5-2008

Liminal Space in Architecture: Threshold and Transition

Patrick Troy Zimmerman
University of Tennessee - Knoxville

To the Graduate Council:

I am submitting herewith a thesis written by Patrick Troy Zimmerman entitled "Liminal Space in Architecture: Threshold and Transition." 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.

Brian Ambroziak, Major Professor

We have read this thesis and recommend its acceptance:

Theodore Shelton, Barbara Klinkhammer

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:

I am submitting herewith a thesis written by Patrick Troy Zimmerman entitled “Liminal Space in Architecture: Threshold and Transition.” I have examined the final 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.

Brian Ambroziak, Primary Advisor

We have read this thesis

And recommend its acceptance:

Theodore Shelton

Barbara Klinkhammer

Accepted for the Council

Carolyn R. Hodges, Vice Provost and
Dean of the Graduate School

(Original signatures are on file with official student records.)

Liminal Space in Architecture: Threshold and Transition

A Proposal for a Ballpark in Miami Beach, Florida

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

Patrick Troy Zimmerman
May 2008

Dedication

This thesis is dedicated to my wife Elana, who graciously spent many nights alone while I pursued this degree. Without her support, this would not have been possible. Elana, you are my sunshine.

Acknowledgements

I would like to acknowledge everyone who contributed to the success of this pursuit. First, to my primary advisor, Brian Ambroziak, thank you for the guidance you have shown me throughout my years at Tennessee. Your knowledge and advice has been invaluable. To my secondary advisors, Ted Shelton and Barbara Klinkhammer, thank you for your thoughtful comments and support throughout this process. To my family, my parents and sisters, thank you for guiding me along a path and allowing me the opportunities to pursue a course of study that I am passionate about. And finally to my friends, both at the University of Tennessee and at home, thank you for your support and ability to offer an outlet to the demands of graduate school.

Abstract

The limen is defined as the transitional threshold between two fixed states in cultural rites of passage or between two dissimilar spaces in architecture. The study of rites of passage provides an analogy from which principles can be drawn for the design of a transformative space. The characteristics that define liminal space include layering, dissolution, blurring, and ambiguity and have the ability to transform the occupant of that space as they move through it. The experience of liminal space poses a discontinuity and leads the occupant to question their surroundings, thus leading to heightened awareness of the space as a transformative threshold between distinct spaces.

The design of a ballpark, a building type associated with ritual, will be the vehicle for the exploration of the design of liminal space. Attention to the individual ritualistic acts of attending a ballgame can heighten the perception of the fan and their movement through a transitional space which transforms them from their everyday life. Additionally, a blurring of the space of the fan with the space of the player and a blurring of the space of the city and the space of the game will further heighten the ambiguity. Through an analysis of precedents that address both liminal space as transformative threshold and the liminality present in the ballpark, the design of the ballpark will create a transformative space for both the player and the fan which is based in history and advances the perception of the threshold as transformative.

Table of Contents

I. Thesis Statement 1

Liminal Space in Architecture: Threshold and Transition 1

II. Liminal Space in Rites of Passage and Built Architecture 2

Goals and Perspective 2
Architectural Issues 3
Liminality: Definition and Significance 5
Arnold van Gennep: Separation, Transition, Incorporation 6
Victor Turner: Dissolution and Dissociation 10
Bobby Alexander: Ritual 21
The Process of the Liminal 22

III. The Ballpark: Ritual and Liminal Space 25

The Ritual of Sport 25
The Ritual of the Ballpark 28
The Playing Field 28
The Ballpark in the City 34
The Fan and the Player 36
Concourse 38
Vomitory 42
Concession Stands 44
Seating Bowl 45
Clubhouse 46

IV. Miami: Threshold City 48

Site Selection 48
History of Miami 48
Liminal Qualities of Miami 51
South Pointe Park, Miami Beach 53

V. Conclusion 57

Bibliography 60

Appendices 63

Appendix A: Quantitative Program 64
Appendix B: Building Codes 72
Appendix C: Site Analysis 75
Appendix D: Timeline of the Fan and the Player at a Typical Stadium 87
Appendix E: Presentation Images 87

Vita 98

List of Figures

Figure Page

1. Photo of the Glass House, Philip Johnson……... 4
2. Photo of the Clark County Library, Michael Graves……..... 4
3. Photo of San Carlo alle Quattro Fontane, Borromini……..... 4
4. Photo of the Memorial to the Murdered Jews of Europe, Peter Eisenman…..... 4
5. The Propylaea, entrance to the Acropolis……..... 7
6. Zones of separation, transition, and incorporation in the plan of the Propylaea……... 7
7. Zones of separation, transition, and incorporation in the section of the Propylaea……..... 7
8. Emphasis of change in elevation in the Propylaea..... 7
9. Axon diagram of layers of separation, transition, and incorporation in the Mill Owners' Association Building……..…… 9
10. Plan diagram of the layers of separation, transition, and incorporation in the Mill Owners' Association Building…….…… 9
11. Section diagram of the layers of separation, transition, and incorporation in the Mill Owners' Association Building…….…… 9
12. Threshold of a house in Beaufort, SC…… 11
13. Threshold of the Pantheon, Rome…….……..…….. 11
14. Liminal Space in the Pantheon and in a house…….. 11
15. Front Façade of the Mill Owners' Association Building……. 13
16. Elements of the front façade of the Mill Owners' Association Building…….. 13
17. Elements of the front façade as an integral part of the building……... 13
18. Piranesi's *Carcere oscura* …… 14
19. Eisenstein's diagram of the individual elements of the *Carcere oscura*…… 14
20. Eisenstein's diagram of the movement of the exploded elements…… 14
21. Layers of diagrams of the Memorial to the Murdered Jews of Europe……. 17
22. Diagrams overlaid to create blurred zone between…….. 17
23. Blurred transformative zone between slabs……. 17
24. Overhead view of the Memorial to the Murdered Jews of Europe…… 17
25. Blurring of space through dissociation of Doric and Ionic orders...…….…… 19
26. Combination of Doric and Ionic principles in Propylaea…….. 19
27. Interior View of the Mill Owners' Association Building showing blurred interior/exterior space……..…….. 20
28. Diagram of the enclosing/porous briese soleil elements…… 20
29. Diagram of the both open and closed quality of the briese soleil…….. 20
30. Diagram of the ambiguous interior/exterior spaces……. 20
31. Diagram showing possibility of layering spaces……..... 23
32. Diagram showing the possibilities of overlaying diagrams…….. 23
33. Worshipping the athlete, Greg Maddux receiving a curtain call……..... 27
34. Baseball season relating to the calendar…….. …….. 27
35. Re-creation of energy…… 27
36. The infield dimensions and meaningful numbers in the game……. 29
37. Concourse dimensions relating to proportions of the infield…… 31
38. Diagram of a possible dimensional threshold, relating the pitching mound to entry sequence…….. 31
39. The impact of the city on the ballpark……..... 33

40. The impact of the ballpark on the city……..……..…….. 33
41. The stadium as civic space……... 35
42. Integration of the city and the ballpark at Camden Yards in Baltimore, MD..... 37
43. The transitional space at Petco Park between the city and the ballpark……... 37
44. Light towers as civic markers at Petco Park……. 37
45. Section of Wrigley Field, Chicago showing concourse occupied
by players and fans ……. 39
46. Plan diagrams of Petco Park, San Diego showing separation between
players and fans……..... 39
47. Section diagram of Petco Park, San Diego showing separation between
players and fans……..... 39
48. The layers of the Colosseum……. 41
49. Section of Wrigley Field…….. 41
50. Section of the Zepplinfeld showing transitional procession into stadium……. ……... 41
51. Plan of Petco Park showing dissolving threshold between concourse and seats……. 43
52. Plan of Nationals Stadium showing complete lack of threshold between
concourse and seating……..... 43
53. Vomitory at Bush Stadium form inside concourse……..…… 43
54. Vomitory at Bush Stadium from seating bowl…… 43
55. Plan of Fenway Park showing compressed threshold at vomitories…… 43
56. Main Threshold Cities of Miami, Los Angeles, and New York…….. 49
57. Miami in relation to the Caribbean countries……... 49
58. Entrance to the Port of Miami before the Government Cut was built…… 50
59. Entrance to the Port of Miami through the Government Cut……. 50
60. Layers of the City of Miami……. …….. 52
61. View of Site in context of Miami and the Atlantic Ocean…….. 54
62. View of the Site in relation to the harbor……. 54
63. Specific Site at the threshold to the harbor……. 54
64. The Florida Current……. …….. 55
65. The compressed threshold at the site through the Government Cut…… 55
66. Transitional space of site bordered by water, landscape, and urbanism……..…… 56
67. Site Plan…….. 73
68. Plan of Miami in 1919……. ……. 74
69. Plan of Miami in 1921…….. 74
70. Plan of Miami in 1930……. ……. 75
71. Plan of Miami in 1950……...…… 75
72. Plan of Miami in 1969……. …….. 76
73. Plan of Miami in 1994……. ……. 76
74. Figure Ground diagram of South Beach…….. ……. 77
75. Diagram of the major transportation routes converging on the site……..... 78
76. Massing of South Beach……. …….. 78
77. Scale Comparisons of Major League Ballparks on the Site……. 79
78. Fenway Park massing on site…….. ……. 79
79. Wrigley Field massing on site……. ……. 79
80. Climatic Information for Miami Beach, Florida …… 82
81. Aerial view of the site from the east……. 83
82. Aerial view of the site from the south……..…… 83
83. View of the site from the Government Cut……. 84
84. View towards the site down the Government Cut from Downtown Miami……... 84

Fig 85: View of the site down Washington Avenue ……..…… 85
Fig 86: View of the site down Alton Road ……..... 85
Fig 87: View of the site from South Pointe Drive …….. 86
Fig 88: View of the site and the Government Cut from the beach on South Pointe Park ……. 86
Fig 89: Presentation Plate 1 …… 88
Fig 90: Presentation Plate 2 …… 89
Fig 91: Presentation Plate 3 …… 90
Fig 92: Presentation Plate 4 …… 91
Fig 93: Presentation Plate 5 …… 92
Fig 94: Presentation Plate 6 …… 93
Fig 95: Presentation Plate 7 …… 94
Fig 96: Presentation Plate 8 …… 95
Fig 97: Presentation Plate 9 …… 96
Fig 98: Presentation Plate 10 ……. 97

List of Tables

Table		Page
I.	Quantitative Program……	70
II.	Occupancy Groups…….....	72
III.	Construction Types……...……...	72
IV.	Egress Design for Group A-5…….....	73
V.	Egress Design for Assembly Seating……	73
VI.	Accessibility Requirements…….....	74

I. Thesis Statement

Liminal Space in Architecture: Threshold and Transition

This is an exploration into the creation and perception of liminal space through an understanding of threshold and transition. A study of the liminal, or transitional, stage in cultural rites of passage, or rituals, will provide an analogy for the understanding and creation of in-between space as it exists in historical architectural precedents. The knowledge gained from this investigation proposes a set of processes, including: layering, dissolution, dissociation, and blurring, that will inform an architecture that responds to and advances the perception of the threshold as a unique transformative space that connects two dissimilar spaces and introduces a discontinuity that heightens the spatial awareness of the occupant.

II. Liminal Space in Rites of Passage and Built Architecture

Goals and Perspective

Ethnographer Arnold van Gennep defined rites of passage as ceremonies that accompany any individual's "life crises," and that each rite of passage is composed of three major phases: separation, transition, and incorporation. The transition from one stage to the next, or from the profane to the sacred, is so great that there must be an intermediate stage – the liminal stage (Turner 94). A further study into liminality in rites of passage will offer an analogy through which liminal space can be understood in architectural precedents. The study of select historical precedents will frame this discourse in a historical context and explore how ideas of threshold and transition have changed and evolved. The understanding of liminality gained through these studies can influence an approach to architectural design in which spaces take on qualities of their neighboring spaces while still remaining separate from them. The resultant architecture is one that responds to and advances an understanding of space and threshold as transitional and transformative. This process will then be applied specifically to the design of a Major League Baseball park in Miami, Florida, a building type already steeped in ritual and a city which is a threshold to the United States, in order to reestablish the transformative space between the city and the field.

Architectural Issues

> Through his drawings and photographs [Michael Graves] seeks to reestablish the wall as an element that maintains a physical presence as well as a metaphorical one. While in Rome, Graves began to question Modernism's use of the glass plane to create a homogenous world, one in which the outside and inside were visually merged. He wrote, "The long culture of architecture that proceeded the modern movement described these two places as different but related. One could frame the quite wonderful light coming into the bedroom, yet could also close that light out to obtain privacy. Those differences, however, began to dissolve with the glass plane (Ambroziak 249).

This quote addresses the understanding of threshold both prior to and after the Modern movement began to merge together the interior and the exterior, thus dissolving the threshold between these distinct spaces, as seen in Philip Johnson's Glass House (fig 1). While Graves addresses the wall as the mediator between the sacred interior and the profane exterior (fig 2), this thesis addresses the idea of space mediating between the two. This in-between space begins to take on qualities of the spaces it is connecting thus blurring the perception of the occupied space while creating a distinct threshold which is transformative. In *Complexity and Contradiction in Architecture* Robert Venturi addresses this as the 'both-and' condition in which a space has multiple readings; it is both one thing and at the same time another. He illustrates this idea in the space of San Carlo alle Quattro Fontane by Francesco Borromini which is both centralized and directional (fig 3). This type of architecture "evokes many levels of meaning and combinations of focus: its space and its elements become readable and workable in several ways at once" (Venturi 16). Peter Eisenman carries the idea of blurring further by proposing a layering of diagrams in order to apply an interstitial process which can undercut the traditional legitimation of space (fig 4). The contrasts present between dissimilar spaces offer an opportunity to explore the spatial

Fig 1: Glass House, Philip Johnson, New Canaan, CT
(Source: www.matthewlangley.com)

Fig 2: Clark County Public Library, Michael Graves, Las Vegas, NV
(Source: www.library.unlv.edu)

Fig 3: San Carlo alle Quattro Fontane, Francesco, Borromini, Rome, Italy (Source: Author)

Fig 4: Memorial to the Murdered Jews of Europe, Peter Eisenman, Berlin, Germany
(Source: www.ivan-herman.net)

ideas expressed in the experience of liminality: threshold, transition, layering, and blurring. Each of these ideas presents a discontinuity of space which heightens the spatial awareness of the occupant. This issue will be addressed at the scales of the occupant, the building and the site. Each scale has a unique threshold situation that has the opportunity to be transformative.

Liminality: Definition and Significance

The understanding of liminality has multiple contexts, ranging from the social and cultural to the spatial. The root word limen "is derived from the Latin word for 'threshold,' [and] literally means 'being on a threshold" (Alexander 31). In all contexts, liminal refers to an intermediate state or condition; an in-between condition in which the liminal entity has characteristics of what it is between, but at the same time is separate and distinct from them. In cultural contexts the liminal entity is a person while in architectural contexts it is the space itself. The liminal stage is one of pure possibility in which there is an ambiguity of clear definition. Fred Koetter defines this in-between zone that is the liminal as "the realm of conscious and unconscious speculation and questioning – the 'zone' where things concrete and ideas are intermingled, taken apart and reassembled – where memory, values, and intentions collide (Koetter 69)." It is a space which is essentially ambiguous and is, by definition, temporary; a transitional space or space between fixed constants.

Arnold van Gennep: Separation, Transition, Incorporation

Arnold van Gennep was one of the first researchers to study cultural rites of passage and concluded that each rite of passage consists of three major phases: separation, transition or liminality, and incorporation. In any rite of passage, "so great is the incompatibility between the profane and the sacred worlds that man cannot pass from one to the other without going through an intermediate stage" (van Gennep 1). This liminal stage that bridges the two states must be transformative in nature in order for the rite to be complete. The person experiencing the liminal stage has left the previous state but has not yet entered the coming state. It is this in-between stage that characterizes the liminal as transitional.

In applying this type of thinking to spatial experience, we see a liminal space that transforms the occupant of the space as they move between the profane and the sacred worlds in the Athenian Acropolis. The entrance to the Acropolis through the Propylaea (fig 5) creates a transformative transition between the city and the temple precinct. This space is clearly transitional, as the occupant moves through a series of thresholds, or layers, to ascend to the sacred space. The two wings of the building extend out, as if to pull the visitor into the space and create a zone of separation from the profane. Upon ascending through the Doric colonnade, the occupant has entered a zone of transition in which they are not yet a part of the sacred temple precinct, but they have been removed from the profane world. Upon passing through the door into the porch that leads to the Acropolis, the occupant has entered a zone of incorporation (fig 6-7). Thus, the layering of the Propylaea illustrates each of the three stages integral to rites of passage.

Fig 5: The Propylaea, entrance to the Acropolis (Source: Rhodes)

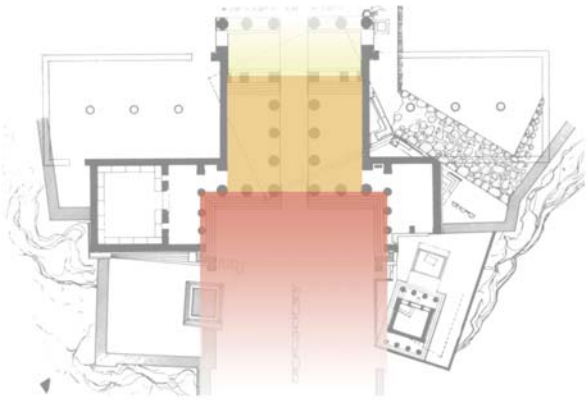


Fig 6: Zones of separation, transition, incorporation in the plan of the Propylaea (Source: Author)

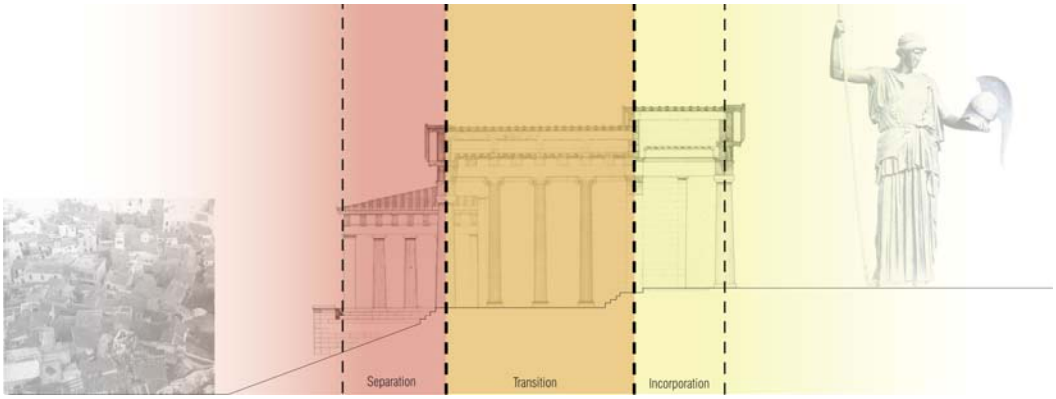


Fig 7: Zones of separation, transition, and incorporation in the section of the Propylaea (Source: Author)

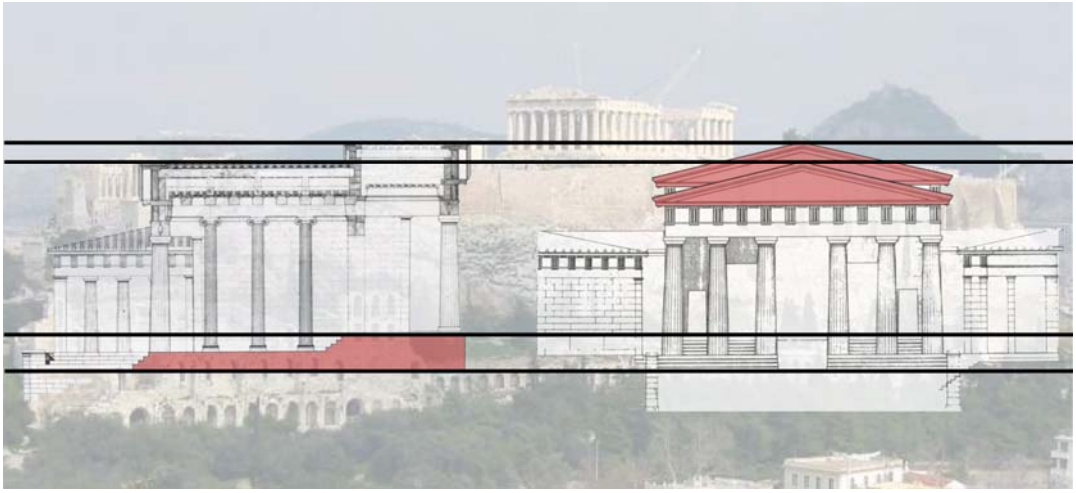


Fig 8: Emphasis of change in elevation in the Propylaea (Source: Author)

In addition, the change in elevation is used to heighten the awareness of this transition. The architect placed steps between the zones of separation and transition and between the zones of transition and incorporation to emphasize the threshold to the sacred space. To further emphasize the change in elevation marking the transitional space of the Propylaea, the pediment of the building is stepped (fig 8). These elements of the Propylaea illustrate the zones of separation, transition, and incorporation that are present in order to transform the occupant as they move from the profane to the sacred.

These three zones are also present in Le Corbusier's Mill Owners' Association Building, although in a diagram that is not quite as clear. The whole composition of the front façade, including the entry bridge, staircase, and briese soleil, acts as the separation zone between the city and the office building. This zone is experienced multiple times while moving through the building instead of once, as in the Propylaea. While moving between floors on the stair, the occupant moves back and forth through this zone of separation. Past the front façade of the building is the zone of transition. This space is neither inside nor outside, but is a blurred space, and will be explored further in the following section. This space acts as a zone of transition between the exterior spaces of the city and the interior spaces of the office building, including the main assembly room on the top floor. The incorporation zones are the spaces that allow entry into the individual rooms. In this building, the occupant is constantly moving between these three zones, constantly blurring the threshold and occupation of the building (Fig 9-11). Through this use of threshold and transition, le Corbusier transforms a space of work and thus transforms the experience of the worker.

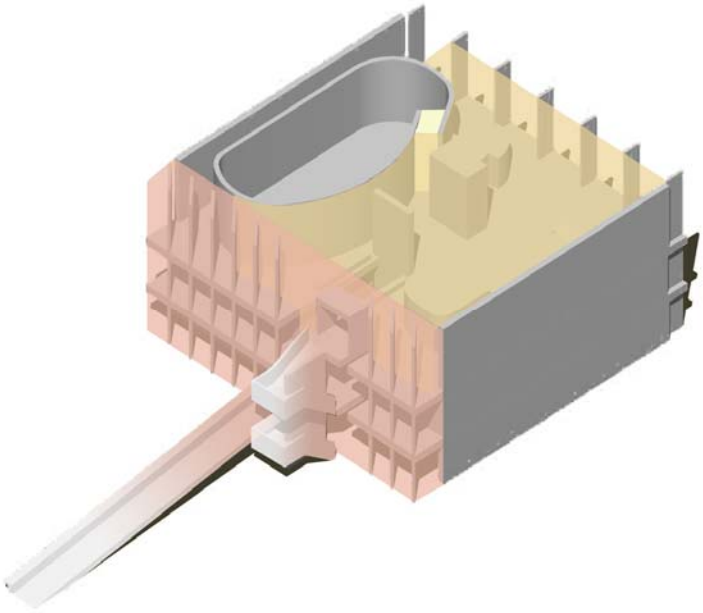


Fig 9: Axon diagram of layers of separation, transition, and Incorporation in the Mill Owners' Association Building (Source: Author)

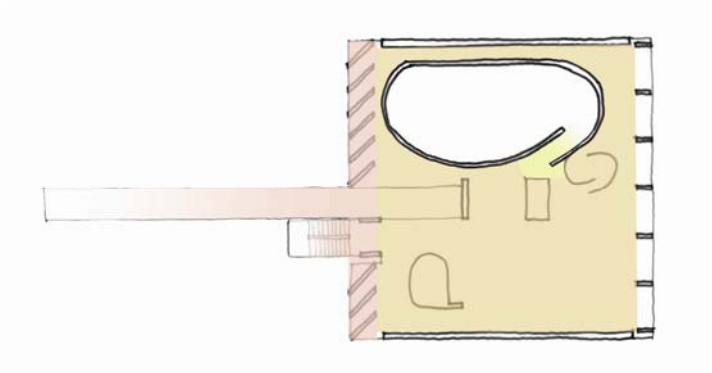


Fig 10: Plan diagram of layers of separation, transition, and incorporation in the Mill Owners' Association Building (Source: Author)

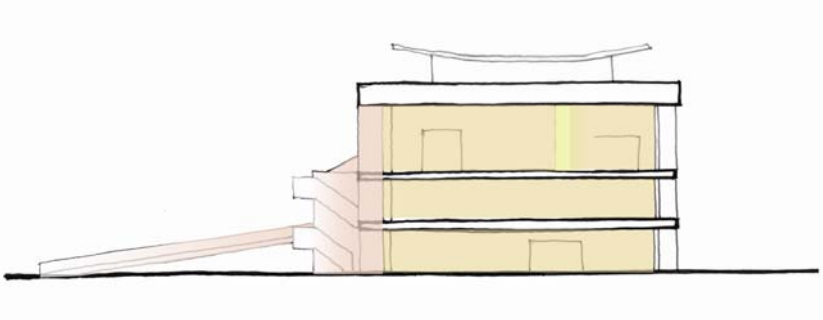


Fig 11: Axon diagram of layers of separation, transition, and incorporation in the Mill Owners' Association Building (Source: Author)

Victor Turner: Dissolution and Dissociation

Victor Turner builds upon van Gennep's understanding of rites of passage and specifically focuses on the liminal stage in the rites of the Ndembu civilization in Zambia, Africa. Turner states that "*rites de passage*" are found in all societies but tend to reach their maximal expression in small-scale, relatively stable and cyclical societies," which is why he studies the Ndembu people (Turner 93). It is important to understand the liminal stage specifically as a stage as opposed to a state. A state is "a relatively fixed or stable condition" while a stage is transitional (Turner 93). The liminal stage acts as a transition between two relatively fixed states. As van Gennep stated, all rites of passage follow the same general patterns in all cultures. Turner stresses that the scale at which the transition occurs is not as important as the transition itself. The terms initiate and neophyte have the same name regardless of what states are being transitioned between. For instance, a priest becoming a high priest takes the same name, initiate, and therefore assumes the same status, as an apprentice becoming a craftsman. "It would seem from this that emphasis tends to be laid on the transition itself, rather than on the particular states between which it is taking place" (Turner 96). In applying this understanding of liminality to architecture, we understand that the threshold between spaces is crucial to the experience of those spaces, regardless of their program and function. The threshold at the door of a house can have as profound an impact as that at the entry to a cathedral (fig 12-14). In any threshold space, the occupant is in a transitional stage in which he is neither part of what he has left or what he is entering, but is in-between, in an ambiguous condition.

