserve open space

- The intrinsic qualities of the existing concrete structures that have endured.

- Recognition of technology as a collective cultural force needed to build a nuclear power plant facility

- The simplistic and scaleless quality of existing structures and the spaces they generate

- The site has a history of collecting and is located within the valley basin where natural collection of material can occur

- The natural boundaries create place which is conducive to gathering, thought site access.

- The abandoned structures express their weathering and experience through patina.
VIII. Site Design Implications:

Connecting to the broader landscape:
Recognizing those forces that form our landscape give direction and meaning to monumental architecture. (Figures 8.1 - 8.15)

Figure 8.1: Site Topography
Source: USGS (with authors overlay diagram)
(Monumental Forces cultivating the landscape.)
VIII. Site Design Implications:

Figure 8.2: Site Drainage
Source: TVA
(Natural drainage.)

Figure 8.3: Holston River Water Flow
Source: TVA (with authors overlay diagram)
(Water and current forces.)
VIII. Site Design Implications:

Figure 8.4: Sediment deposit zone
Source: TVA (with authors overlay diagram)
(Collecting and gathering sediment.)

Figure 8.5: Erosion zones
Source: TVA
(The enduring landscape.)
VIII. Site Design Implications:

Figure 86: Sun Diagram
Source: TVA (with overlay diagram from Architectural Graphic Standards)
(The Sun provides a source of energy that marks time and season)
VIII. Site Design Implications:

Figure 87: Annual wind speed and direction
Source: TVA (with overlay diagram from TVA Climatic database)
(Wind is one of those invisible forces which help cultivate by movement and resistance to movement)
VIII. Site Design Implications:

Figure 8.8: Man Cultivated Landscape
Source: Aerial Photograph Author unknown
(The land is cultivated by culture through technology, farming, communicating and gathering for the common goal of community.)
VIII. Site Design Implications:

Figure 8.9: Holston River Water Flow
Source: TVA (with authors overlay diagram)
(The construction baseline establishes the reference in which all future building is affected.)
VIII. Site Design Implications:

Figure 8.10 TVA Transmission System
Source TVA
(Connecting through communication)

Figure 8.11 Rail Communication
Source TVA
(Connecting through communication)
Site Analysis:

Figure 8.12: Microwave Communication
Source: TVA
(Connecting through communication.)

Figure 8.13: Plumes Effect on the Environment
Source: TVA
(Cultivating technology and its impact on the environment.)
VIII. Site Design Implications:

Figure 8.14: Principle Plant Communities
Source: TVA
(Cultivated temporal landscape.)
VIII. Site Design Implications:

Figure 8.15: Boundaries
Source: Unknown
(The cultural landscape is controlled by the political govern of community)
Horizontal and Vertical site implications
Source: Photos by Author
(The built condition can express those horizontal and vertical forces that inform monumental architecture, through material and technology.)
VIII. Site Design Implications:

Site Photos: (By author)

Abandoned Reactor Building.
VIII. Site Design Implications:

Abandoned Reactor Building and topography.
VIII. Site Design Implications:

Cooling tower base and power grid.
VIII. Site Design Implications:

Technology can become program through the experience of spectacle.

Power grid structure.
Natural and Manmade
Source: Photo by Author
(The cultivated landscape engages the earth through materials.)
IX. The Program:

The use of program can connect us with the landscape and the built environment through the monumental language of *building to Earth, building to Man, building to Itself, and building to beyond man*. The program should be directed by the inherent site forces of environment and culture. These spaces can be animated by technology and civic activity. We can consider the use of animated surfaces with the latest technologies as Giedion proposed. These would be connected to event and spectacle for the collective gathering.

Site:

The site program is directed by the existing conditions of site through the acknowledgment of the Appalachian Mountain Ridge and the construction baseline of the reactor building. The program activities could include:

Visitor Center with overlook and observation deck.

Marking of arrival points.

Engagement and separation of the land though built constructs.
IX. The Program:

Engagement of the existing reactor building as ruins, creating a sculpture garden. Evoking the temporal and the enduring.

Reengage the landscape and provide participation with the civic activities.

Acknowledgment of the open landscape and its natural condition.

Point of decision of taking direction of engagement of the land or invoking the built environment.

Arrival of the monolith and base plinth. Acknowledgment of the circulation path.

Establish order for the monolithic buildings. (Data Collection Center)

Terminate the plinth with a lighting spectacle which is linked to time and season in a way that provoke the projecting of the beyond.
IX. The Program:

Building is reengage to the earth through a reflecting pond that terminates back to the river, hence completing the termination of the known into the unknown.

Circulation of the site is controlled through the use of an ellipse which is based upon a belief system and Harries definition of poles. These poles are acknowledged through the pray pond, sacred tree and the monumental cooling tower base. This circulation is programmed with events marking the months and seasons (summer and winter solstices). Other related activities include festal space with projection screen for outdoor walk-in theater, Technology Forrest (drive through the power grid), man ordered landscape through tree plantings, park spaces and cultivating farm land. The circulation path is anchored to the site by artwork (design by others) marking the radius points of the ellipse. The archeological / historical points are marked and identified with plaques and ground markers. (by others).
IX. The Program:

Buildings
The bunkers near the base of the plinth are intended for long term storage. And the wall created, facing South holds glass plaques with text depicting cataclysmic weather events.