Fig 12: Threshold of a house in Beaufort, SC (Source: Author)

Fig 13: Threshold of the Pantheon, Rome (Source: Author)

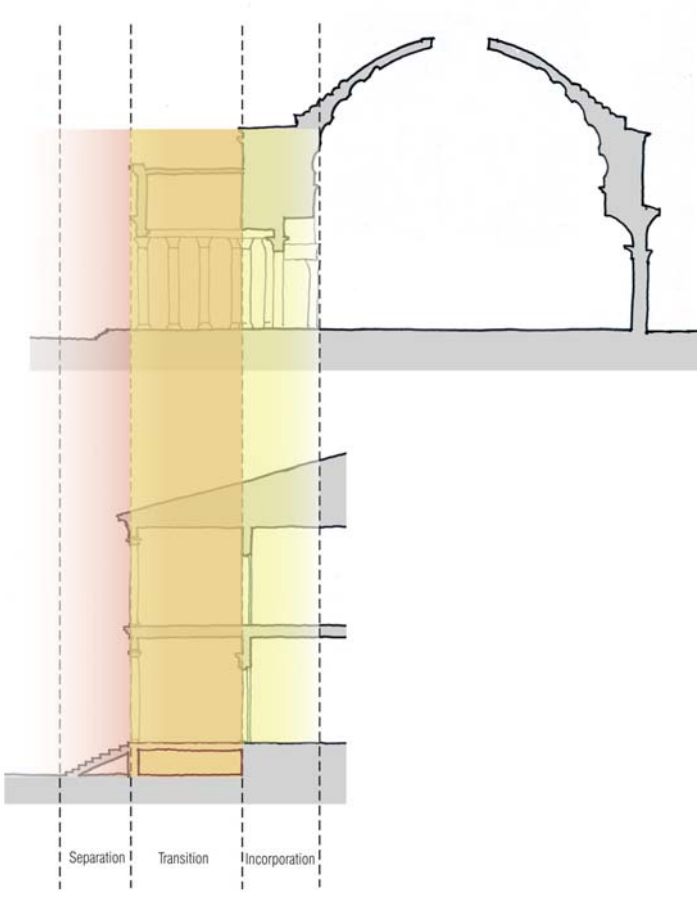


Fig 14: Liminal Space in the Pantheon and in a house (Source: Author)

Turner further asserts that the metaphor of dissolution is often applied to those in the liminal stage. What had previously constituted their being before separation is broken down in order for them be able to transform into a new state. In order for this to happen, dissolution is accompanied by growth, transformation, and reformulation. In the Mill Owners' Association Building the elements are broken down such that each is readable as an individual piece; the ramp, the briese soleil, and the floating stair (fig 15-16). Upon entering this space though, all the elements are reconstituted and work together to perform as a sequence, leading the occupant through the building and transforming a workspace into a space of contemplation and experience (fig 17). Through this understanding we see that the transition that takes place in the liminal stage is "not a mere acquisition of knowledge, but a change in being" (Turner 102). Similarly, in architectural space, the threshold acts to change the consciousness of the occupant, so it is not merely a change of space that is occurring, but a change in being.

In a similar process of dissolution, Sergei Eisenstein breaks down the essential elements of Giovanbattisti Piranesi's first etching of the *Carcere oscura* through an explosion, or "ecstatic transfiguration," (Tafuri 56) and finds that a reconstitution of these elements leads directly to Piranesi's second etching of the *Carcere* (fig 18-20). Manfredo Tafuri writes in *The Sphere and the Labyrinth* that Eisenstein's method of explosion puts the elements in a metaphorical motion, reacting to the tensions that are already present in the etching. This motion reconstitutes the meaning of each piece, ultimately transforming them into the second etching of the *Carcere*. The basis for exploding the formal components of the etching is to explore the elements of montage present in it because, as Eisenstein states, "montage is the

Fig 15: Front façade of the Mill Owners' Association Building (Source: Singh)

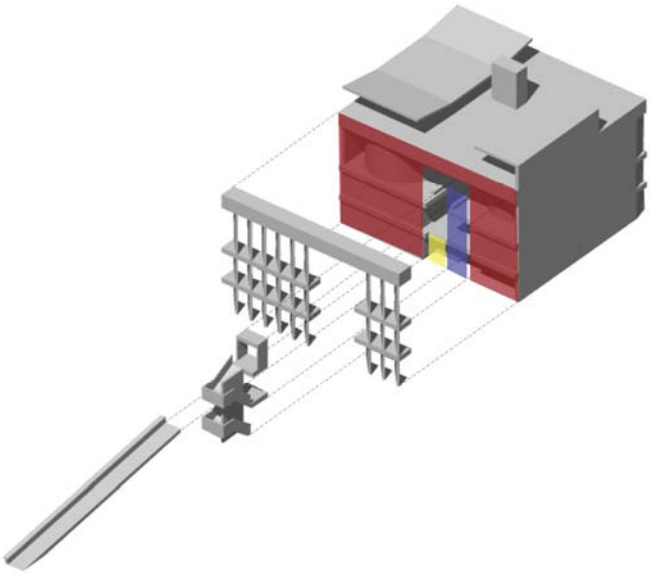


Fig 16: Elements of the front façade of the Mill Owners' Association Building (Source: Author)

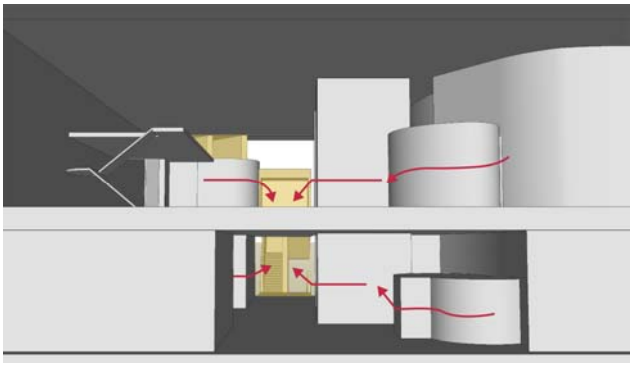


Fig 17: Elements of front façade as integral part of building (Source: Author)

Fig 18: Piransei's *Carcere oscura* (Source: www.metmuseum.org)

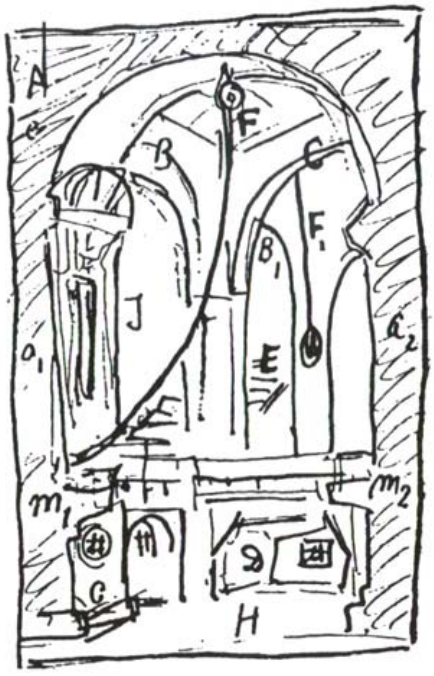


Fig 19: Eisenstein's diagram of the individual elements of the *Carcere oscura* *(*Source: Tafuri)

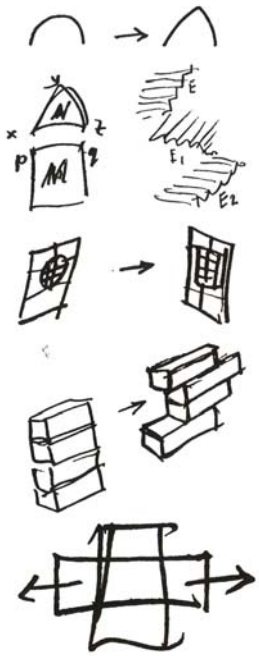


Fig 20: Eisenstein's diagram of the movement of the exploded elements, (Source: Tafuri)

stage of the explosion of the shot" (Tafuri 56). Through an explosion, Eisenstein has related the theory of montage, "collision…the conflict of two pieces in opposition to each other," (Tafuri 59) to liminality in rites of passage in that they are both characterized as stages. As stated above, the liminal stage must be seen as transitional because a stage is "a period or a step in a process" (Merriam-Webster). Because of the contrast between the two conflicting states being transitioned between, a conflict is present between them and the liminal stage can be read as a collision of the two states. Through the explosion of the *Carcere oscura,* Eisenstein illustrates the potential for the dissolution of formal components to be reconstituted with a new meaning and understanding, and the relation of the principle of montage to liminal space.

Turner continues by addressing the communication of the *sacra*, secrets that will transform the person in the liminal stage into a member of the next state. This action is not simply the communication of knowledge but is substantive information that changes the being of the person. The *sacra* is communicated through either exhibitions, actions, or instructions but always involves an abstraction of what the person in the transitional stage had previously taken for granted in order for them to rethink their place in society. Turner refers to William James' 'law of dissociation' in order to understand the abstraction, dissociation, and recombination of images and symbols used in transforming the liminal person. "As James…puts it, 'what is associated now with one thing and now with another, tends to become dissociated with either, and to grow into an object of abstract contemplation by the mind" (Turner 105). In the Ndembu tribe that Turner studies, he notes that the sacra are often communicated through exhibitions in which participants are confronted with monstrous

images with disproportionate features on a human being. "Elements are withdrawn from their usual settings and combined with one another in a totally unique configuration. [For example, the monster is combined with the human and it] startles neophytes into thinking about objects, persons, relationships, and features of their environment they have hitherto taken for granted" (Turner 105).

Here, Peter Eisenman's application of blurring to architectural design can be compared to the law of dissociation. By applying a clear diagram on top of another clear diagram the clarity of each is blurred (Eisenman 27). In his Monument to the Murdered Jews of Europe, Eisenman takes three diagrams: one of the topography of the site, one of the topography of the city, and one of a structured grid to represent the deceased, and overlays them to create a constantly changing space in which meaning is blurred (Fig 21-22). The effect is the representation of an ordered system which is out of touch with human reason to commemorate the Holocaust. Through the layering of diagrams the occupant encounters a transformation in a blurred zone (Fig 23-24). The communication of the sacra involves reducing cultural ideas into recognized components, a dissociation of those components, and recombination of them in new understandings (Turner 106). Similarly, the process of blurring takes a recognizable diagram and dissociates it by overlaying another diagram, thus leading to a recombination that has a new understanding.

The concept of blurring is seen again in the Propylaea in order to create an ambiguous space which has liminal characteristics. The building is at once a space for procession into the Acropolis and also distinct space separating the sacred and the profane. To emphasize this point the architect, Mnesicles, blurred the conventional uses and meanings of the Doric

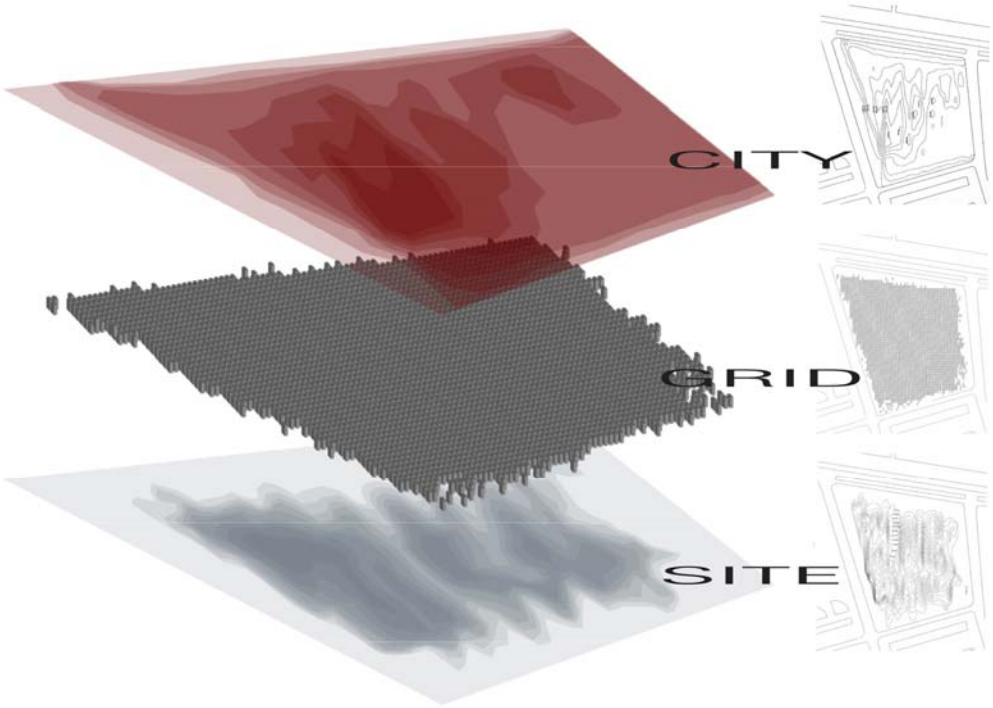


Fig 21: Layers of diagrams of the Memorial to the Murdered Jews of Europe (Source: Author)

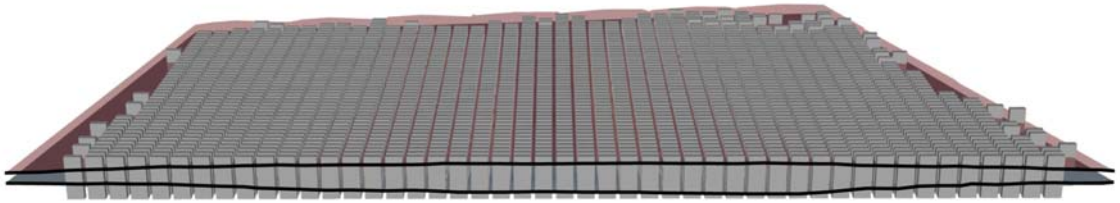


Fig 22: Diagrams overlaid to create blurred zone between (Source: Author)

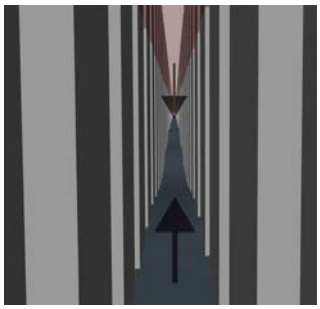


Fig 23: Blurred transformative zone between slabs (Source: Author)

Fig 24: Overhead view of the Memorial to the Murdered Jews of Europe (Source: en.wikipedia.org)

and Ionic orders creating an ambiguous reading. Before the Propylaea was built, the Doric and Ionic orders had not been combined in the same building; the Doric order was predominantly used on mainland Greece while the Ionic order was used in Asia Minor. In addition, the Doric was associated with a separation from the land, the vertical, and enclosure while the Ionic was used to represent a connection to the landscape, the horizontal, and procession. Mnesicles employs the Doric order on the exterior of the building to emphasize the separation between profane and sacred while using the Ionic order inside to emphasize the processional importance of the space (Fig 25). In addition, the Doric columns are spaced irregularly, a spacing usually reserved for the Ionic, so that the center bay is larger, again creating an ambiguity between enclosure and procession (Fig 26). The combination of the orders shows how images or symbols can be dissociated and recombined to express new meanings.

A blurring of space also occurs in the Mill Owners' Association Building in which the occupant constantly questions whether they are inside or outside (Fig 27). This ambiguity of space is a key characteristic of the liminal. The briese soleil on the east and west facades of the building act as both enclosing and porous elements which can be read at times as open and at other times as closed (Fig 28-29). The zone of the briese soleil is moved through as the occupant circulates through the building because the stair pushes through it. Once inside the enclosure of the briese soleil though, the occupant is still in a space that is both interior and exterior (Fig 30). It is not until the assembly room that the occupant is fully enclosed in a space, and even then, this space is floating in another. The sequence of the Mill Owners' Association Building is through a blurred space in which the occupant questions whether they are inside or outside, when in fact they are both inside and outside.

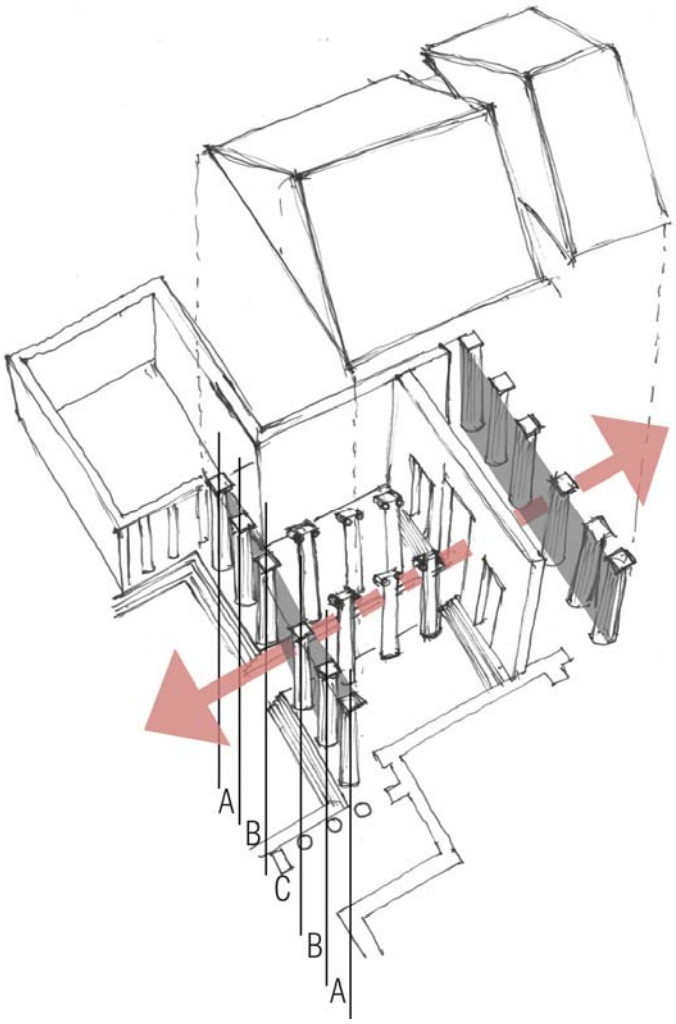


Fig 25: Blurring of space through dissociation and recombination of Doric and Ionic orders (Source: Author)

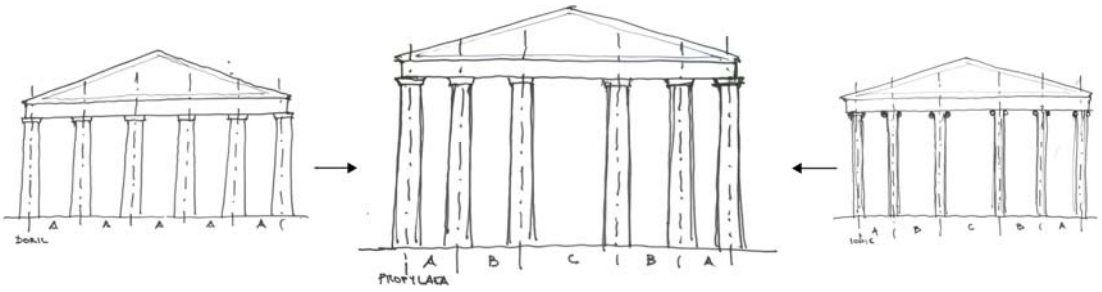


Fig 26: Combination of Doric and Ionic principles in Propylaea (Source: Author)

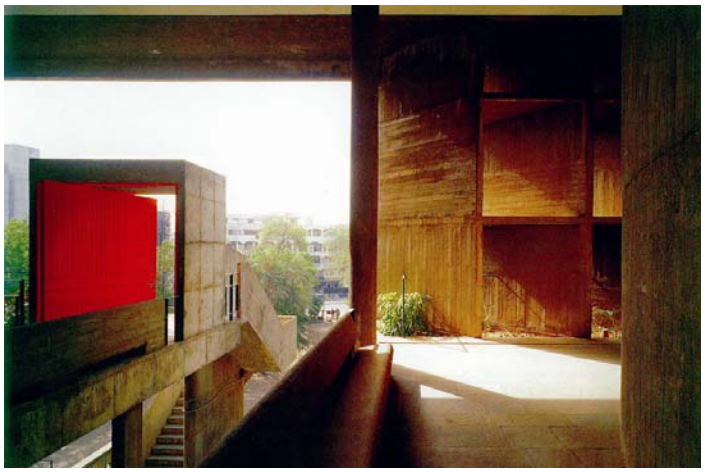


Fig 27: Interior View of the Mill Owners' Association Building showing blurred interior/exterior space (Source: Singh)

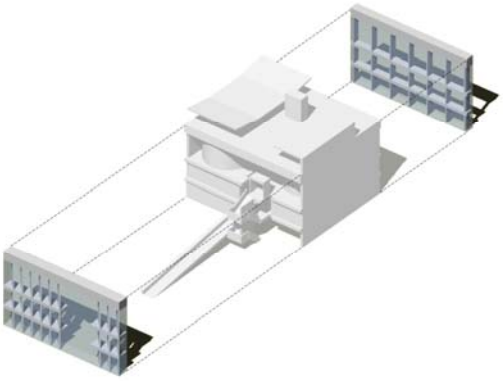


Fig 28: Diagram of the enclosing/porous briese soleil elements (Source: Author)

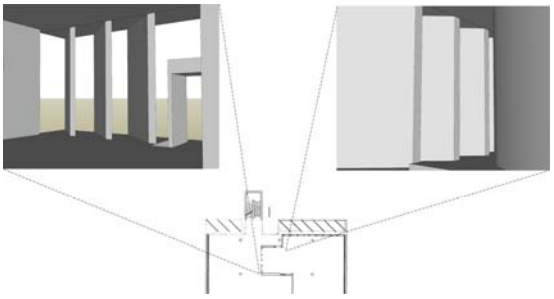


Fig 29: Diagram of the both open and closed quality of the briese soleil (Source: Author)

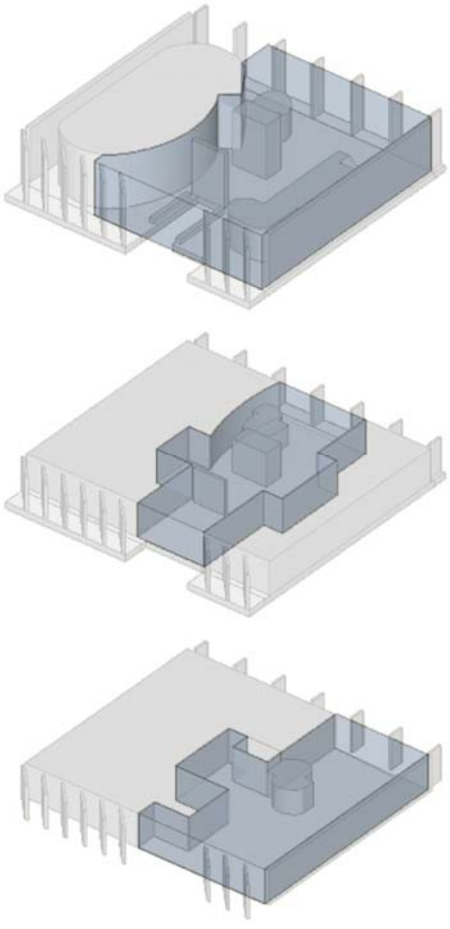


Fig 30: Diagram of the ambiguous interior/ exterior spaces (Source: Author)

Through the dissolution, abstraction, dissociation, and blurring of elements and space, a transformative liminal space can be created. This is seen in the Propylaea, the Mill Owners' Association Building, the Memorial to the Murdered Jews of Europe, and in the *Carcere oscura.* The liminal space in each of these projects is one of ambiguity and has a transformative effect on the occupant as they move through it, analogous to the liminal stage in rites of passage.

Bobby Alexander: Ritual

Bobby Alexander writes on the topic of the ritual in response to van Gennep and Turner and argues that "ritual… [creates] the condition of liminality, in which some of the demands of social structure and obligations to it are relaxed" (Alexander 17). Alexander's ideas actually relate more to the experience of being in a liminal space than providing an analogy for it. He addresses the liminal realm as one "of pure possibility or potentiality," (Alexander 18) in which everyday social and cultural experiences can be transformed. The creation of a community is of importance to his understanding of what occurs as a result of ritual, in which social distinctions have been relaxed. This relaxing of structure allows for encounter between people who are generally isolated from one another. The space of a ballpark then can act as a liminal space created by ritual, relaxing the generally accepted social structure to create a sense of community. Alexander references Turner's description of sports and games as "liminoid phenomena" which resemble rituals. Although they do not meet the standards for pure ritual (i.e.: based in religion, required for cultural advancement, or necessary for the working of

social structure) they do "[provide] a transitional framework within which everyday social and cultural experience is transformed, i.e., liminality" (Alexander 21). The space of a ballpark provides the setting for the creation of community through ritual. The potentiality inherent in liminal space is essentially its transformative nature through which a new understanding of oneself, others, and the space occupied by the two can be grasped.

The Process of the Liminal

Through an analysis of traditional rites of passage, a process for the creation of transformative liminal space has been uncovered. This process, although listed above as linear, is actually concurrent so that each of the individual processes informs the others. These processes include layering, dissolution and reformulation, and blurring. A layering of spaces serves to separate, transition, and incorporate the occupant from one space to another so that the threshold is a progression through space (Fig 31). Dissolution and reformulation represents the breaking down of a composition to its constituent elements in their generally accepted meanings and use and then reconstituting them in a way that leads to a different understanding about what they are. Additionally, an overlaying of clear diagrams creates a blurring between the two (Fig 32). This produces an ambiguity that leads the occupant to question what had previously been taken for granted in a certain kind of space and creates a new understanding and apprehension of the space. Architect Vincent Mulcahy describes this interstitial space between contrasting states as a "realm of pure possibility" (Koetter 68). The simultaneous combination of these processes creates a space that has the ability to transform the state of the occupant.

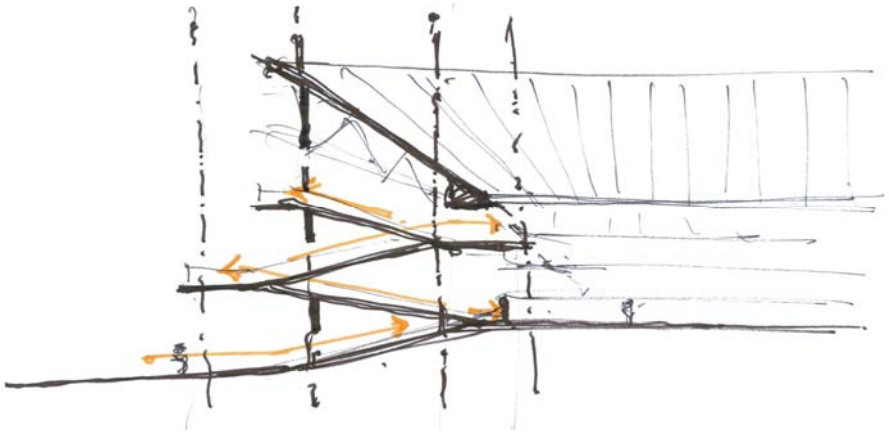


Fig 31: Diagram showing possibility of layering spaces (Source: Author)

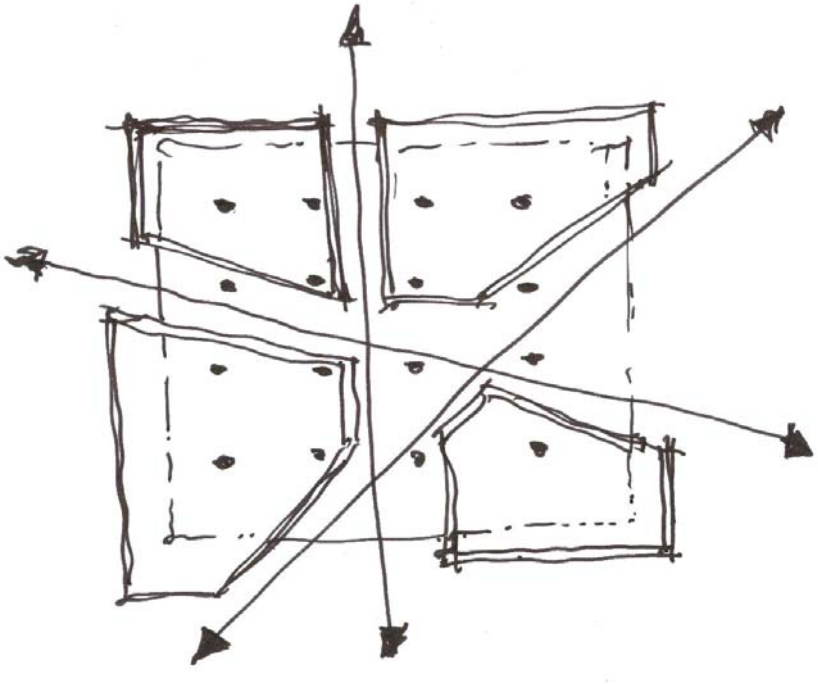


Fig 32: Diagram showing the possibilities of overlaying diagrams
(Source: Author)

This process will be applied to a ballpark in order to create a space that is transformative in nature for both the fan and the player. The ballpark will be understood, broken down, and reconstituted in a way that emphasizes the ritualistic nature of the ballpark and the game of baseball. By accentuating the specific ritualistic acts of the ballpark, the space creates a series of moments that ultimately work together to create an experience that transforms the occupants, both the fan and the player. This transformation is achieved through the expression of the transitional nature of the space of the ballpark between the city and the seats for the fan and the city and the field for the player. This in-between space is one of constant occupation and movement and has the ability to be a transformative threshold.

III. The Ballpark: Ritual and Liminal Space

The Ritual of Sport

Although Victor Turner has classified sport as liminoid phenomena, or a transitional framework resembling ritual, it is necessary that the definition of ritual be expanded for this argument. The criteria that Turner employs to define rituals in clued that they be: based in religion; concerned with calendrical, biological, social-structural rhythms or with crises in social processes; required for every member of society; "centrally integrated into the total social process; and beneficial for the working of social structure (Alexander 21). This structure limits the understanding and comprehension of ritual and does not do service to any secularized ritual. David Voigt offers a more comprehensive definition of ritual that encompasses Turner's definition while expanding it to all aspects of a culture; "rituals shall be taken to mean those culturally prescribed behavior forms used by certain individuals or groups to cope with the pressures of reality" (Browne 125). Voigt goes on to identify the working world of jobs and economic survival as the 'real world' in American culture. In this way, the ritual of sport is a way of coping with the real world and produces a condition of liminality "in which some of the demands of social structure and obligations to it are relaxed" (Alexander 17). Central to Voigt's argument on the ritual of American sport is that ritual is simply "a public act and an expression of faith in the world's orderly processes" (Browne 126).

To argue that the participation in sporting events as a fan is ritualistic and does actually conform to Turner's definition, Voigt analyzes the sporting ritual. He argues that many Americans revere athletes as gods to be worshiped and the stadium that the sport takes place

in a place for worship (Fig 33). Each individual sport's season marks the passage of time and relates to social processes associated with the calendar (Fig 34). For example, the baseball season marks the beginning of spring and the end of summer. Although an interest in sport is not required for every member of society, Voigt argues that "for an American to be utterly without interest in sport, to be uninvolved as a participant or spectator, is to be alienated from American culture" (Browne 127). Finally, the participation in sport "serves a function of re-creating one's energies for fuller participation in the 'real' world of work," thus serving as beneficial for the working of social structure (Browne 127) (Fig 35).

Because of its inherent ritualistic properties, the attendance of a baseball game is situated in a liminal space. The spatial aspects of the ballpark can enrich and enhance the experience of attending a ballgame by accentuating the liminality inherent in the sporting event. A blurring between city and playing field as well as between fan and player can heighten the transformative nature of attending a ballgame.

Fig 33: Worshipping the athlete, Greg Maddux receiving a curtain call (Source:

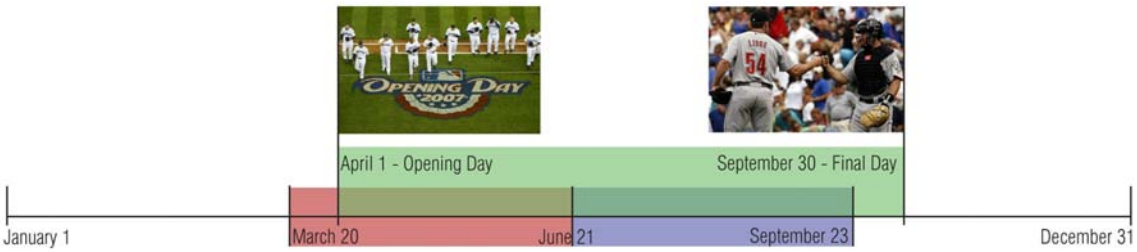


Fig 34: Baseball season relating to the calendar (Source: Author)

Fig 35: Re-creation of energy (Source: jazzgirl-im.tripod.com)

The Ritual of the Ballpark

> "A sports stadium is essentially a huge theatre for the presentation of heroic feats. From such a combination of dramatic function plus monumental scale ought to flow powerful civic architecture." (Sheard 1)

> "The one constant through all the years, Ray, has been baseball. America has rolled by like an army of steamrollers. It's been erased like a blackboard, rebuilt, and erased again. But, baseball has marked the time. This field, this game, is a part of our past, Ray. It reminds us of all that once was good, and could be again."
>
> James Earl Jones (as Terrance Man, *Field of Dreams*)

Baseball has been a constant in American culture since its inception in the mid-1800's and the ballpark has been the setting for the rituals involved in the game. The ballpark has the opportunity to provide the liminal space necessary for the transformative nature of attending a ballgame. Inside the ballpark exists a "realm of pure possibility" (Koetter 68) that has the power to transform the fan through the participation in a ritual that is central to American culture. How can the ritual of attending a baseball game be re-understood so that attending a ballgame becomes more than just sitting at the park and watching the replay screen but puts the fan in direct contact with the game itself? Through an understanding of the space of the ballpark, the elements of the park will be broken down and reconstituted so that the threshold space between the city and the field becomes transformative instead of simply circulation and enclosure.

The Playing Field

The ballpark is both fixed and variable. Since the rules of baseball were laid down by Alexander Cartwright in the 1850's the infield has been a fixed diamond of four 90 foot long sides holding the only fixed dimensions of the game of baseball (Fig 36). Within the 90 foot

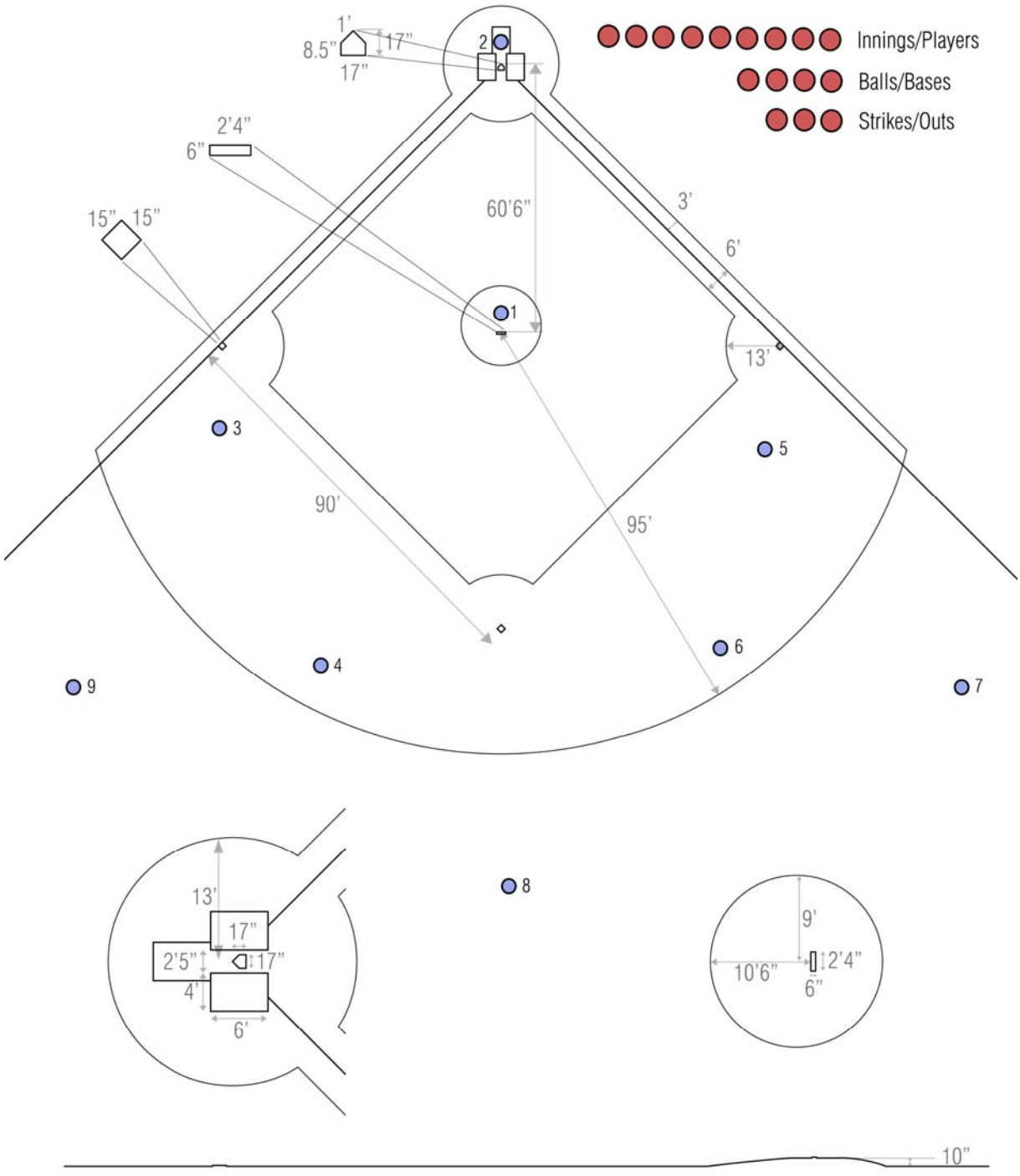


Fig 36: The infield dimensions and meaningful numbers in the game (Source: Author)

diamond is the pitcher's mound which is located 60'6" from the back of home plate and is raised up ten inches above the rest of the playing field. Home plate is a 17" x 17" square with two corners notched out to fit into the diamond. Each base is 15"x15" and the pitching rubber is 28" x 6". These dimensions are all critically important to the game and are perceived clearly by any fan who attends the ballpark. The critical dimensions of the infield have the opportunity to inform the design of the ballpark. By creating spaces that relate to the dimensions of the playing field, the fan engages a space that has a relationship to the space occupied by the players. This juxtaposition can create a dimensional threshold in which the movement of the fan through a space is based on the movement of the players on the field (Fig 37-38). The result is a blurring of space occupied by the fan and the space of the player. While still remaining separate from the playing field, the space of the fan can take on qualities of the playing field in order to create a transformative, transitional space from the city. In addition to the dimensions of the playing field, the game of baseball has always been strongly associated with numbers. The history of the game places an emphasis on important milestones numbers such as 300 wins, 3,000 hits, and 500 home runs. While these numbers may be difficult to incorporate into the design of the ballpark in a meaningful and understandable way, the numbers three, four, and nine are obvious to any baseball fan and can relate the game on the field to the space occupied by the fan. Three is both the number of strikes allowed and the number of outs per half inning, four is both the number of balls allowed and the number of bases on the field, and nine is the number of innings per game and number of players on the field. In the same way that the dimensions of the field can be incorporated into the design of the ballpark, these significant numbers too can be incorporated.

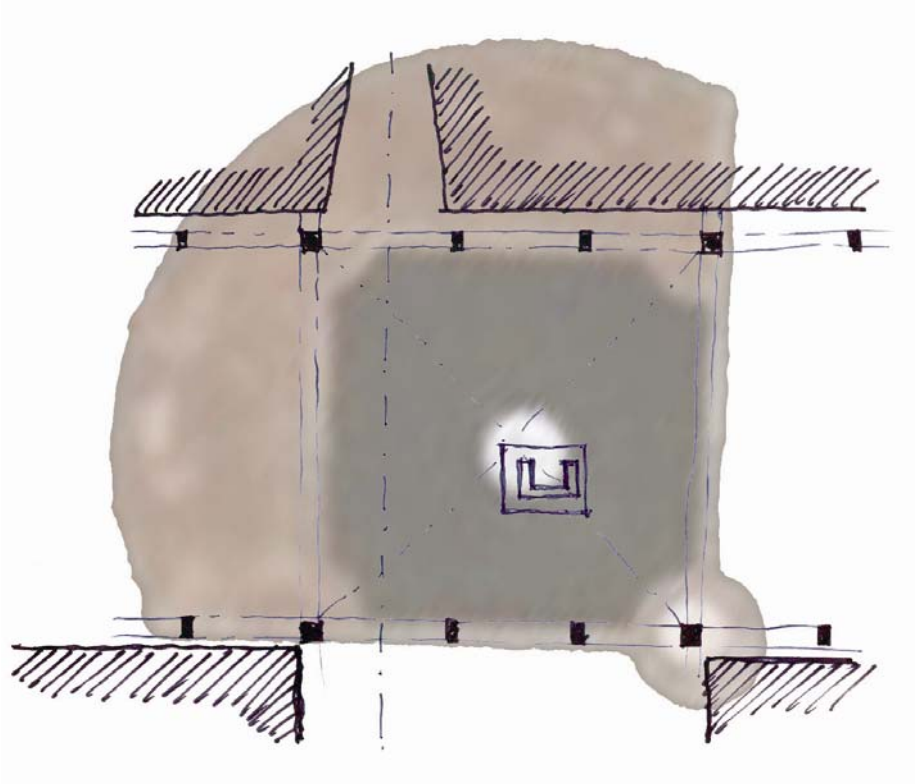


Fig 37: Concourse dimensions relating to proportions of the infield, also incorporating the numbers four and three. (Source: Author)

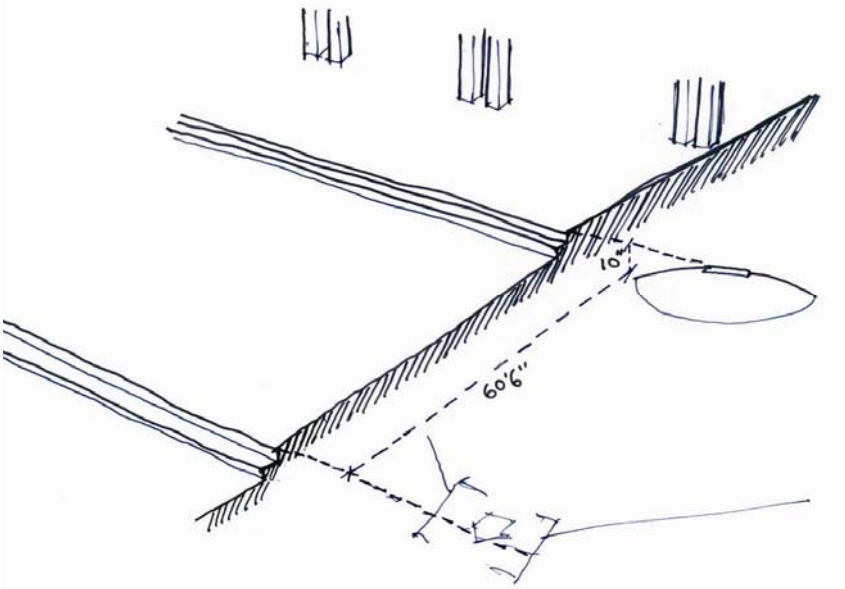


Fig 38: Diagram of a possible dimensional threshold, relating the pitching mound to entry sequence (Source: Author)

While the infield is completely fixed, the outfield is infinitely variable. Aside from the suburban stadium trend of the 1960s and 1970s in which generic, symmetrical, antiseptic stadiums were built, the variation of the outfield has created some of the most defining moments of ballpark architecture which lends a sense of place to the game. The ability of the playing field to change from field to field allows the ballpark to be situated in unique settings. Because of this ability to adapt to a site, the ballpark has been historically associated with urban conditions, as is evident in Chicago's Wrigley Field and Boston's Fenway Park. This allows the ballpark to have direct contact with the city and begin to engage it in a way that no other sporting facility can. Because of the variation available to the ballpark the city can impact and shape it, as in Fenway Park (fig 39), while at the same time the ballpark can impact and shape the city, as at Wrigley Field (Fig 40). Because sports such as football, soccer, basketball, and hockey have completely fixed dimensions, essentially a rectangular playing surface, the buildings that house them are, more often than not, a rectangular mass, a reflection of what is inside on the outside. The ballpark has a unique opportunity in this respect, while the massing can be a reflection of the playing field on the inside, the playing field can also be a reflection of the outside city. The ballpark as the threshold between the city and the field then can have a unique relationship with each and begin to blur and overlap these spaces instead of sealing them off from each other.

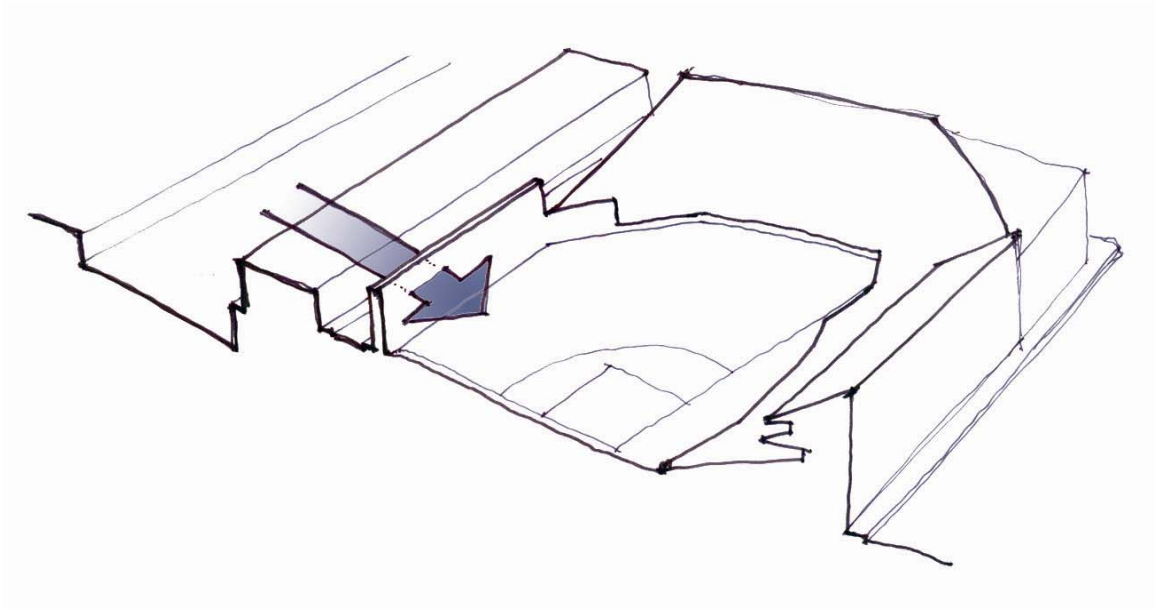


Fig 39: The impact of the city upon the ballpark. The city streets of Boston create an enclosed site at Fenway Park which led to the short left field and required the Green Monster to be built. (Source: Author)

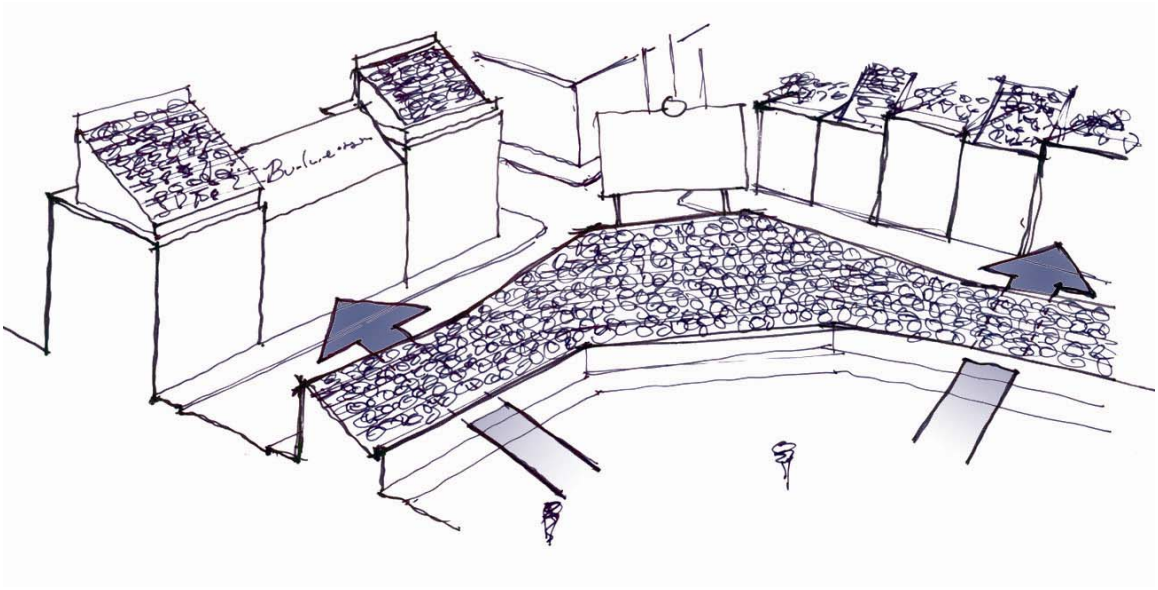


Fig 40: The impact of the ballpark on the city. The low outfield bleachers at Wrigley Field in Chicago have led to the building of bleachers on top of neighboring buildings. (Source: Author)

The Ballpark in the City

In addition to the impact of the field on the city, the ballpark is one of the few remaining civic spaces occupied by a large group of people. In this respect, it has the ability to, and should, function as civic architecture. The reasons for gathering people together for a common interest have decreased with the advancement and increase in mass media. Sporting events now offer the only resemblance of civic opportunities that once were possible in the Greek agora, the Roman forum, or the early American town square. When the ballpark itself is located in the city it can act as a beacon, a civic monument to the superior athleticism that takes place there as well as the gathering of the community for a common cause. The civic pride that sports, and baseball in particular, have inspired is priceless in conception of community. The ritual associated with the ballpark spans across generations and throughout diverse communities, changing to reflect the character of the individual setting, but always returning to the game. Because the game of baseball holds a civic position, the architecture of the ballpark should support this civic function. In this regard the ballpark should be specific to the city and community it is in. In addition, and more importantly, the ballpark should function as a civic monument even when there is not a game being played. Instead of a landmark that simply marks space and is only used 81 days a year, the ballpark should function as a part of the everyday life of the city. The Piazza del Campo in Siena, Italy functions as a public plaza for 363 days of the year, but for two days it is the setting for the Palio horse race (Fig 41). This dual function of civic space and stadium creates an ambiguous condition which is a component of liminal space, the both-and condition. In Baltimore at Oriole Park at Camden Yards, the integration with the city occurs between the ballpark and the adjacent pre-existing

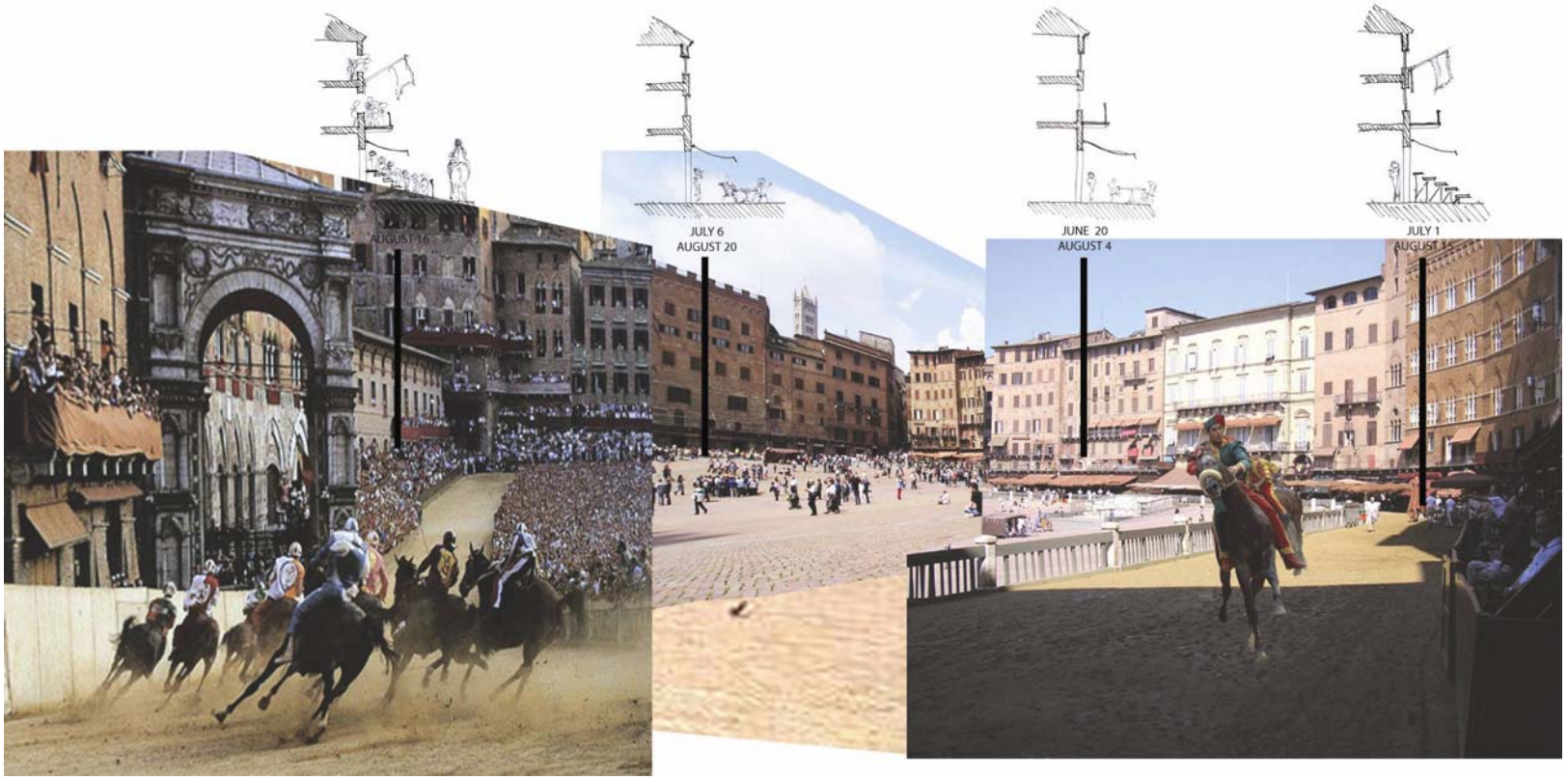


Fig 41: The stadium as civic space. Diagram showing the transformation of the Piazza del Campo in Siena, Italy from civic space to horse racing arena. (Source: Author)

warehouse (Fig 42). When games are not being played the pedestrian street between the two is open to public access and offers views to the playing field. At Petco Park in San Diego, the ballpark engages a public park in the same way Camden Yards integrates the warehouse (Fig 43). A pedestrian street runs between the ballpark and the public park so that while games are not being played the civic space of the park engages the space of the ballpark. Additionally at Petco Park, architect Antoine Predock used the form of the tower generally associated with civic buildings such as churches and clock towers and applied it to the ballpark in the form of light standards, marking it as important civic space (Fig 44). By placing the common urban form of the tower in the context of the ballpark, Predock has dissociated the form from its common context and reformulated it in a new way to give the ballpark a new meaning, a civic one, to the fan.