The bunker itself houses the parking and catwalks for circulation. From the data buildings to the research and living glass structure.

The data buildings are designed based upon the themes of Earth, Wind, Fire, and Water. Each building houses a didactic event at the plinth level, which includes indoor projection screen and computer / microfilm machines. The remaining levels house the actual recording and storage equipment. These house several media types:

- Magnetic tapes
- Film
- Paper
- Electronic media
  - magnetic
  - optical
  - future expansion

All these storage areas are viewable from below.
IX. The Program:

The glass structure houses the main research and living facilities:

- Small and large meeting rooms for 10 to 25 persons
- Restroom facility with locker and shower area
- Observation area for visitors to view the data collection process
- Communications hubs and telecommunication spaces
- Research spaces with lab equipment
- Sleeping facilities for extended stay, separated from working and public areas
- Break room with equipment for catered foods, warmers etc.
- Mechanical spaces for HVAC equipment
IX. The Program:

Public spaces:
The program provides places for the experience of form, scale and space utilizing monumentally defined structure and material. This is engaged through the plinth and accompanying buildings. The program includes public spaces for gathering and celebrating cultural events (large gathering space inside the glass structure). Programmed outdoor events provided by the use of animated surfaces through the use of lights on the exterior elevations of the monolithic buildings, and light columns at the terminus of the plinth.

Provide public classroom spaces for didactic events with a interactive lab space for the experience of collecting data through technological devices. Provide a teacher planning space, large eating / cafeteria space that support the didactic events. Provide touring arrival / departure space, within the glass building area.
X. The Design:

Site:
The design is given direction by the natural and manmade forces that are intrinsic within the site. The mountain is where the horizontal meets the vertical to achieve balance. The datum line established during the construction phase approximates the parallel direction of the mountains. This indicates a continuum that is both universal and beyond-man.
X. The Design:

Collective Gathering:
We are put in the position of coming to terms with our environment and landscape. The terminus at the waters edge is where community is gathered and collects their culture. This is where the natural and manmade forces can be resolved.
X. The Design:

Circulation:
We can consider those forces that inform our culture to be directed by ordinal and path designated by a belief system, (see monument to beyond man). This represents seasonal cycles and the ellipse contains the two foci representing man (technology) and environment (nature). The links gathering, collecting with ceremony and event.
X. The Design:
Site section looking East.

Site section looking Northeast.

Site section looking North.
X. The Design:

Site Models:
X. The Design:

Overall site model.

Site model looking East.
X. The Design:

Public gathering event space.

Road through the Technology Forrest.
X. The Design:

Engagement of building and cultivated landscape.

Image looking from cooling tower base.
Walk along the bunker storage, with etched glass plates of testimony of weather events.
X. The Design:

Plinth Concept Study:
X. The Design:

The Plinth:
Catwalk level plan.
X. The Design:

Main level plan.
X. The Design:

Plinth sections.
X. The Design:

Plinth sections.
X. The Design:

Plinth section looking North.
Wall section through glass building showing occupied structure.
X. The Design:

Building section through glass building and research center within.
X. The Design:

Plinth Models:
X. The Design:
X. The Design:

Program spaces:

Public spaces.

Living spaces.

Research, lab, office and meeting spaces.
X. The Design:

Experience of the glass building structure.
X. The Design:

Building Design:

Floor plan at Projection Room Level.

Floor plan at Plinth Level.
X. The Design:

- Roof Plan.
- Equipment level Plan.
Building section.
X. The Design:

Wall section.

Exploded View.
X. The Design:

Exterior Elevation looking West.
X. The Design:

Structure model.
X. The Design:

Engaging the environment.
X. The Design:

Secondary frame, support for wind loading.
Didactic spaces.

Intermediate level equipment and storage. (Long term storage in the bunkers, see site model.)
Epilogue:

The use of a monumental language which recognizes those cultural binders holding community together, can make it possible to build an enduring monument in the landscape. The use of simple geometry and direct dialog with the environment, reinforces a sense of place and is universally understood. The use of technology which is applied in an artful and crafted manner, can transcend the pragmatics of the everyday and inform the making of buildings for the ages. This consideration for a contemporary architectural monument and natural forces merits further design investigation by others as the recognition for the need of the monumental becomes increasingly understood by our contemporary culture.

The design has taken advantage of a minimal and direct dialog with the landscape and the language of the monumental. Time, form, materiality, construction and program linked to ceremony, expressed in the context of a cultural belief system is the only true way to evaluate the significance of the monumental, and its' ability to endure over time.
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**Additional Suggested Readings:**


Vita:

Steve Blevins, the son of Walter and Dorothy Blevins, born in Abingdon, Virginia and raised in the hills of northeast Tennessee. I am a graduate of East Tennessee State University, with a Bachelor of Science in Engineering Technology, majoring in Engineering Design Graphics with a concentration in architecture. I am currently employed by the architectural firm of Freeman Solt PLLC, located in Kingsport, Tennessee. I am a Project Designer involved in all phases of design and construction administration.