The Fan and the Player

The ballpark is occupied by two different groups of people, the fans and the players. Each of these groups experiences the space differently but relies on the other in order for the space of the ballpark to be active (See Appendix D). Because of the inherently different use of the ballpark, the player experiences the threshold very differently from the fan, but nonetheless also has the power to be transformed by the space. The experience of the liminal space in the ballpark must address both the fan and the player and their perceptions of the space and of each other. The arrival of the player and the fan occur at different times, with the players arriving four to five hours before game time and fans arriving, at the earliest, two hours before the game beings. After the game, the fans leave immediately while the players spend one or

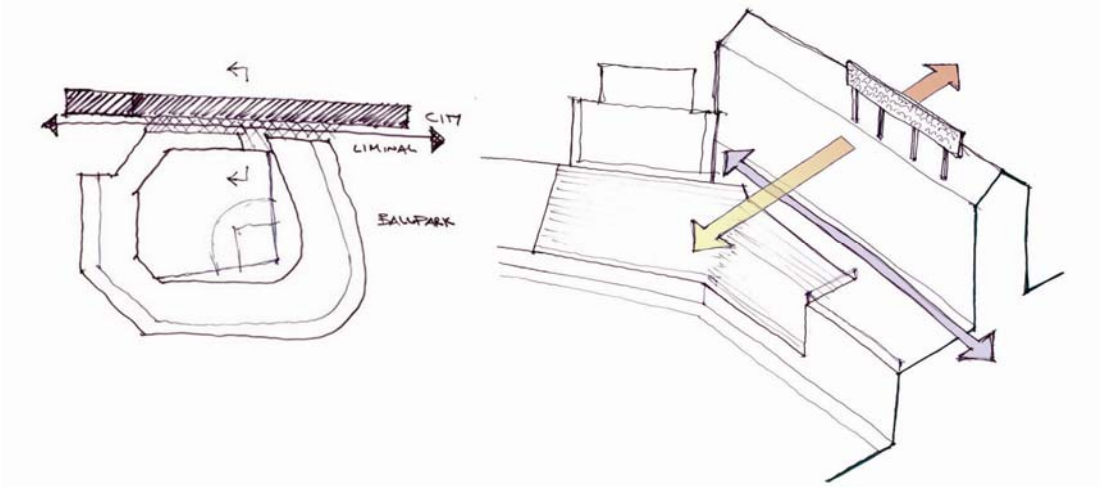


Fig 42: Integration of the city and the ballpark at Camden Yards in Baltimore, MD (Source: Author)

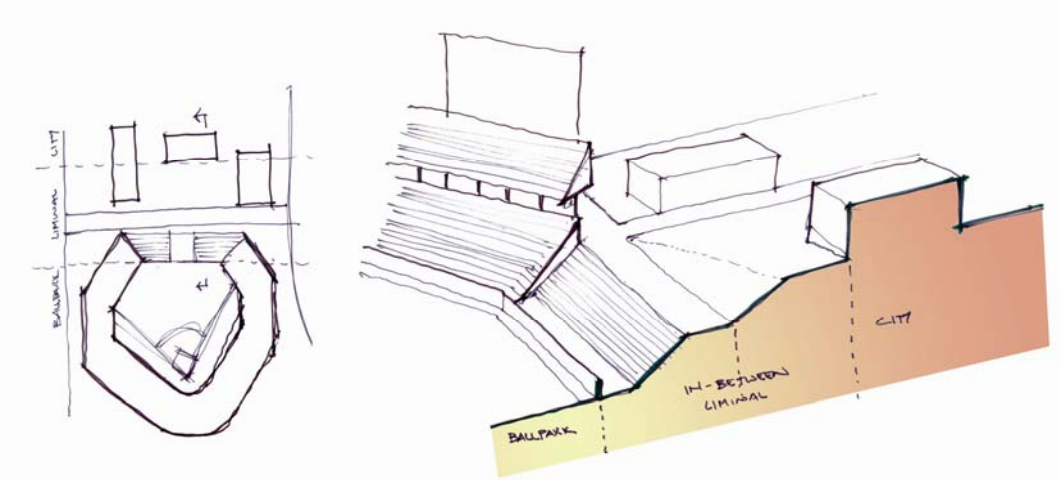


Fig 43: The transitional space at Petco Park between the city and the ballpark (Source: Author)

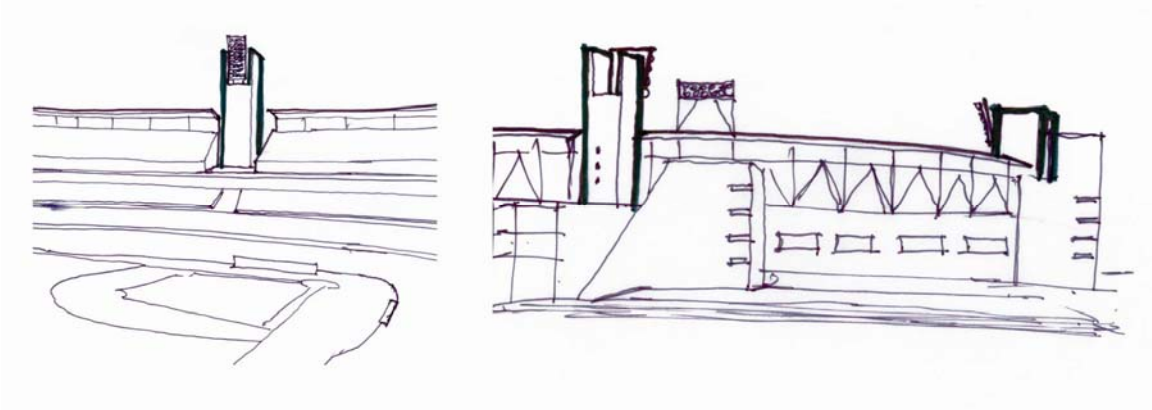


Fig 44: Light towers as civic markers at Petco Park (Source: Author)

two hours in the clubhouse. Despite this gap between player and fan occupation of the transitional space between the field and the city, the two groups never occupy the same spaces in the modern parks. In older parks, such as Fenway Park and Wrigley Field, player clubhouses were on the same level as the main entrance to the ballpark so the players had to use the same entry and move through the concourse that the fans would later occupy (Fig 45). In modern ballparks such as Petco Park in San Diego, the fans must move up a flight of stairs to get to the main concourse space so that the ground level is reserved for the players (Fig 46-47). The lack of connection between player and fan in these spaces contributes to the dissolution of the fan in the belief of the good of the game, elevating the player to a higher status. While this may be true and be a part of the ritual of the game, by providing a space that both the player and fan occupy, that space can begin to take on liminal characteristics through the equality of the participants.

Concourse

The concourses of the ballpark are a major layer in the procession from the city to the seats. This space of the concourse should be a clearly defined space between the city and the seating bowl, thus providing an understanding of being inside the stadium. Throughout the history of the stadium, the concourse has been used primarily as a space to move people between the outside and the seats. This space has the intrinsic ability though, to transform the fan who engages the space and make them a participant instead of simply an observer. The power of the space to transform the fan from spectator to participant is crucial to the thesis of liminal space. In the case of the ballpark, the concourse is the clearly defined space between

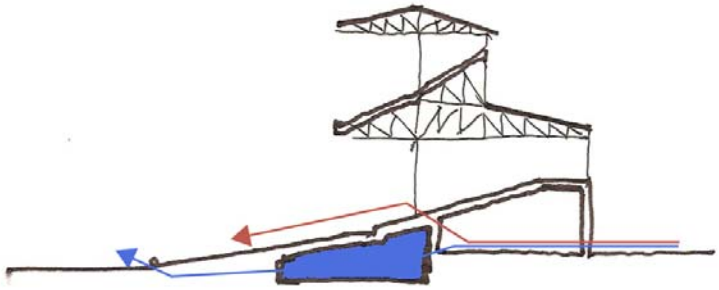


Fig 45: Section of Wrigley Field, Chicago showing concourse occupied by players and fans (Source: Author)

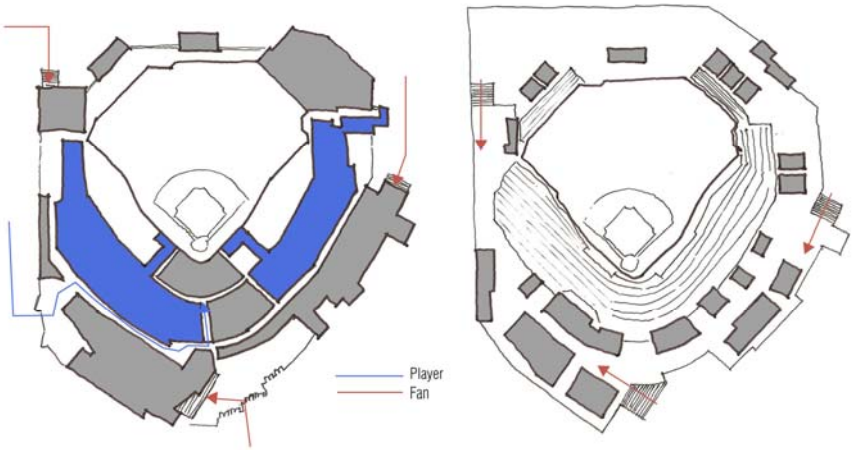


Fig 46: Plan Diagrams of Petco Park, San Diego showing separation between players and fans (Source: Author)

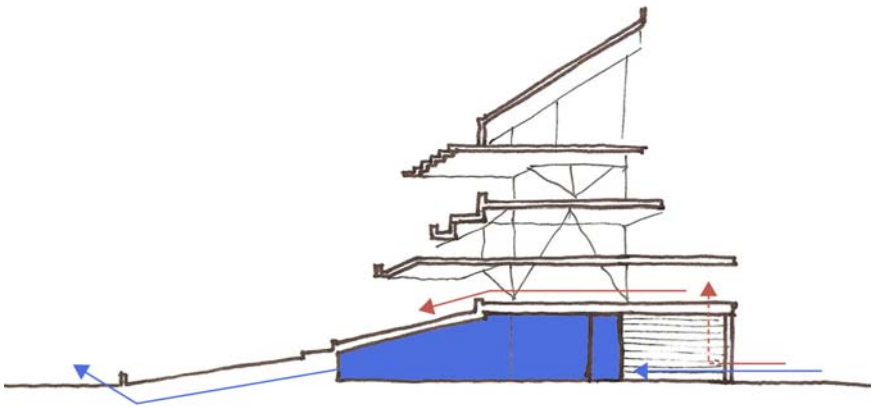


Fig 47: Section diagram of Petco Park, San Diego showing separation between players and fans (Source: Author)

two distinct thresholds which transitions the fan from the city to the game. The nature of the concourse has changed throughout history and has lost many attributes which in the past allowed the threshold from the concourse to the seats to be transformative. The section of the Colosseum in Rome illustrates a layered progression through space which, in addition to moving people, served to create a threshold upon entering the stadium (Fig 48). Once inside the concourse, the fan had to move through a series of spaces before encountering the arena, thus building up a sense of drama through the transitional space which transformed the occupant from citizen to fan. This series of layers created a disconnect from the city and incorporated the fan into the arena, fully engaging them with the spectacle of the sport taking place. In Wrigley Field, the concourse is located beneath the seats and is completely enclosed (Fig 49). This space is transitional between the outside and the seats, and in being so cut off does not offer any glimpse or suggestion of what might be beyond except through the vomitories. This brief view of the brilliant blue sky creates an anticipation that builds in the fan as they walk through the dark concourse, serving to heighten the threshold. In contrast to the Colosseum, the space is a single layer as opposed to the multiple layers which diminishes the threshold. At the Zepplinfeld in Berlin by Albert Speer, the procession from the exterior to the seats is through a series of layers in both plan and section to separate the spectator from the exterior and incorporate them into the arena (Fig 50). The enclosed stair separates the spectator while the colonnade at the top of the stands is an in-between zone that relates the spectator to the field while providing a perceptible threshold. In more contemporary ballparks, the interstitial space of the concourse has been blurred to the point of near non-existence. The

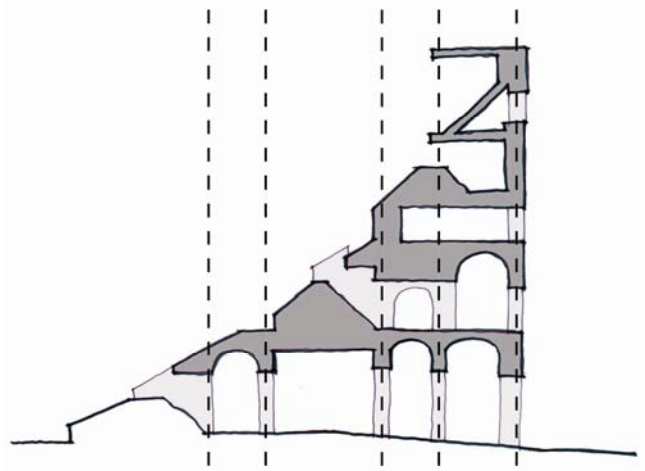


Fig 48: The layers of the Colosseum (Source: Author)

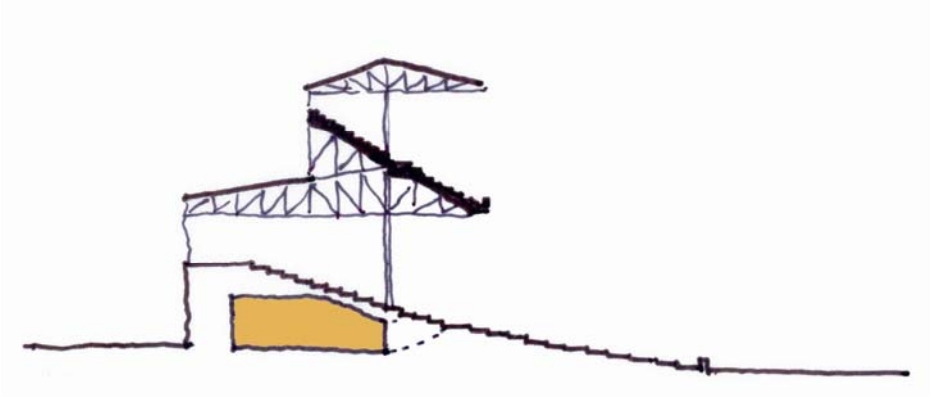


Fig 49: Section of Wrigley Field, enclosed concourse shown in orange (Source: Author)

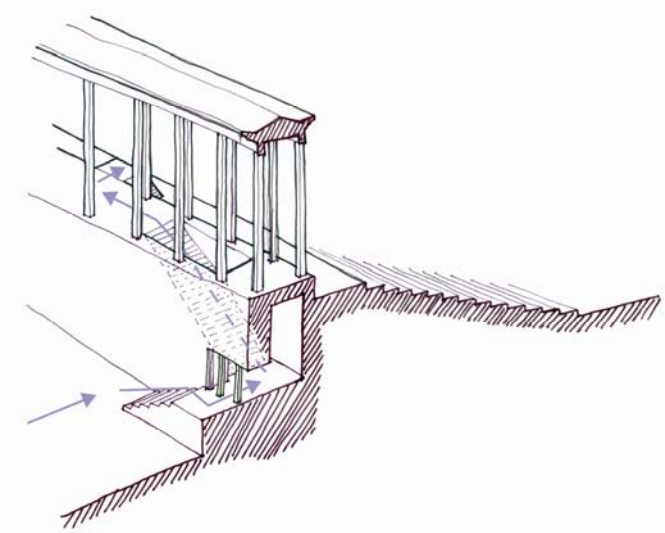


Fig 50: Section of the Zepplinfeld showing transitional procession into stadium (Source: Author)

space used to move people from concourse to seating in the older parks and stadiums, the vomitories, have been removed in favor of a concourse which completely opens to the field. The design of the concourse should create a perceptible threshold that defines an in-between space in order to transition the occupant.

Vomitory

The removal of the vomitories between concourse and seating bowl has led to the elimination of the threshold. This lack of distinction between the two spaces has been a recent trend in stadium design. Prior, the concourse was separated from the seating bowl and the transition between the concourse and the seats was through a vomitory. Petco Park in San Diego has a series of pavilions that at times close of the field and at other times open it up to the spectator (Fig 51). The threshold is essentially lost though, in the spaces where there is no barrier between the stands and the concourse. In the Nationals Stadium in Washington DC, the threshold has been completely removed so that the concourse is completely open on both sides (Fig 52). On the interior, the concourse opens to the stands and the field while on the exterior the space opens to the city. This space linking the concourse and seating bowl was previously generally a dark space leading out to the brilliant green of the field and blue of the sky (Fig 53-54). This threshold space is found in older ballparks such as Fenway Park (Fig 55) and also in newer designs such as at Camden Yards. The vomitory should, as much as possible, create a distinct threshold between the stands and the concourse in order to emphasize the transition. This threshold does not need to be a solid wall but should be perceptual to the occupant. The unique threshold space created by a vomitory seen in

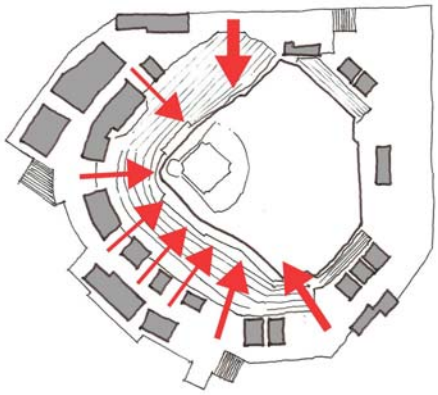


Fig 51: Plan of Petco Park showing dissolving threshold between concourse and seats (Source: Author)

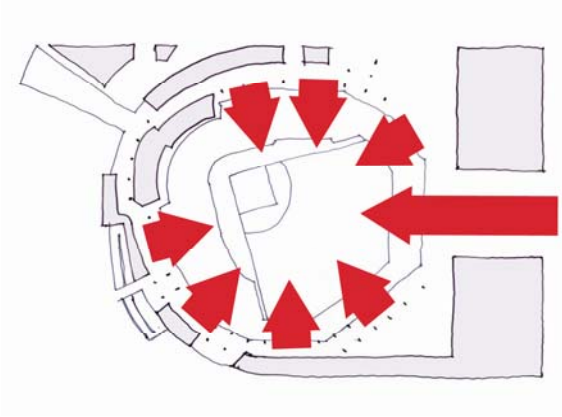


Fig 52: Plan of Nationals Stadium showing complete lack of threshold between concourse and seating (Source: Author)

Fig 53: Vomitory at Bush Stadium from inside concourse (Source: Author)

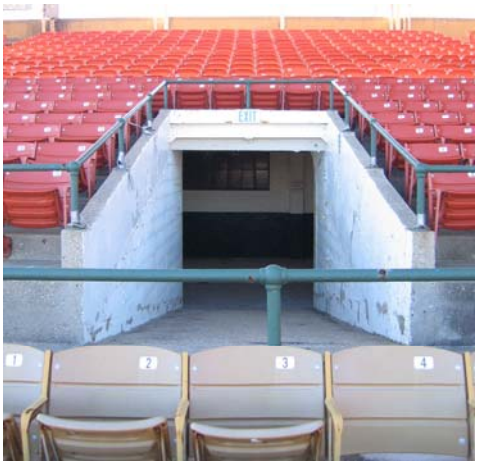


Fig 54: Vomitory at Bush Stadium from seating bowl (Source: Author)

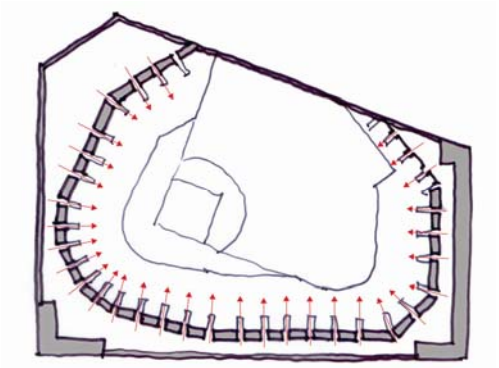


Fig 55: Plan of Fenway Park showing compressed threshold at vomitories (Source: Author)

traditional ballparks creates a sense of drama as the fan moves from the dark concourse, through a compressed space, and emerges in the seating bowl enclosed by thousands of people framing the brilliant green of the field and the blue of the sky. The main reason the vomitories have been removed is because of the commodification of the game. As the importance of making money has increased the accessibility to concessions has led to the space of the concourse bleeding into the space of the stands.

Concession Stands

Throughout the stadium are located various concession stands and vendors selling food and souvenirs. These stations have become a crucial element to the experience of attending a ballgame and the occupation of the ballpark. The early ballpark model located the concessions below the stands in the concourse area, separated from the playing field. This separation created a clear distinction between game and commodity, requiring the fan to disengage from the event in order to experience the ballpark or purchase their beer and hot dog. With the introduction of the television into the ballpark, the commodity of the space increased as people could leave their seats and stand in line for concessions while still watching the game on televisions above the concession stand. This juxtaposition of watching an event on the television while it was taking place only on the other side of a wall illustrates the cultural shift from the beginning of the twentieth century to the end of it. The mass media has made the sporting event available to all people through the push of a button, so the experience of attending a game had to become an event. As seen in Nationals Stadium previously, the complete openness of the concourse to the seats and field, which is standard

in most new ballparks, removes the threshold in order to make the fan perceive that they will not miss the game while buying their beer. The reality is that the view is not to the field but straight out to the stands across the field, thus removing the threshold but also not allowing the fan to constantly watch the game. Essentially, this type of organization is worthless. When the concessions are clearly separate from the game the fan is always moving across the threshold between the field and the concourse. By separating the two, the game is established as the important event and makes the threshold perceptible. For this reason, and in order to create a perceptible threshold that marks the transitional zone and the zone of incorporation into the game, the concessions should be placed such that the fan is disengaged from the game while accessing these spaces.

Seating Bowl

The final destination for the fan at the ballpark is the seat, which allows them views of the game unfolding. The seating bowl offers a variety of vantage points to the game, wrapping around the playing field. To offer the best experience to the fan and the player, the seats should be as close as possible to the playing field. The sense of enclosure and compactness of the crowd focuses the energy of that crowd inward to the field where the game is being played. The current trend in ballpark design is to split the seating sections into "neighborhoods." Essentially this creates more places to raise ticket prices while breaking up the mass of the fans. The tight quarters in the stands at ballparks such as Fenway Park, Wrigley Field, and Yankee Stadium bring the fans closer together helping to create a transformative experience. While the previous spaces in the procession can create a perceived

connection with the player and the game, the seats offer a direct connection. As such the ambiguous, blurred condition of the liminal is not as present in this space. The seats are relatively fixed in their arrangement because they should be as close to the field as possible and offer the best views of the game possible.

Clubhouse

The player experiences the space of a ballpark in a very different way from the fan. In modern ballparks the fans are completely separated from any interaction with the fan until they step onto the playing field. The program for the Washington Nationals new stadium specifically states that the player entrance shall be a level below that of the public entrances and the public should never have access to the level of the players. As addressed earlier, the design of a space in which player and fan can interact in some way will produce a threshold condition which incorporates the fan into the experience of the game. The transitional space for the player must be inherently different from that of the fan because of the respective group's use of the space. While the threshold for the fan should disengage them from the "real world" and allow them to prepare for leisure, the player must be in a completely focused environment because they are preparing for work. While this could preclude the type of space currently designed for players, completely separated from the fans, the importance of reminding players that they are doing what they do because of the fan could better prepare them for the game. By blurring that line between fan and player, the player may be more aware of the investment, both emotionally and economically, that the fan makes. The main transitional space for the player is the clubhouse. This space includes the locker room,

training room, player lounge, weight room, and other support spaces for the players. The clubhouse has a direct connection to the playing field and in major league stadiums is located under the lower level of stands. The clubhouse should be designed so that the player can mentally and physically prepare for the coming game.

The liminal space of the ballpark is essentially processional. How can this procession be re-understood in order to provide a transformative space for the rituals of baseball which engages the player and the fan while providing a "powerful civic architecture" (Sheard 1)? Through a blurring between city and field and fan and player, the threshold of the ballpark can be blurred to incorporate the fan into the game so that the fan becomes a participant instead of just simply an observer. The ambiguity of when the city ends and the stadium beings can have a transformative effect upon the fan of the game. The design of a distinct threshold that transitions between the city and the field and is, at the same time, ambiguous can have a profound impact upon the occupant. In addition, by accentuating each aspect of the rituals of attending a game, the whole experience becomes transformative. Through the design process outlined earlier, the design of the ballpark can address and emphasize the inherent liminal conditions of the space in order to transform the occupants.

IV. Miami: Threshold City

Site Selection

As the threshold to the United States from Latin American countries, the city of Miami, Florida offers an ideal site to explore liminal space in architecture (Fig 56-57). In addition, because of the cultural significance of baseball in the United States and in Latin American countries such as Cuba, the Dominican Republic, and Puerto Rico, the program of a Major League Baseball park as the threshold between Latin America and the United States can have a profound effect. As the threshold to the United States, the city of Miami as a whole as well as the specific site of exploration for this thesis embody qualities of the liminal; essentially in that it is a blurred space. Miami has developed as a city that is both Latin and American, an ambiguous city in which elements of both cultures are blurred to create an in-between zone.

History of Miami

As a threshold and transitional city "Miami has represented for multitudes of new residents a place to begin anew, a gateway to a better tomorrow" (George). Due to its remote location at the southern tip of Florida and the military encounters with the Seminole Indian nation in the 1800s, Miami was one of the last American frontiers. In the late 1890s pioneers began populating an area around the mouth of the Miami River and Fort Dallas, which had been established to protect against the Seminole tribe. Beginning in 1894, Henry Flagler extended his railway to Miami and laid the groundwork for the city on both the north and south sides of the Miami River. At the turn of the century Miami had become had a popular tourist

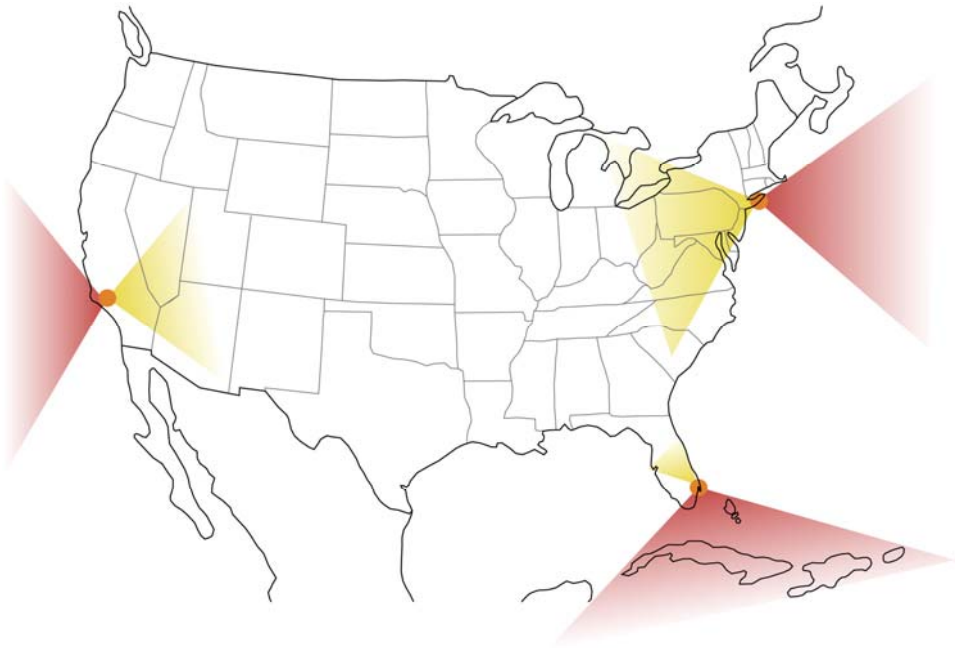


Fig 56: Main Threshold Cities of Miami, Los Angeles, and New York (Source: Author)

Fig 57: Miami in relation to the Caribbean countries (Source: Author)

destination for wealthy Americans and was beginning to grow. In 1905 the Government Cut was dredged, connecting the Atlantic Ocean to the port of Miami at the mouth of the Miami River more directly. Before the cut was built ships had to sail south of Cape Florida in order to enter the port (Fig 58-59). Between 1910 and 1920 the population of Miami increased 440 percent, the largest increase in the nation, as many tourists ended up becoming permanent residents. A land speculation boom between 1920 and 1925 saw the population increase from 30,000 to 100,000 residents but a real estate bust and the ensuing Great Depression saw growth halt in the following years. Because of the tourist economy and location of Pan-American Airways' and Eastern Airlines' headquarters, the city weathered the Depression well. In addition, the Orange Bowl, which began being played in the mid-1930s, increased tourism to the city. Up to 1950 Miami was a city growing from within the United States and developed mainly due to its large tourist population (George).

In 1959 Fidel Castro took over political control of Cuba and instituted a Marxist state which led to a mass exodus of Cubans from the island. Miami was the logical choice for these immigrants entering the United States from Cuba. The arrival of the first wave of Cubans

Fig 58: Entrance to the Port of Miami before the Government Cut was built (Source: Author)

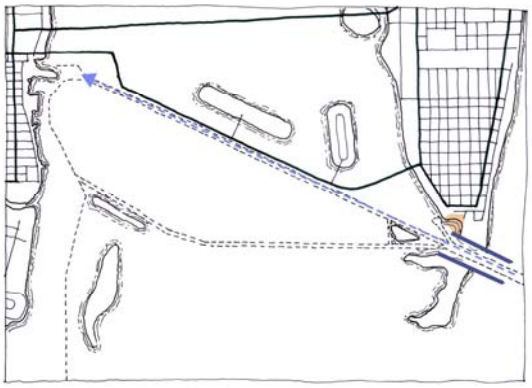


Fig 59: Entrance to the Port of Miami through the Government Cut (Source: Author)

revitalized the city's economy and infused a culture that would remain an integral part of Miami even today. Beginning in 1965 the United States sponsored "Freedom Flights," an airlift operation that brought 150,000 Cubans into America through Miami. These airlifts "instituted the radical transformation of the city into a Latin American capital" (George). The 1980s saw the population of Cubans in the Miami area hit 600,000 in addition to the number of immigrants from other Caribbean and Latin American countries. "Clearly, Miami could claim for itself in the century's final decades the persona of a new Ellis Island for persons fleeing troubled countries in the Caribbean and Latin America" (George). Today the Port of Miami is the third largest immigration port in the United States behind New York and Los Angeles and is the predominant port of entry for Latin Americans.

Miami has a year-round sub-tropical climate with no extreme temperatures throughout the year. The average temperature in January is 68° F while the average temperature in July is 83°. In contrast to the comfortable temperatures, the average humidity in the summer is 86-89%. This effect of the humidity can be somewhat offset by the winds coming from the east-southeast off the Atlantic Ocean. Because of the high humidity there is a high amount of rainfall Miami, averaging between five and seven inches during the baseball season.

Liminal Qualities of Miami

The large Hispanic population of Miami creates a liminal space in which Latin American and American cultures are blurred. The merging of these many cultures creates a dynamic which is unique among American cities. The influence of Latin language, music, and food, among other cultural contributions, has made Miami essentially a Latin city in the United

States. This distinction makes the city of Miami an ambiguous space, encompassing qualities of both cultures while at the same time being distinct from them both. The physical location of the city adds to its liminal qualities. The city is bordered on the east by the Atlantic Ocean and on the west by the mainland, so that the city occupies the in-between space between these two zones (Fig 60). As the largest immigration port for Latin American countries, Miami is the threshold to the United States for most Hispanic immigrants and as such it is a transitional zone in which aspects of both the previous culture, Latin, and the following culture, American, are blurred. It is evident that the city of Miami contains the characteristics of the liminal as identified earlier.

Fig 60: Layers of the City of Miami (Source: Author)

South Pointe Park, Miami Beach

The specific site chosen for the study of liminal space in a ballpark in Miami, Florida is in South Pointe Park on Miami Beach. As one of the northernmost islands of the Florida Keys, Miami Beach sits approximately 2.5 miles of the mainland, east of Miami. Because of this location the island is in an in-between zone between the ocean and the mainland and at the same time acts as part of a layered transition upon entering the United States (Fig 61-63). The ocean currents naturally make the shore of Miami Beach a destination from all Caribbean countries. The Florida current flows up through the islands and right along the eastern coast of Florida (Fig 64). This current naturally directs all sea traffic to the Port of Miami through the Government Cut. The southern end of Miami Beach where South Pointe Park is located creates the northern edge of the Government Cut while Fisher Island creates the south edge. This cut is the access point to the Port of Miami from the Atlantic Ocean, bringing Latin American immigrants and cruise ships in to the United States. South Pointe Park and Fisher Island create a compressed threshold space for entry to the port and subsequently, the city of Miami (Fig 65).

The specific site is bound by the Government Cut to the south and west, Washington Avenue and South Pointe Park to the east, and Commerce Street to the north. Currently the site holds a parking lot. The east and north boundaries are not restricted and can be adjusted in order to fit the building program on the site. Washington Avenue and Alton Road are the two main north-south arterials in Miami Beach and both terminate at the site. Washington Avenue runs along the east side of the island while Alton Road runs along the west side. Both of these roads are linked to the Macarthur Causeway which connects I-95 and downtown Miami with

Fig 61: View of Site in context of Miami and the Atlantic Ocean (Source: Google Earth)

Fig 62: View of the Site in relation to the harbor (Source: Google Earth)

Fig 63: Specific Site at the threshold to the harbor (Source: Google Earth)

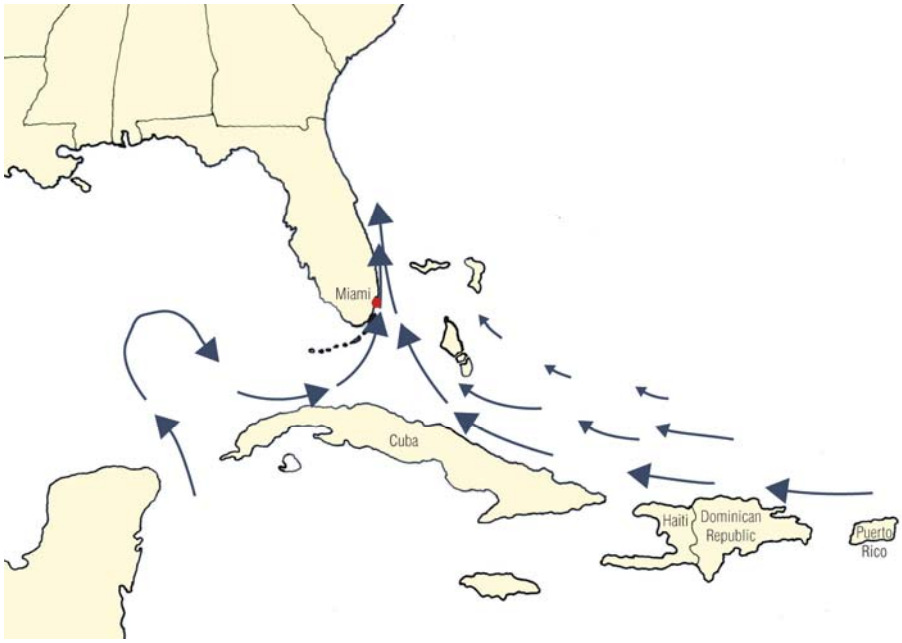


Fig 64: The Florida Current (Source: Author)

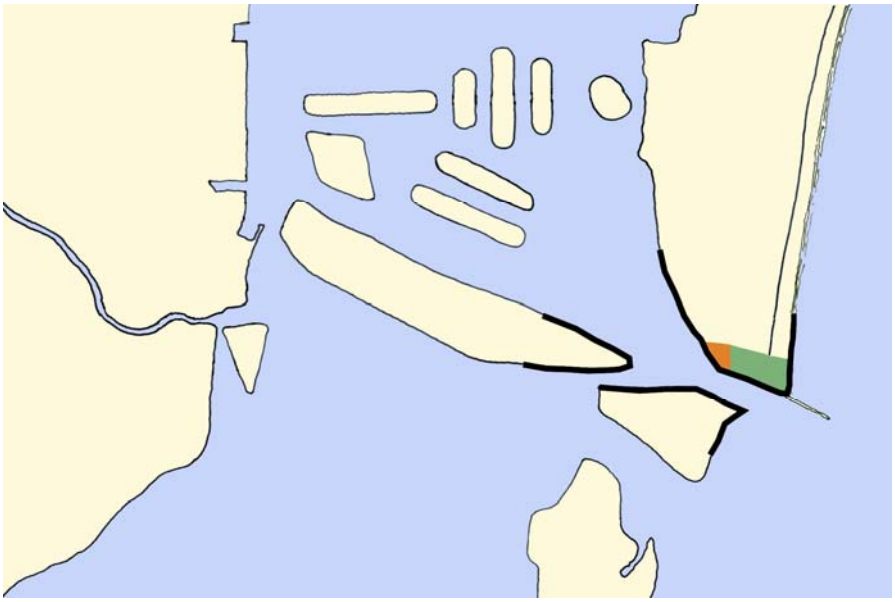


Fig 65: The compressed threshold at the site through the Government Cut (Source: Author)

South Beach. The causeway provides the main connection between the mainland and the island. Miami Beach Marina, the "Gateway to the Caribbean," is located just north-west of the site in Biscayne Bay. This marina is for private boats and has 400 slips. Because of the unique boundaries of the site the space already has liminal qualities waiting to be expressed. The site is a zone in which multiple fixed states, specifically the water, the landscape, and the urban condition, all meet (Fig 66). Therefore, this space has the opportunity to be transformative between theses specific conditions and not only in the program. By engaging all the characteristics of the site, the ballpark will be able to become a threshold between multiple conditions.

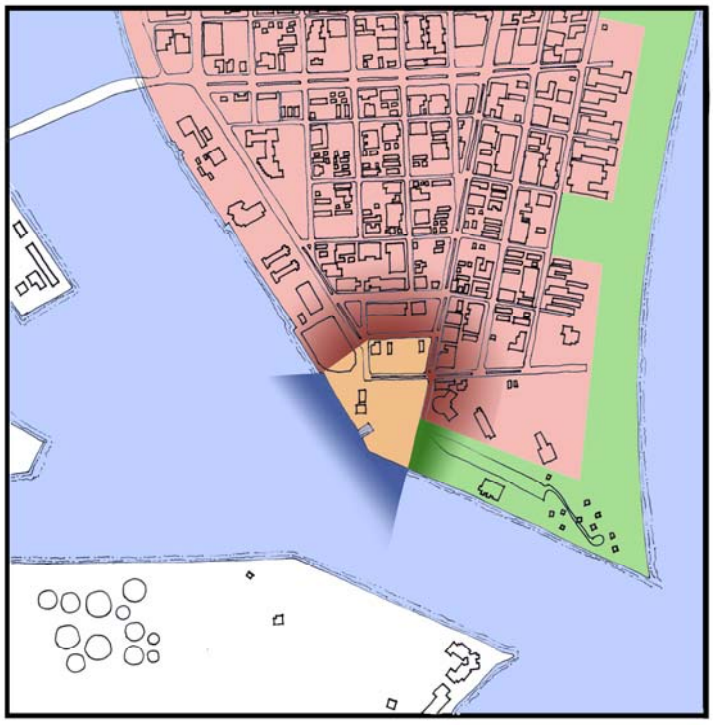


Fig 66: Transitional space of site bordered by water, landscape, and urbanism (Source: Author)

V. Conclusion

The design of liminal space, by utilizing the processes described earlier, proved to be a difficult one to grasp in the beginning of the design process. The processes of layering, dissolution, dissociation, and blurring each had varying levels of success in helping to create liminal space. Overall, the process of layering added the most visible and perceptible aspect of a distinct transformative threshold by creating a series of layers which one moved along instead of directly through. The process of dissolution did not have a significant effect on the design or in the creation of liminal space, as this concept was the most difficult to grasp in diagrammatic form and therefore to apply to design. The process of dissociation, also very difficult to diagram, lent one of the most crucial aspects of the creation of liminal space to this design, in that the threshold to the country became one in which the person crossing the threshold understood something associated with their home country and then related it to entering the United States of America. This process is more of a mental one than a physical one, but the spatial construct of the design allowed for the application of this process. The final process of blurring was achieved through the overlap of spaces, especially those that are normally completely separate, in order to introduce an ambiguity which forces the occupant to question the space they are in. The application of these processes to the design of a baseball stadium in Miami culminated in the design of distinct transformative thresholds at multiple scales from the larger site context down to the building itself. As a whole, these processes added a discontinuity to the design which forces the occupant to be more aware of the threshold between the distinct spaces of the city and the stadium.

The design for the stadium identified five critical thresholds to be addressed, which drove the process of creating liminal space. The first threshold was the threshold to the country through the Government Cut from the Atlantic Ocean to the Port of Miami. This threshold was addressed by placing the Jumbotron for the stadium across the channel, thus extending the space of the stadium across the channel and creating an overlap of space. This also utilized the process of dissociation, such that the occupant of the ship moving through the threshold would associate the game of baseball, previously associated with their home country in Latin America, with the United States.

At the urban scale, two thresholds were addressed: the threshold to South Pointe Park from the city of South Beach, and the threshold to South Beach from a proposed ferry. This ferry would bring fans from downtown Miami on game days and would operate at other times to bring visitors to South Beach. Both of these thresholds were designed as part of the layering system which peels away from the stadium to the city and creates a series of zones which the occupants of the space move through. The threshold to the park is up a ramp alongside the stadium but also under an overhang of the upper deck, which creates a blurred zone through the overlap of different spaces. The threshold to South Beach from the ferry pushes into the stadium impacting the field and is underneath the upper deck. This threshold is a series of zones which includes zones of separation, transition, and incorporation. The ferry itself is the zone of separation from Miami to South Beach, while the zone of transition is the island that the passengers disembark onto from the ferry. The island is an ambiguous space which is not the water but not yet the mainland of South Beach. Finally, the bridge into

South Beach is the zone of incorporation. These three zones make the threshold a distinct space itself instead of simply a moment of passage.

The final two thresholds are at the scale of the building and are from the city into the stadium and from the concourse into the seating bowl. The threshold into the stadium is through a series of layers which delaminate from the geometry of the field to the geometry of the city and creates zones of separation, transition, and incorporation. Each threshold to the stadium also has views into the stadium, but the occupant must move off the view corridor and along an edge in order to move into the stadium, creating a perceptible discontinuity in the threshold of the stadium. In addition to the series of layers, the threshold to the stadium puts players and fans in contact with each other through spatial overlap and visual connections so that each group is aware of the other in the space. The final threshold, from concourse to seating bowl is up a stair through a vomitory which follows the geometry of the register lines that connect each of the layers of the stadium.

The creation of liminal space in architectural design took a series of processes applied at different scales. Each threshold was designed as distinct and unique, making each threshold more important. In addition, each threshold has a perceptible discontinuity in order to heighten the awareness of the occupant. The processes of layering, dissolution, dissociation, and blurring applied to the design of architectural space lead to a heightened awareness of the threshold between distinct spaces, reinforcing the importance of, and unique use and characteristics of each space.

Bibliography

Alexander, Bobby C. *Victor Turner Revisited: Ritual as Social Change.* (Atlanta, GA: Scholars Press, 1991)

Allen, Edward and Joseph Iano. *The Architect's Studio Companion, Third Edition*. (New York: John Wiley and Sons, Inc., 2002)

Ambroziak, Brian, *Michael Graves: Images of a Grand Tour*. (New York, NY: The Princeton Architectural Press, 2005)

Bess, Philip. *City Baseball Magic: Plain Talk and Uncommon Sense About Cities and Baseball Parks.* (Saint Paul, MN: Knothole Press, 1989)

DC Watch. "Major League Baseball Park Site Evaluation Project Report, November 6, 2000." DC Watch. http://www.dcwatch.com/govern/sports021106.htm#V.

Eisenman, Peter. "Processes of the Interstitial," Croquis (1997, no. 83)

George, Paul S. "Miami: One Hundred Years of History," South Florida History Magazine (Summer 1996, v. 24, no. 2)

Giedion, Sigfried. *Space, Time, and Architecture: The Growth of a New Tradition.* (Cambridge, MA: Harvard University Press, 1962)

Koetter, Fred. "Notes on the In Between," Harvard Architecture Review (Spring 1980, v. 1)

Merriam-Webster Online Dictionary. Merriam-Webster Incorporated. http://www.m-w.com.

Le Corbusier. *Towards a New Architecture.* (London: John Rodker, 1931)

Lowry, Philip J. *Green Cathedrals: The Ultimate Celebration of Major League and Negro League Ballparks.* (New York: Walker Publishing Company, 2006)

Provoost, Michelle, ed. *The Stadium: the Architecture of Mass Sport*. (Rotterdam: NAi Publishers, 2000)

Raitz, Karl B, ed. *The Theater of Sport*. (Baltimore: The Johns Hopkins University Press, 1995)

Rhodes, Robin Francis. *Architecture and Meaning on the Athenian Acropolis*. (New York, NY: Cambridge University Press, 1995)

Rossi, Aldo. *The Architecture of the City.* (Cambridge, MA: The MIT Press, 1982)

Schildt, Goran ed. *Alvar Aalto in His Own Words.* (New York, NY: Rizzoli, 1997)

Sheard, Rod. *The Stadium: Architecture for the New Global Culture*. (Sydney, Australia: Periplus Editions, 2005)

Sheard, Rod and Geraint John. *Stadia: A Design and Development Guide*. (Oxford: Architectural Press, 2000)

Singh, Priyamwada. "The Conceptually Woven Threads of a Spatial Experience: Le Corbusier's Mill Owners' Association Building," Architecture and Urbanism (2001, May, v. 368).

Tafuri, Manfredo. *The Sphere and the Labyrinth.* (Cambridge, MA: The MIT Press, 1987)

Turner, Victor. *Forest of Symbols.* (Ithaca, NY: Cornell University Press, 1967)

van Gennep, Arnold. *The Rites of Passage.* (Chicago, IL: The University of Chicago Press, 1960)

Venturi, Robert. *Complexity and Contradiction in Architecture.* (New York, NY: The Museum of Modern Art, 1966)

Appendices

Appendix A: Quantitative Program

Orientation:

The stadium shall be oriented so that a line from home plate to second base faces approximately northeast, if possible. Rule 1.04 in the Major League Baseball Rulebook, “The Playing Field,” states that “it is desirable that the line from home base through the pitchers plate to second base shall run East Northeast." This orientation is to reduce the glare from the setting sun upon the field, although most any orientation is acceptable.

Seating Capacity:

Seating capacity should be approximately 30,000 – 40,000 seats. Current seating at Dolphins Stadium for a baseball game is 36,301. Trends in Major League Baseball stadiums place the average seating capacity in the low 40,000. At just below 40,000 seats, the ballpark will provide more seating than is currently available while maintaining a small enough scale to create a sense of intimacy. “Major League Baseball has demonstrated, over the last decade, that its games are best presented in venues built specifically for baseball, with a smaller capacity than those typically provided in the large multi-use stadiums built in the 1960s and 1970s. Baseball's leisurely pace and emphasis on the balance between individual athletic achievement and teamwork asks for an intimate setting, where as many fans as possible can develop a sense of personal connection to the activities on the field. On a purely economic basis, it is also a wise investment to provide only enough seating capacity for the size of the fan base that can be attracted to 81 home games over the course of a regular season. Seating

capacities from 38,000 to 48,000 have been demonstrated to be reasonable for this model in markets of all sizes" (DC Watch). Included in the seating capacity are the seats for a sufficient number of suites. Through research of existing facilities a total of 50-60 suites are found to be sufficient. Two suites should be larger and designated as owners suites. Each suite shall have two rows of seating accessed through the suite. Because of the historically small attendance for Florida Marlin games, a seating capacity in the low 30,000s will be sufficient.

Concourses:

The concourse shall provide access to the seating bowl through aisles and vomitories. Concession, restrooms, souvenir shops, and other ancillary support functions for the fans shall be accessible from the concourse. The width of the concourse will be determined by the number of people using it; therefore, the lower level concourse shall be wider than the upper deck concourse. A width of 40' is the average for the main concourse of recently designed ballparks. Although this width is based on current design trends, it will not be necessary to make them this wide. The main concourse of Fenway Park is 30' wide while at Neyland Stadium the concourse is less than 20' and is sufficient for 100,000+ fans. The width of the concourse therefore will be determined during design.

Restrooms:

Restrooms shall be provided based on a 50% male, 50% female attendance ratio.
Lavatories: 1/300men, 1/200 women
Water Closets: 1/350 men, 1/75 women
Urinals: 1/100 men

Concessions:

Concession stands shall be located on each concourse and distributed evenly throughout the ballpark. There shall be approximately 15,000 square feet of concession space located on the concourses or publically located. Food service and prep will be located away from the concession stand and will be approx 15,000 square feet. In addition, there will be vendors kiosks located throughout the ballpark.

Ticket Windows:

The main ticket office will have 15 ticket windows as well as offices for the ticket office staff. The main ticket office shall be approximately 2,800 square feet. There shall be four other ticket locations with four ticket windows each for a total of 31 ticket windows. Each of the four secondary ticket offices shall be approximately 225 square feet.

First Aid Stations:

There will be two first aid stations on the main concourse, each approximately 750 square feet. A smaller first aid station will be located on the upper concourse and will be approximately 250 square feet.

Press Box and Facilities:

The press box will be located directly behind home plate between the suite level and bottom of the upper deck or in the upper deck. The side of the press box facing the field will

have a moveable glass façade. The following spaces are required in the press box: working press room, television broadcasting, radio broadcasting, media workroom and press lounge, sound control room, scoreboard operator, and public address announcer.

Management Offices:

Management Offices shall be located in the ballpark with access to the home team clubhouse. Included will be individual offices for the owner, president, vice president, general manager, assistant general manager, scouting director, player development director, public relations director, sales and marketing director, and promotions director. In addition to these enclosed offices, there shall be flexible open space for workers and enclosed conference rooms. The total square footage for the offices shall be approximately 23,100 square feet. The following departments shall be provided separate office spaces: executive, baseball operations, sales and marketing, finance and administration, information technology, ballpark operations, communications and community relations, and miscellaneous spaces and reception.

Home Team Clubhouse:

The home team clubhouse shall have direct access to the playing field. The locker room, with 46 lockers, shall be approximately 3,200 square feet. The whole clubhouse, including locker room and support functions, shall be approximately 20,380 square feet. Support functions include: showers and restroom, training room and support, manager and coach's offices, storage, weight room and conditioning, and player lounge and meeting rooms.

Visitor's Clubhouse:

The visiting team clubhouse shall have direct access to the playing field. The locker room shall be approximately 2,200 square feet with 44 lockers. The total square footage for the visitor's clubhouse, including locker room and support functions, shall be approximately 10,185 square feet. Support functions will include: showers and restroom, training room, manager and coach's offices, storage, weight room and conditioning, and players lounge and meeting rooms.

Batting and Pitching Tunnels:

There shall be two batting/pitching cages for the home team with access from the home team locker room and dugout. The home team tunnel shall be approximately 3,600 square feet. There shall be one batting/pitching tunnel accessible from the visitor's locker room and dugout. The visitor's tunnel shall be approximately 1,800 square feet.

Ancillary Dressing Rooms:

There shall be separate dressing rooms for the following: umpires room with seven lockers, separate ball boy and girl dressing rooms, one "star" dressing room, one mascot dressing room, and one family waiting room.

Dugouts and Bullpens:

Covered dugouts with direct access to the respective team locker rooms shall be provided for the home and visiting teams. Each dugout shall include a bench, bat and helmet racks, toilet, interior batting swing area, and adjacent storage. Each dugout shall be approximately 1,800 square feet. There shall be two bullpens, one for each team. The bullpens shall be approximately 2,500 square feet each and include two pitching mounds each. Each bullpen shall have a covered bench and toilet. Each bullpen shall be visible from each dugout.

Field Lighting:

There shall be sufficient lighting provided to illuminate the playing field and the seating bowl for night games. Lights shall be placed to maximize effectiveness of lighting.

Additional Spaces:

This program assumes the addition of program during design necessary for the creation of liminal space in a ballpark in Miami, Florida. These additions could include but are not limited to: a boat dock, restaurants and shopping space, or additional park space.

Table I: Quantitative Program

Building Space	Area (gross square feet)
Seating Bowl	30,000 – 40,000 seats (area tbd)
Entries and Ticket Booths	
Main Ticket Office	2,800
Secondary Ticket Offices (4)	1,000 (225 each)
Subtotal	*3,800*
Concourses	TBD
Food Service	
Concession Stands	15,000
Commissary	15,000
Vendor Stations (5)	6,000 (1,200 each)
Subtotal	*36,000*
First Aid	
Main Stations (2)	1,500 (750 each)
Substation	250
Subtotal	*1,750*
Press Box	
Working Press:	2,000
TV Broadcasting (3)	900 (300 each)
Radio Broadcast: (3)	600 (200 each)
Media Workroom and Press Lounge	2,000
Sound Control Room	300
Scoreboard Operator	1,500
Public Address	100
Subtotal	*7,400*
Management Offices	
Executive	3,300
Baseball Operations	2,800
Sales and Marketing	6,000
Finance and Administration	2,000
Information Technology	1,500
Ballpark Operations	1,100
Communications and Community Relations	1,400
Miscellaneous Space and Reception	5,000
Subtotal	*23,100*

Building Space	Area (gross square feet)
Home Team Clubhouse	
Locker Room	3,200
Showers and restroom	1,265
Training Room and support	5,610
Manager and Coach's Offices	2,255
Storage	3,575
Weight Room and Conditioning	2,915
Player Lounge and Meeting Rooms	1,560
Subtotal	*20,380*
Visiting Team Clubhouse	
Locker Room	2,200
Showers and Restroom	880
Training Room	880
Manager and Coach's offices	975
Storage	2,100
Weight Room and Conditioning	1,650
Player Lounge and Meeting Rooms	1,500
Subtotal	*10,185*
Ancillary Dressing Rooms	
Umpire's Locker Room	950
Family Waiting Room	1,800
Ball Boy/Girl Dressing Rooms	400 (200 male/200 female)
Star Dressing Room	250
Mascot Dressing Room	250
Subtotal	*3,650*
Batting and Pitching Tunnels	
Home Team Tunnel	3,600
Visiting Team Tunnel	1,800
Subtotal	*5,400*
Dugouts and Bullpens	
Home Team Dugout	1,800
Visiting Team Dugout	1,800
Home Team Bullpen	2,500
Visiting Team Bullpen	2,500
Subtotal	*8,600*
Total	***147,365 Gross***

Appendix B: Building Codes

The applicable Building Code for this proposal is the International Building Code. All material below is Edward Allen and Joseph Iano's *The Architect's Studio Companion, Third Edition*. Only the sections applicable to the program are included here.

Table II: Occupancy Groups

Occupancy Group	Applicable Codes
A-5 Assembly	This group includes outdoor sports arenas. An approved sprinkler system is required for concession stands, retail area, press boxes, and other accessory use areas larger than 1,000 sf.

Table III: Construction Types

Construction Type	Applicable Codes
I-A: 3 Hour Noncombustible	Unlimited height in feet and unlimited floor area Requires a fire resistance rating of 2 hours for floors and 3 hours for columns and walls. Construction types include structural steel, reinforced concrete, posttensioned concrete, precast concrete, brick masonry, and concrete masonry. See Allen, p. 308 for minimum requirements.
I-B: 2 Hour Noncombustible	Unlimited floor area. Maximum height is 180' for a sprinklered building and 160' for unsprinklered. Requires a fire resistance rating of 2 hours for floors, columns, and bearing walls. Construction types include structural steel, reinforced concrete, posttensioned concrete, precast concrete, brick masonry, and concrete masonry. See Allen, p. 309 for minimum requirements
II-A: 1 Hour Noncombustible	Unlimited floor area. Maximum height is 85' for a sprinklered building and 65' for unsprinklered. Requires a fire resistance rating of 1 hour for floors, columns, and bearing walls. Construction types include structural steel, reinforced concrete, posttensioned concrete, precast concrete, brick masonry, and concrete masonry. See Allen, p. 310 for minimum requirements
II-B: Unprotected Noncombustible	Unlimited floor area. Maximum height is 75' for a sprinklered building and 55' for unsprinklered. Requires only that structural members be constructed of noncombustible materials. Construction types include structural steel, reinforced concrete, posttensioned concrete, precast concrete, brick masonry, and concrete masonry. See Allen, p. 311 for minimum requirements

Table IV: Egress Design for Group A-5

Egress Component	Applicable Codes
Minimum Travel Distance to exit	Unlimited for noncombustible construction
Largest Room that may have only one door	50 occupants
Maximum length of dead-end corridor	44" for more than 50 occupants, 36" for 50 or fewer occupants
Width of Egress Doors, Corridors, Ramps	Unsprinklered: 0.2"/occupant, Sprinklered: 0.15"/occupant
Width of Egress Stairs	Unsprinklered: 0.3"/occupant, Sprinklered: 0.2"/occupant
Minimum stair width	44" for more than 50 occupants, 36" for 50or fewer occupants

Table V: Egress Design for Assembly Seating

Egress Component	Applicable Codes
Maximum Row Length	For a row with egress at both ends: 100 seats, for a row with egress only to one end: 30'
Row Spacing	For a row with egress at both ends: 12" clear plus 0.3" for every seat above 14. For a row with egress only to one end: 12" plus 0.6" for every seat above 7. Maximum required spacing is 22"
Minimum Aisle Width	36" for aisles serving seating on one side or not more than 50 seats on two sides. 42" for aisles serving more than 50 seats.
Longest Dead-End Aisle	20'
Cross-Aisle Width	Same as for aisles, sized for the combined capacity of the converging aisles
Maximum Slope of Aisle	1:8
Stairs in Aisle	Tread depth 11" minimum. Riser height 8" maximum and 4" minimum. Risers up to 9" are permitted where necessitated by slope of adjacent seating.
Minimum Stair Width	36" for stairs serving seating on one side or not more than 50 seats on two sides. 48" for stairs serving more than 50 seats on two sides.
Required Stair Width	Add to the minimum stair width from the previous column: 0.3" per person for risers 7" or less.
Handrails	Handrails are required at stairs and at aisles with a slope exceeding 1:15. Aisles or stairs divided by handrails must have a minimum width of 23" between the handrail and the adjacent seating.
Maximum Travel to Exit	200' unsprinklered, 250' sprinklered

Table VI: Accessibility Requirements

Accessibility Component	Applicable Codes
Wheelchair Seating Capacity	For an occupancy greater than 500 people, there must be provided 1 wheelchair place per every additional 200 seats plus 6
Wheelchair Seating Sizing	A wheelchair space must be at least 33" wide and 48" deep. At least one fixed seat must be provided next to a wheelchair space.
Wheelchair Clusters	For occupancy greater than 3000, there must be provided 1 cluster per every additional 1000 seats plus 6

Appendix C: Site Analysis

Fig 67: Site Plan. The site is shown in orange on South Beach. Fisher Island is to the south and the Port of Miami is to the west. The Macarthur Causeway is shown in the north-west corner. (Source: Author)

Fig 68: Plan of Miami in 1919. Note the absence of the Macarthur Causeway and the narrow entrance to the Port of Miami south of the site. (Source: Author)

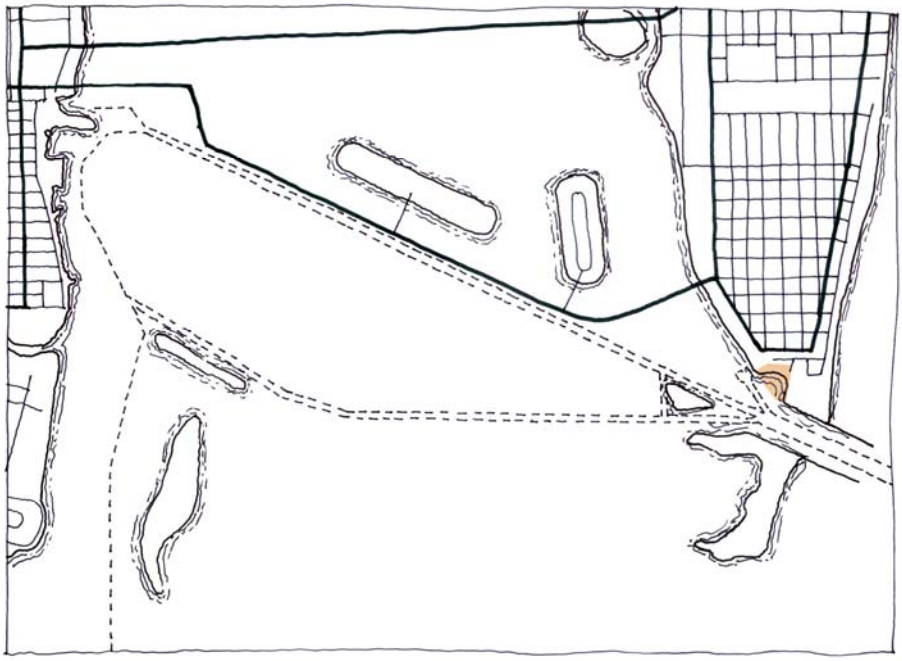


Fig 69: Plan of Miami in 1921. Note the addition of the Macarthur Causeway, the widening of the Government Cut. (Source: Author)

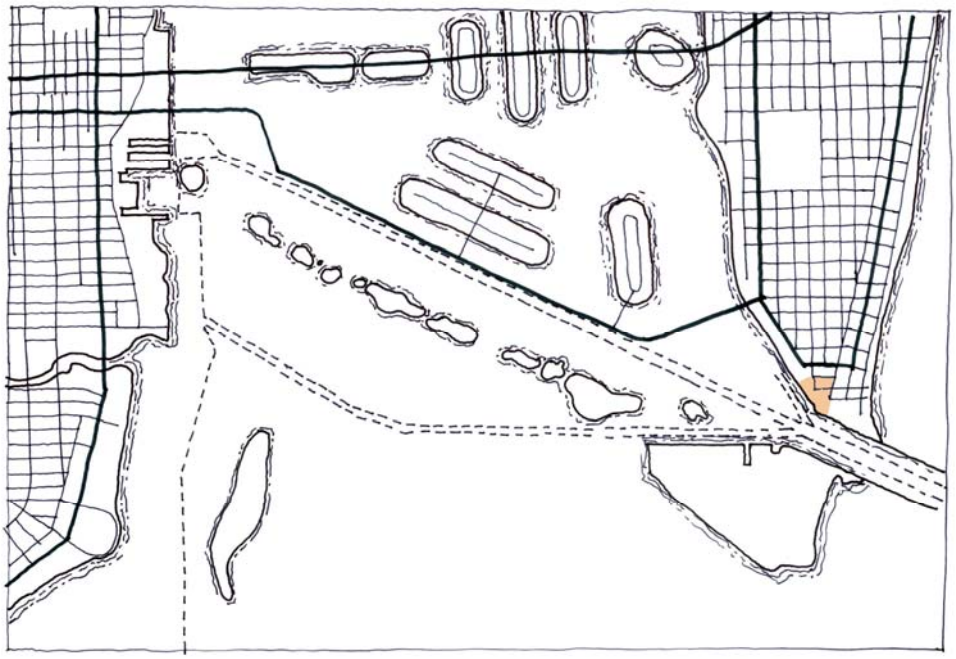


Fig 70: Plan of Miami in 1930. Note the filling in of the site, the definition of the Port on the Mainland, and the string of islands south of the Cut (Source: Author)

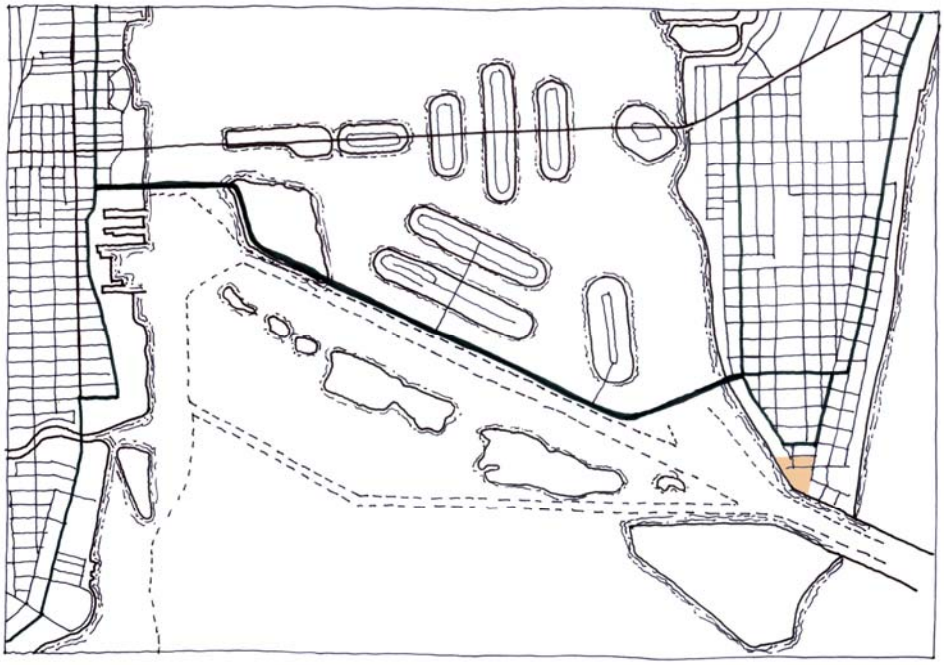


Fig 71: Map of Miami in 1950. Note the widening of the Government Cut. (Source: Author)

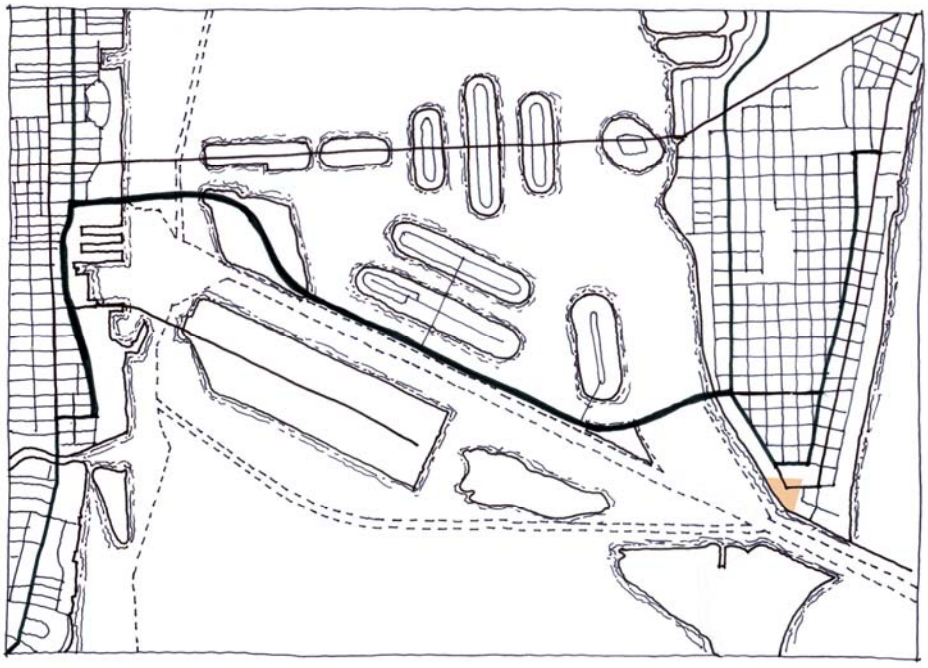


Fig 72: Plan of Miami in 1969. Note the formation of the Port of Miami in the Bay and the shifting of the main north-south arterial on the island one block west to Washington Blvd, which terminates on the site. (Source: Author)

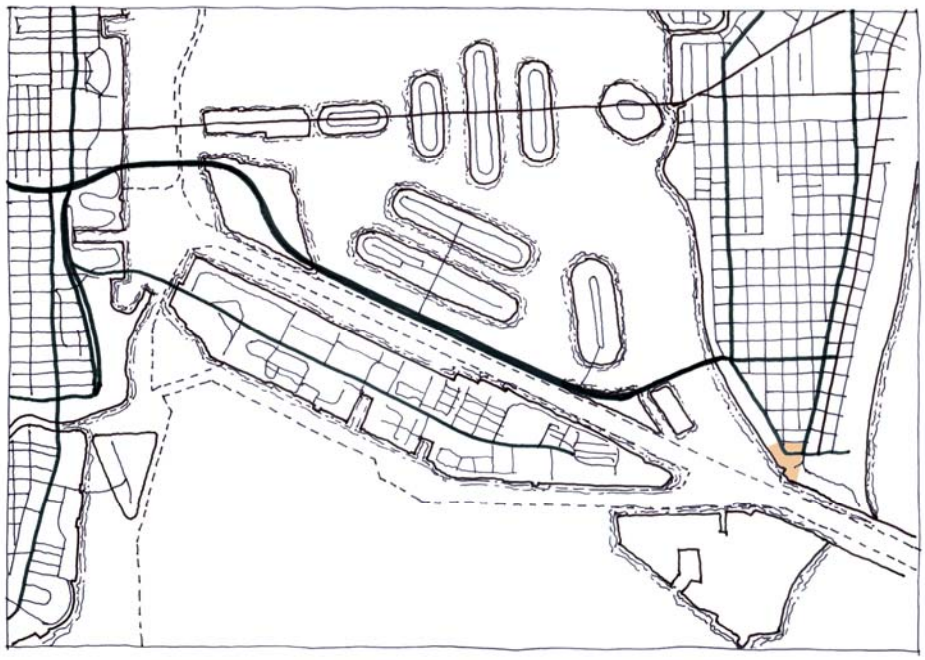


Fig 73: Plan of Miami in 1994. Note the development of the Port of Miami and the widening of the channels around the Port. (Source: Author)

Fig 74: Figure-Ground Diagram of South Beach. Site shown in orange. (Source: Author)

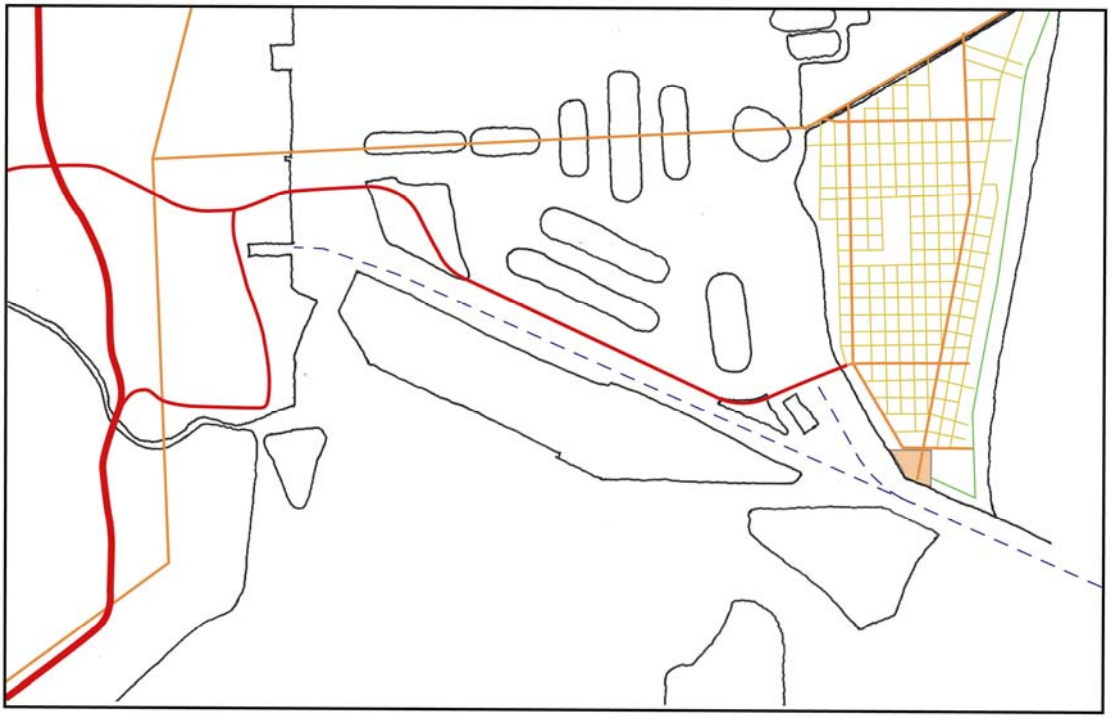


Fig 75: Diagram of the major transportation routes converging on the site (Source: Author)

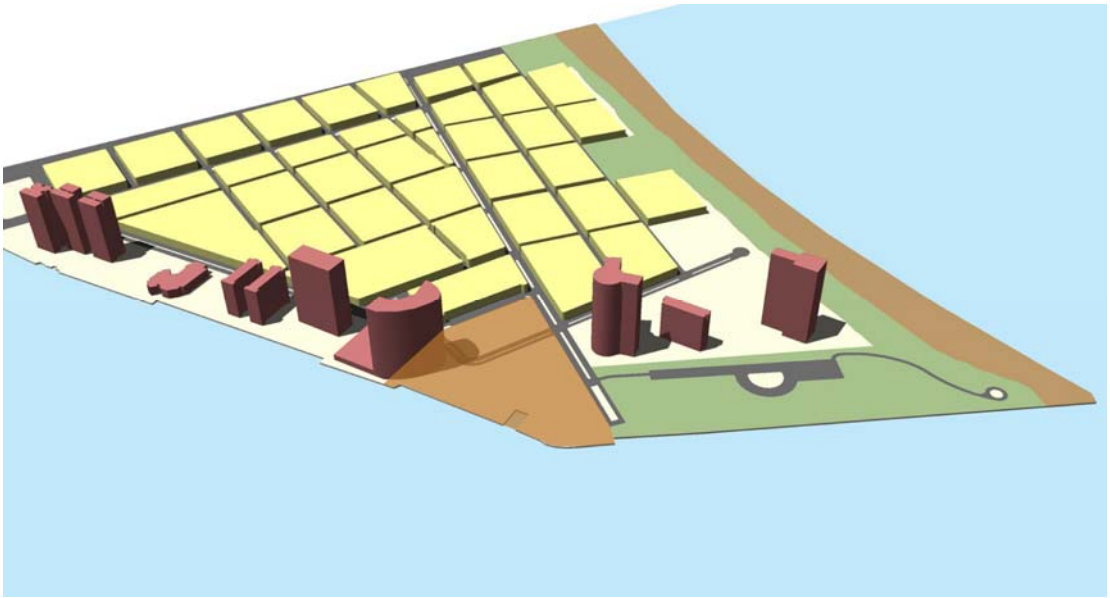


Fig 76: Massing of South Beach. Site shown in orange. (Source: Author)

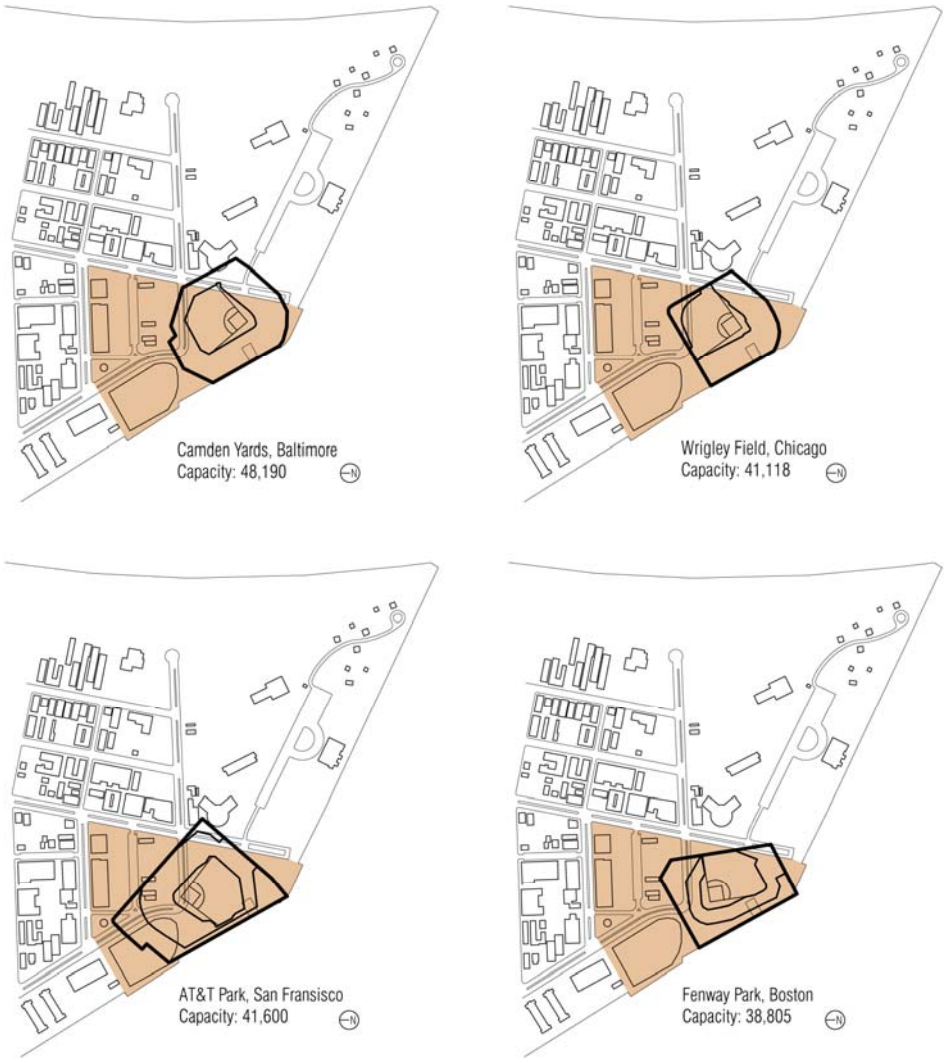


Fig 77: Scale Comparisons of Major League Ballparks on the Site (Source: Author)

Fig 78: Fenway Park massing on site
(Source: Author)

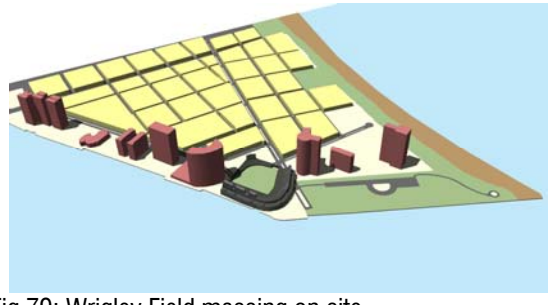
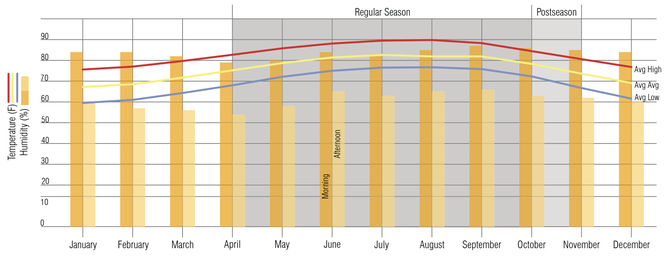


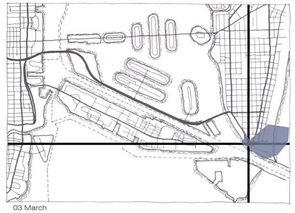
Fig 79: Wrigley Field massing on site
(Source: Author)

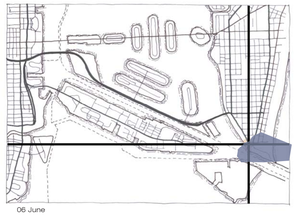
Miami Beach, Florida

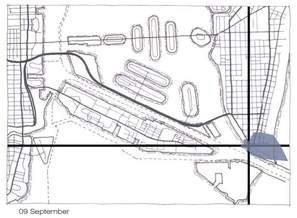
24° North, 80° West

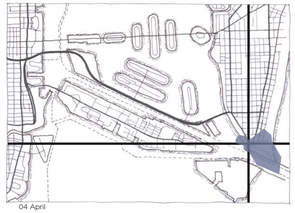
Climatic Information

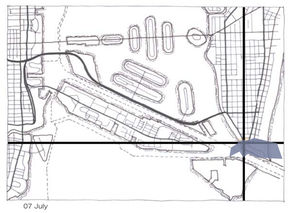


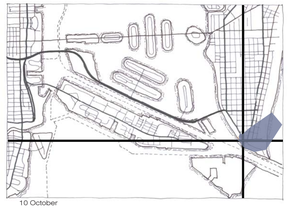

03 March

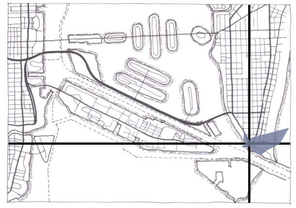

06 June

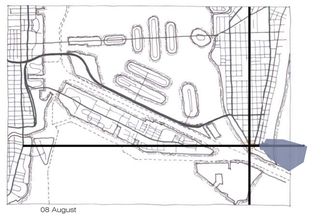

09 September

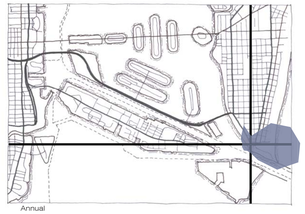

04 April

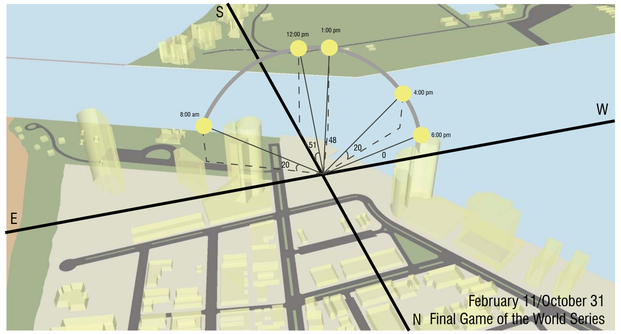

07 July

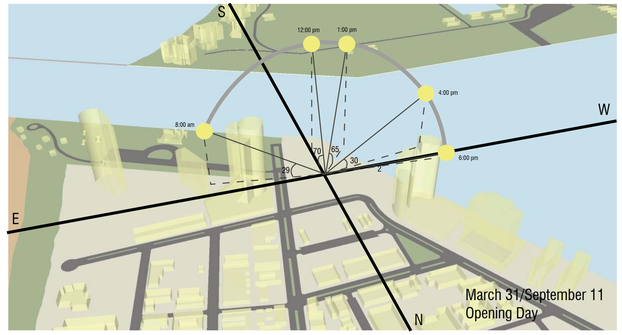

10 October

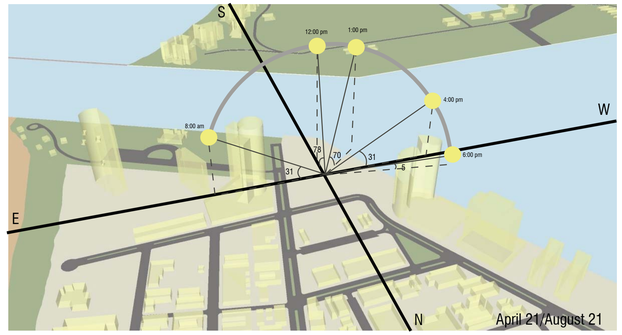

05 May

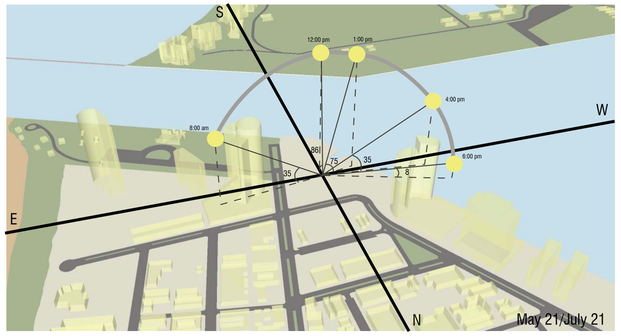

08 August

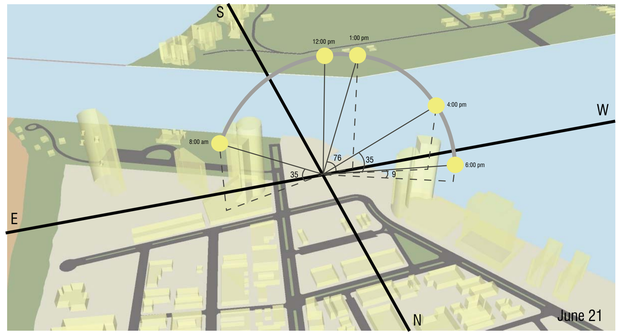

Annual











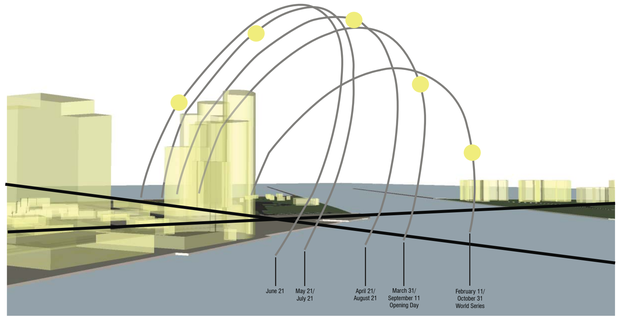


Fig. 80: Climatic Information for Miami Beach, Florida

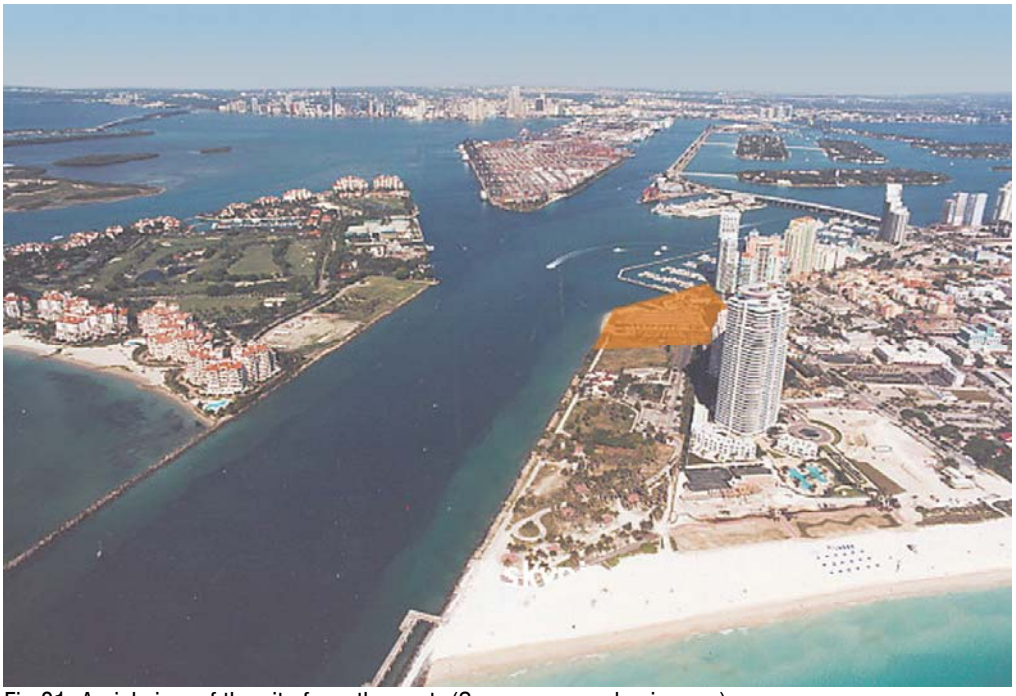


Fig 81: Aerial view of the site from the east. (Source: www.skypic.com)

Fig 82: Aerial view of the site from the south (Source: www.skypic.com)

Fig 83: View of the site from the Government Cut. Site is in front of and to the left of the tower on the left. (Source: www.janiahola.com)

Fig 84: View towards the site down the Government Cut from Downtown Miami. The Port of Miami is on the right and the Macarthur Causeway on the left. (Source: www.viewimages.com)

Fig 85: View of the site down Washington Avenue (source: Author)

Fig 86: View of the site down Alton Road (source: Author)

Fig 87: View of the site from South Pointe Drive (source: Author)


Fig 88: View of the site and the Government Cut from the beach on South Pointe Park (source: Author)

Appendix D: Timeline of the Fan and the Player at a Typical Stadium

LIMINAL SPACE: THRESHOLD AND TRANSITION

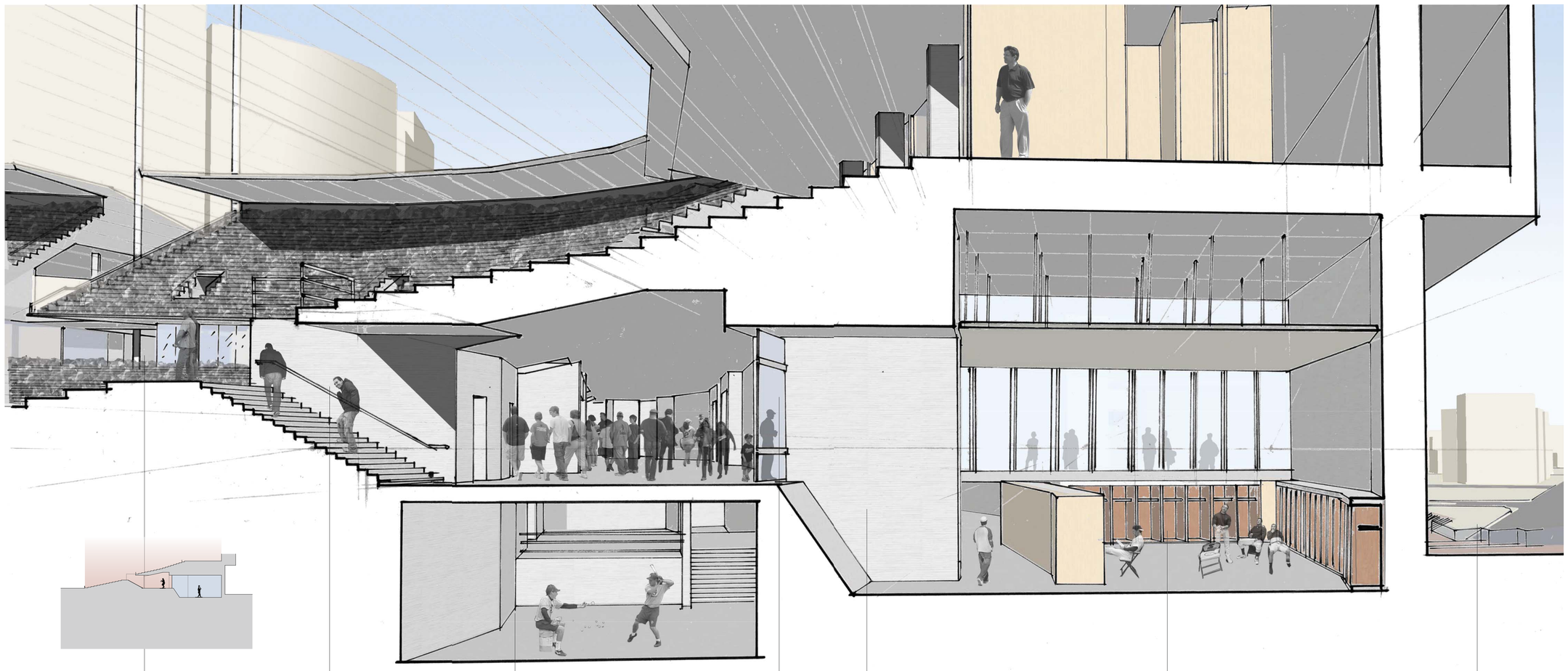
The limen is defined as the transitional threshold between two fixed states in cultural rights of passage or between two dissimilar spaces in architecture. The study of rites of passage provides an analogy from which prinicples can be drawn for the design of a transformative space. The charactersitics that define liminal space inlcude layering, dissolution, dissociation, blurring, and ambiguity and have the ability to transform the occupant of that space as they move through it. The experience of liminal space poses a discontinuity which leads the occupant to question their surroundings, thus leading to heightened spatial awareness of the space as a transformative threshold between distinct spaces.

A BALLPARK IN MIAMI BEACH, FLORIDA

Patrick Zimmerman

Spring 2008

Section Perspective Showing Connection from Seats to Vomitory to Concourse to Locker Room



Path wraps around entire field providing access toto different poitns inthe stadium without leaving sight of the game

Vomitory is final threshold in a series between city and stands

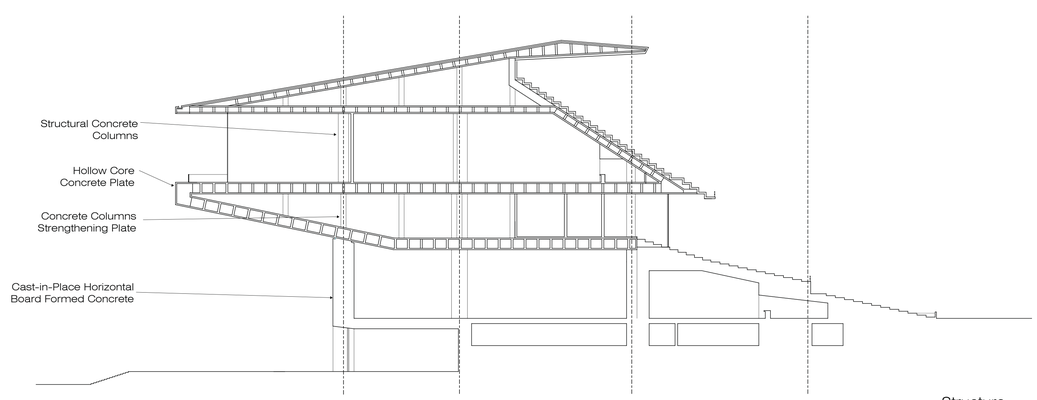
Marlin's batting cages

Translucent glass panels between concourse and locker room provide a constant reminder of the oher party involved

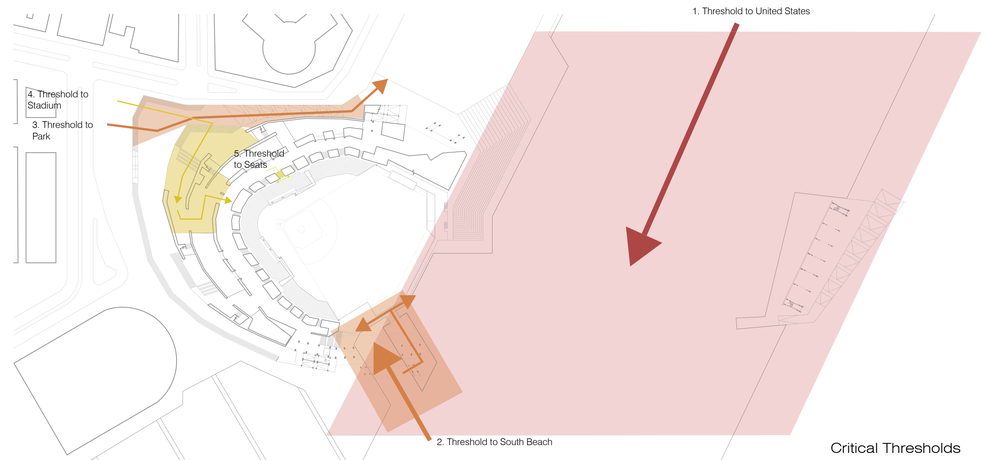
Light well reveals massive conrete walls and folding of surface from locker room to coucourse to seats to field

Marlin's locker room

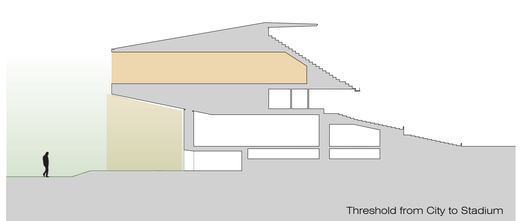
Ramp along edge of stadium to South Pointe



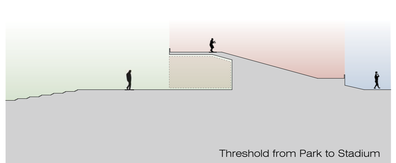
Structure



Critical Thresholds



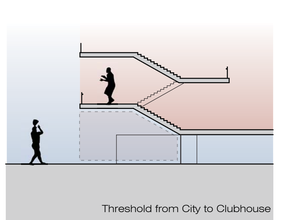
Threshold from City to Stadium



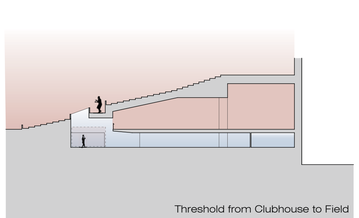
Threshold from Park to Stadium

Space of Fan

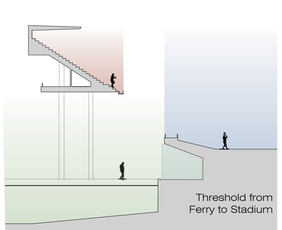
Space of Player



Threshold from City to Clubhouse



Threshold from Clubhouse to Field



Threshold from Ferry to Stadium

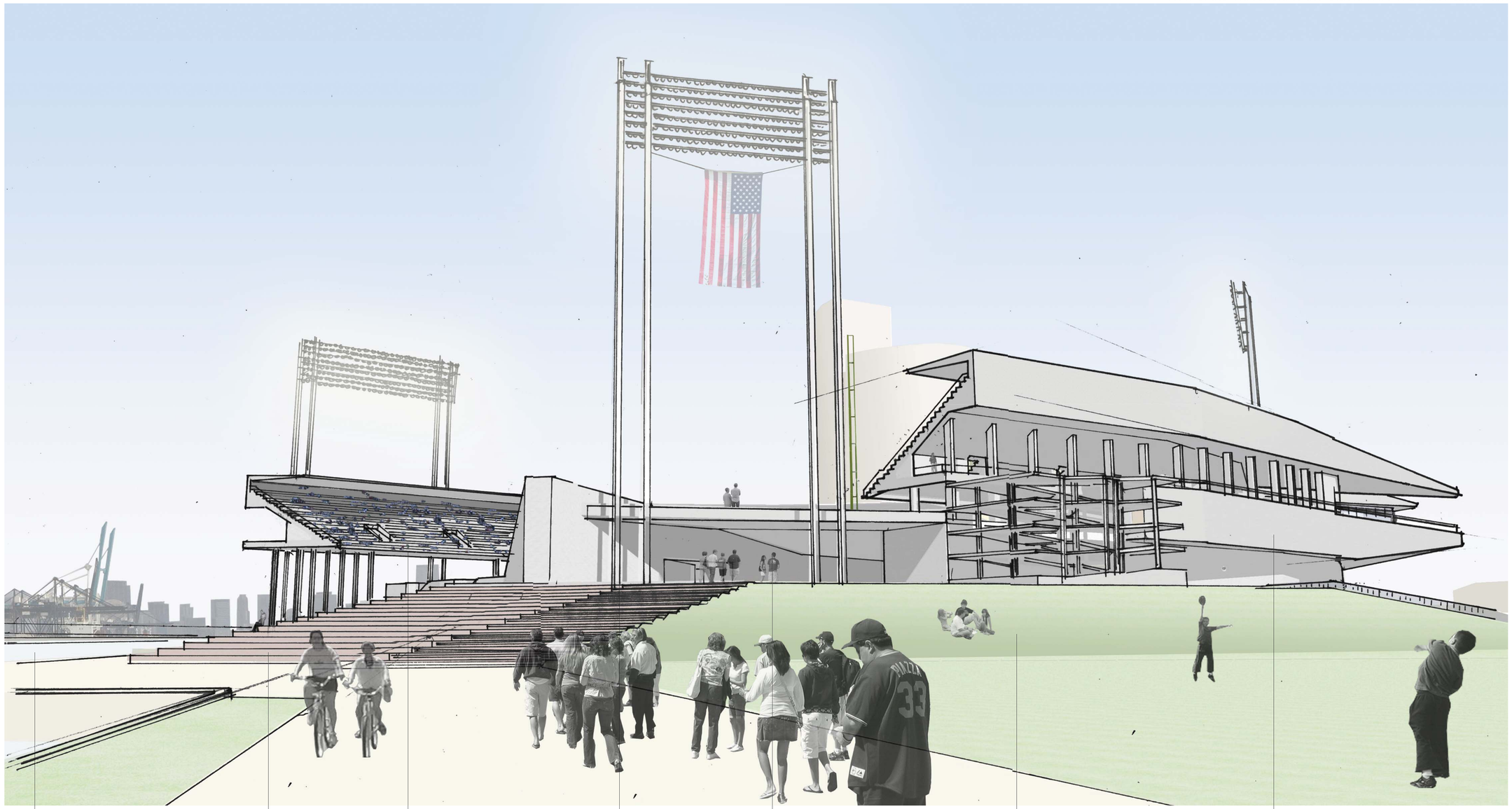
Space of City / Park

Space of Workers

Spatial Overlap at Thresholds

Fig. 89: Presentation Plate 1

View of the Threshold to the Stadium from South Pointe Park



Government Cut, threshold to the Port of Miami

Amphitheater extends park up to stadium and is used to to watch games on the Jumbotron and for movies and concerts when games are not being played

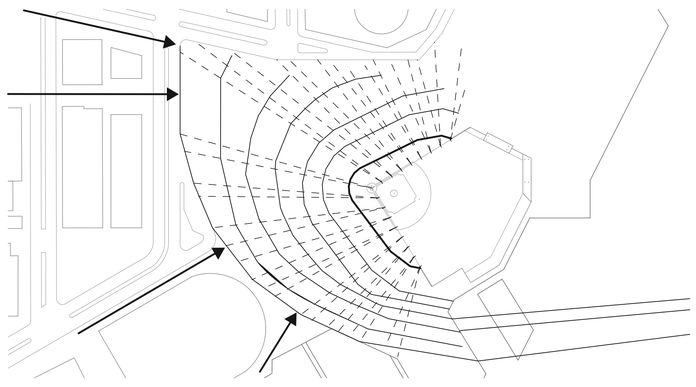
Upper deck spans ferry dock as a layer of the threshold to South Beach

Light standards act as a layer in the threshold to the stadium

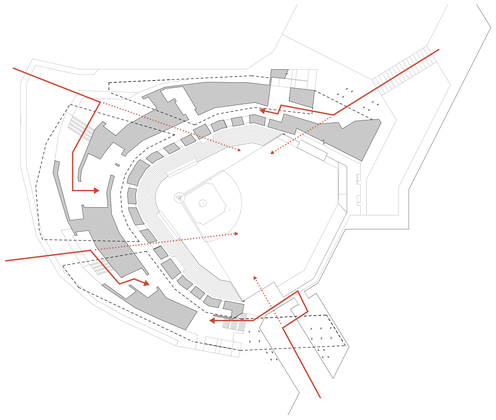
Perceptible overlap of geom-etries of park and field at threshold

Park folds up into stadium extending the field into South Pointe Park

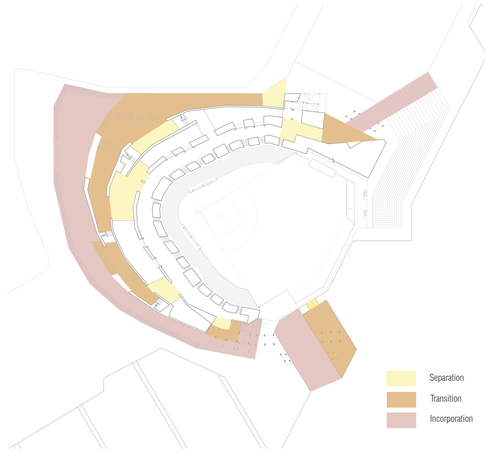
Stadium cantile-vers over ramp to South Pointe Park



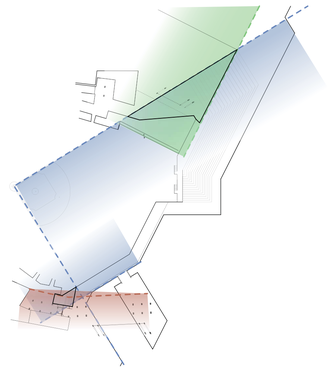
Delamination Creating Layers



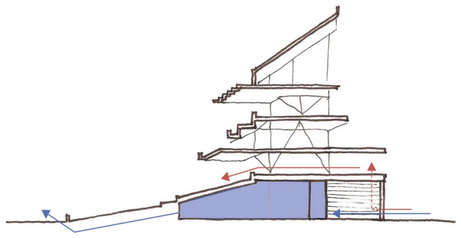
Discontinuity in Path from Visual Connection



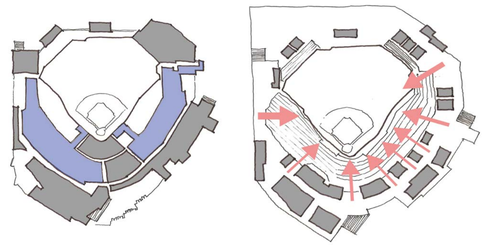
Zones of Separation, Transition, and Incorporation



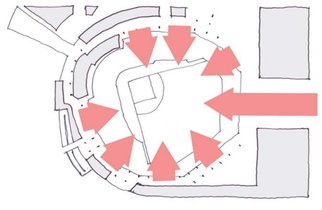
Overlaid Geometries



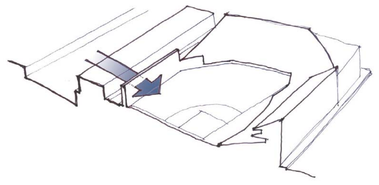
Petco Park Section: Lack of distinction between city, concourse, and seats



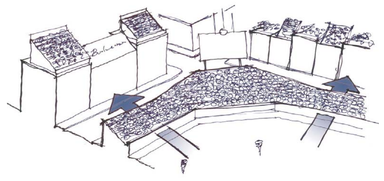
Petco Park Plan: Lack of distinction between city, concourse, and seats



Nationals Park: No threshold between seats and concourse

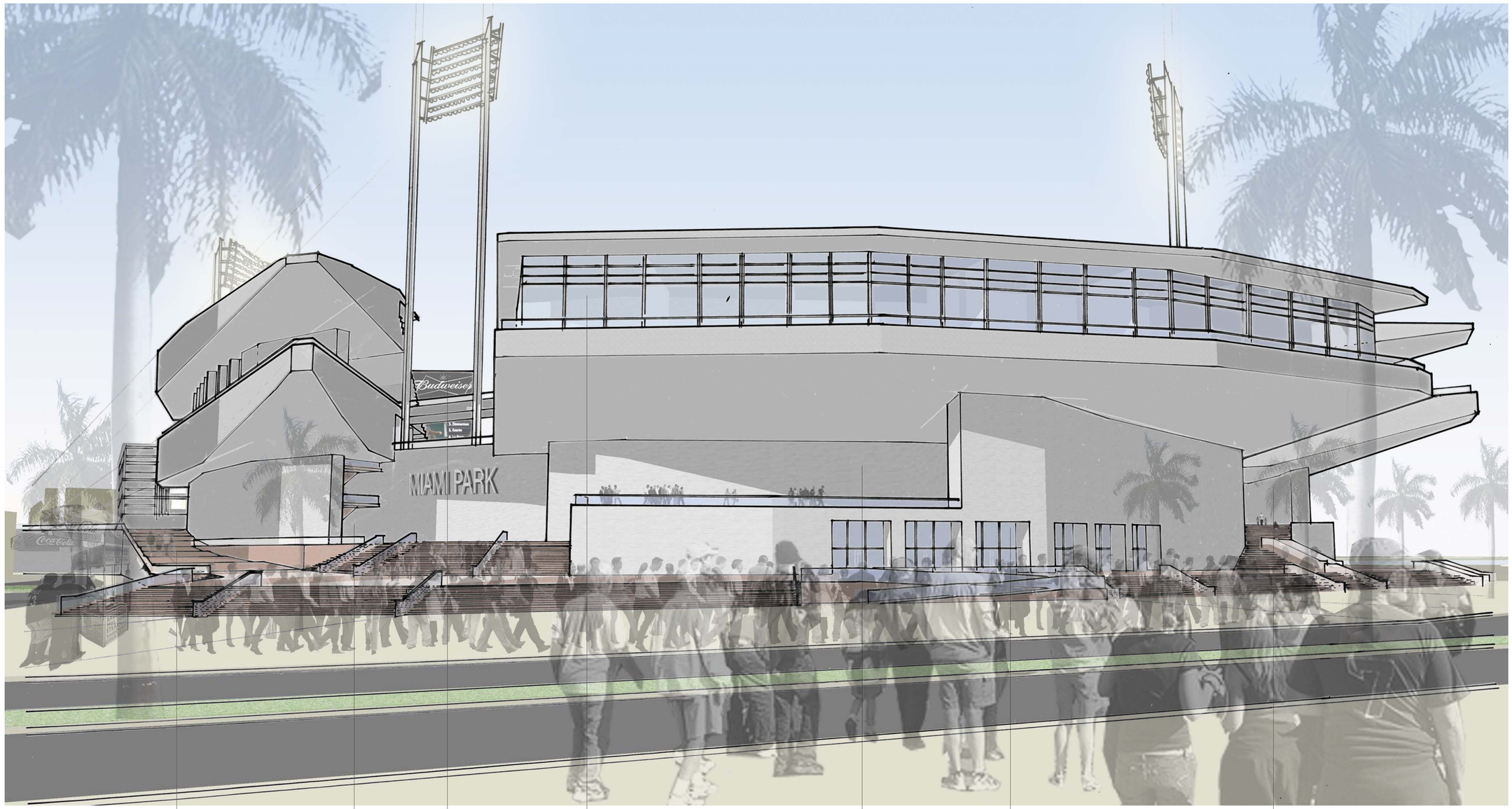


Fenway Park: Positive impact of city on stadium



Wrigley Field: Postive impact of stadium on city

View of the stadium from the plaza approaching from the north



Ramp up edge of stadium to South Pointe Park

Threshold to Marlin's club-house

Views through stadium to Jumbotron create discontinuity in path and provide a connection to the city

Cantilever holds admin-strative offices for the team

Threshold to stadium along edge of layer

Shops at plaza level hold ticket offices along with cafes and coffee shops

View into Alton Road threshold as layers delaminate from playing field

Ramp to South Pointe Park along edge of stadium

Liminal space of plaza creates overlap between fan and player

Long door rolls open for trans-port of team equipment

Stair to upper deck forms horizontal plane for threshold to Marlin's club-house

Board-formed concrete walls provide vertical structure to sup-port cantilever

View of the zone of threshold to Marlin's locker room

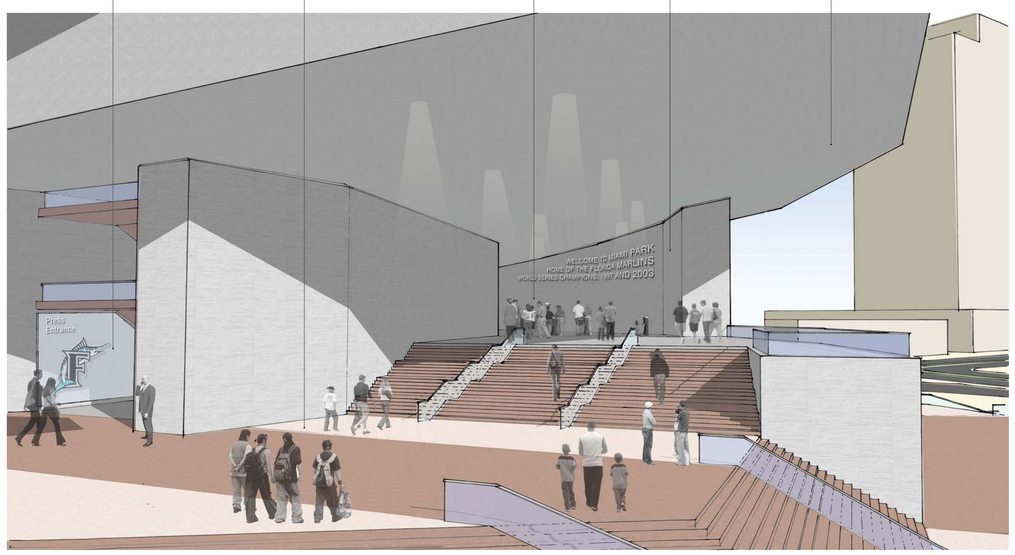
Threshold to ancillary dress-ing rooms and press area under stair, creating spatial overlap

Intermediate plaza creates spatial overlap of fan and player before they are separated

Ticket transaction takes places at point between zones of separa-tion and transition

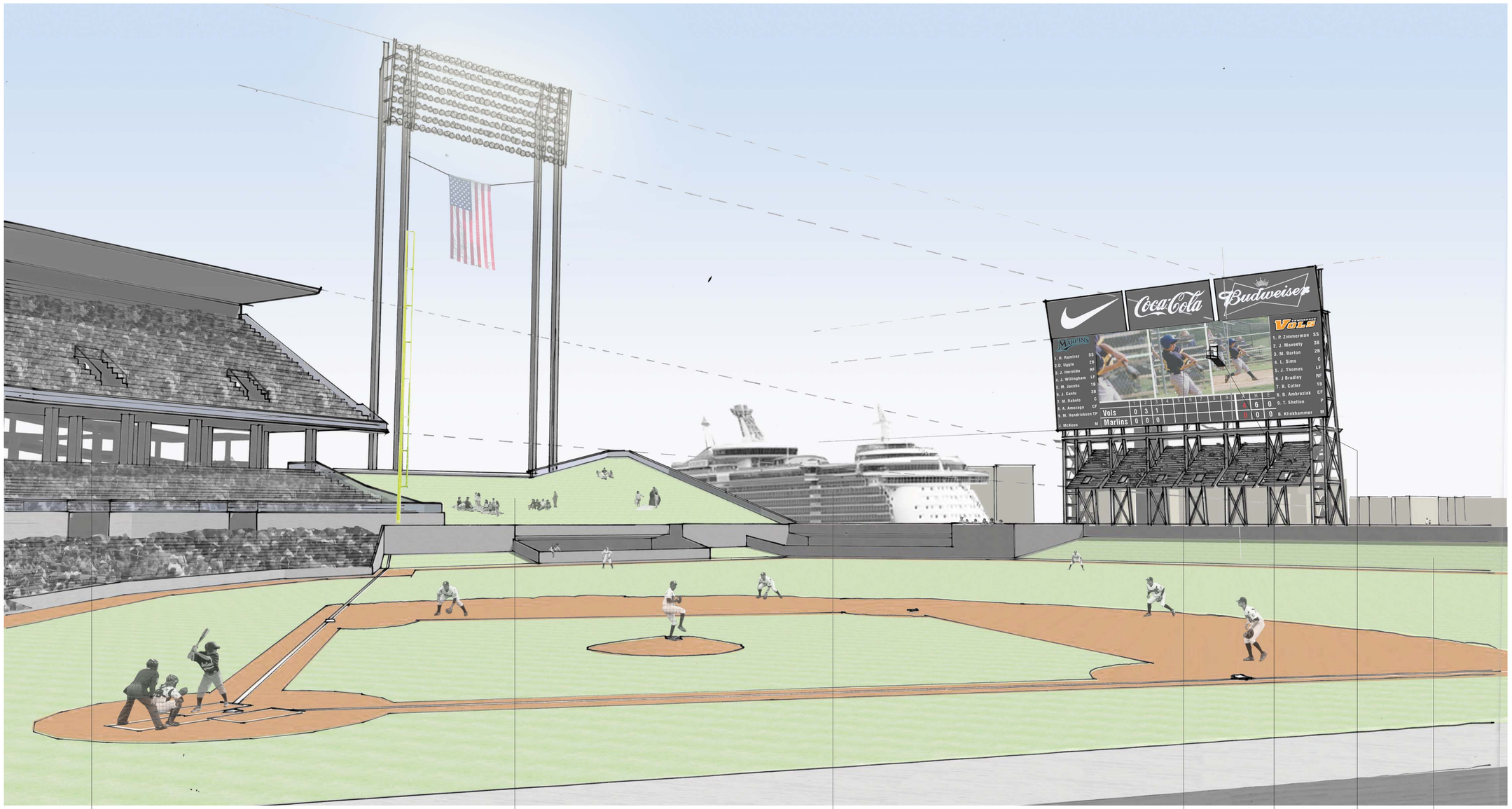
The massive con-crete walls peel away from the field to form thresholds through a series of layers

The concrete plate cantilevers over the threshold from the city creating a blurred zone



View of the zone of separation between city and stadium

View of the interior of the stadium and the threshold to the country after emerging from the vomitory



Viewing patios provide places for social interaction while watching the game

Grass berm continues the fold of the field over the threshold from South Pointe Park

Ships entering the Port of Miami pass through the extended space of the stadium at the threshold to the country

Jumbotron bleachers available for $1.00 with views from the Atlantic to downtown Miami

Jumbotron shows simultaneous shots of each play from different angles in the stadium

Observation balcony extends through Jumbotron placing fan in space of player

Observation deck open year round and holds cafe

Field folds up into hill, extending over bike and jogging path below

Register lines extend through layers connecting field to city

Elevator to suite level and upper deck cased in white ash

Stair to upper decks creates roof for threshold to ancillary locker rooms below

Translucent glass panels between space of fan and space of player creates a satial overlap at the threshold

Final layer between city and concourse

Field level concourse

View of the liminal space between city and concourse

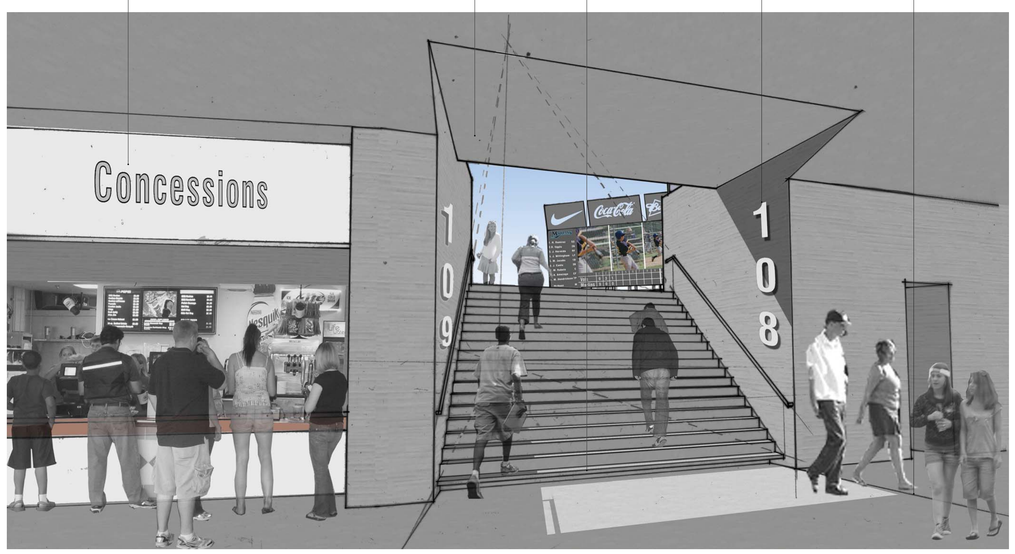
Die cut signage denotes capitalistic enteprise, refering to signage on jumbotron

Ceiling plane carved out to create horizontal zone of threshold

Floating bottom step heightens the perception of the threshold

Signage for vomitory follows aesthetic of circulation signs, translucent glass bolted to wall and lit from behind

Vomitory set inside register lines between layers



View through the vomitory, the threshold between concourse and seats

Atlantic Ocean

San Juan, Puerto Rico 1,028 Miles

Santo Domingo, Domican Rep. 826 Miles

Caracas, Venezuela 1,326 Miles

Havana, Cuba 228 Miles

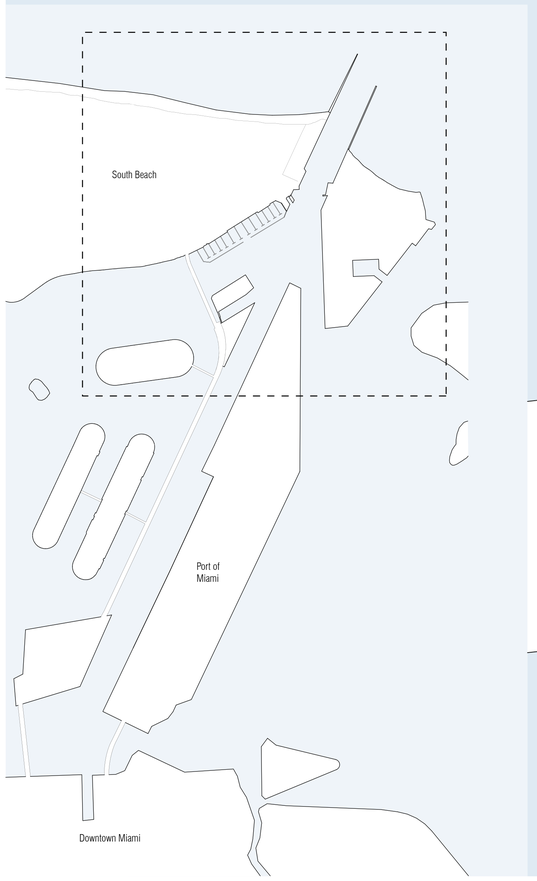
South Beach

Fisher Island

Biscayne Bay

Miami, United States of America 3.4 Miles

Port of Miami



Site Plan

0' 150' 300' 600'

Fig. 93: Presentation Plate 5

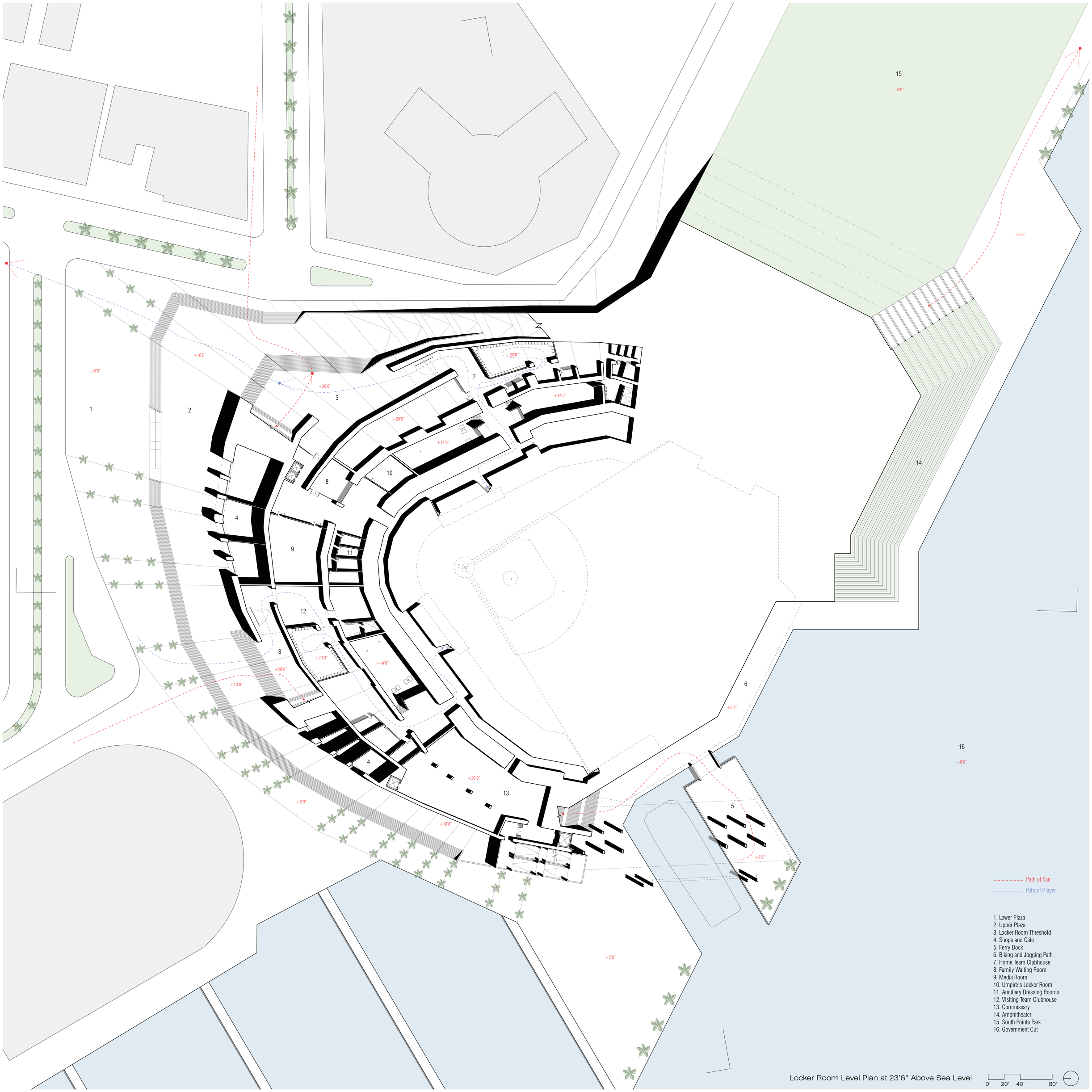
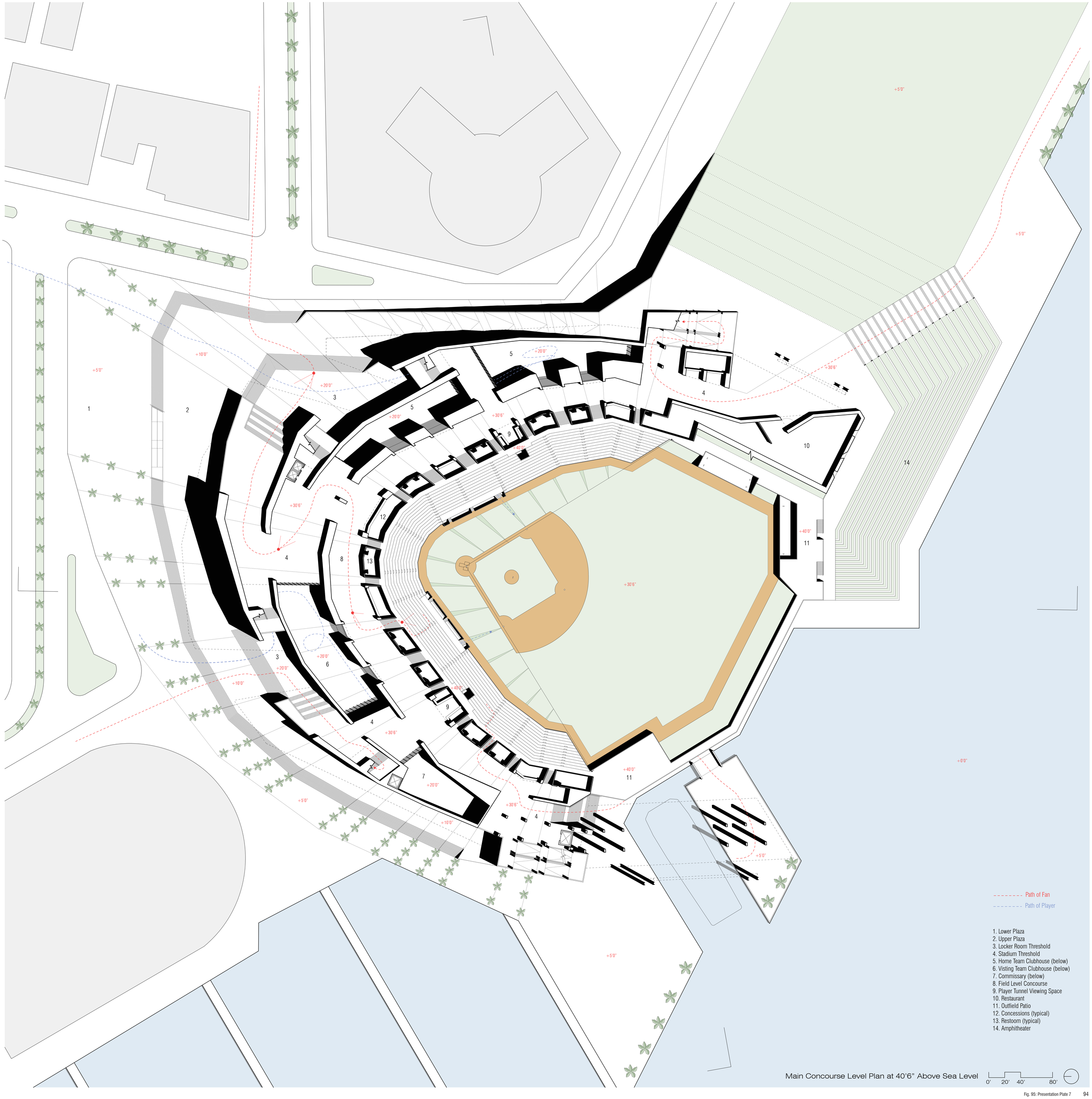
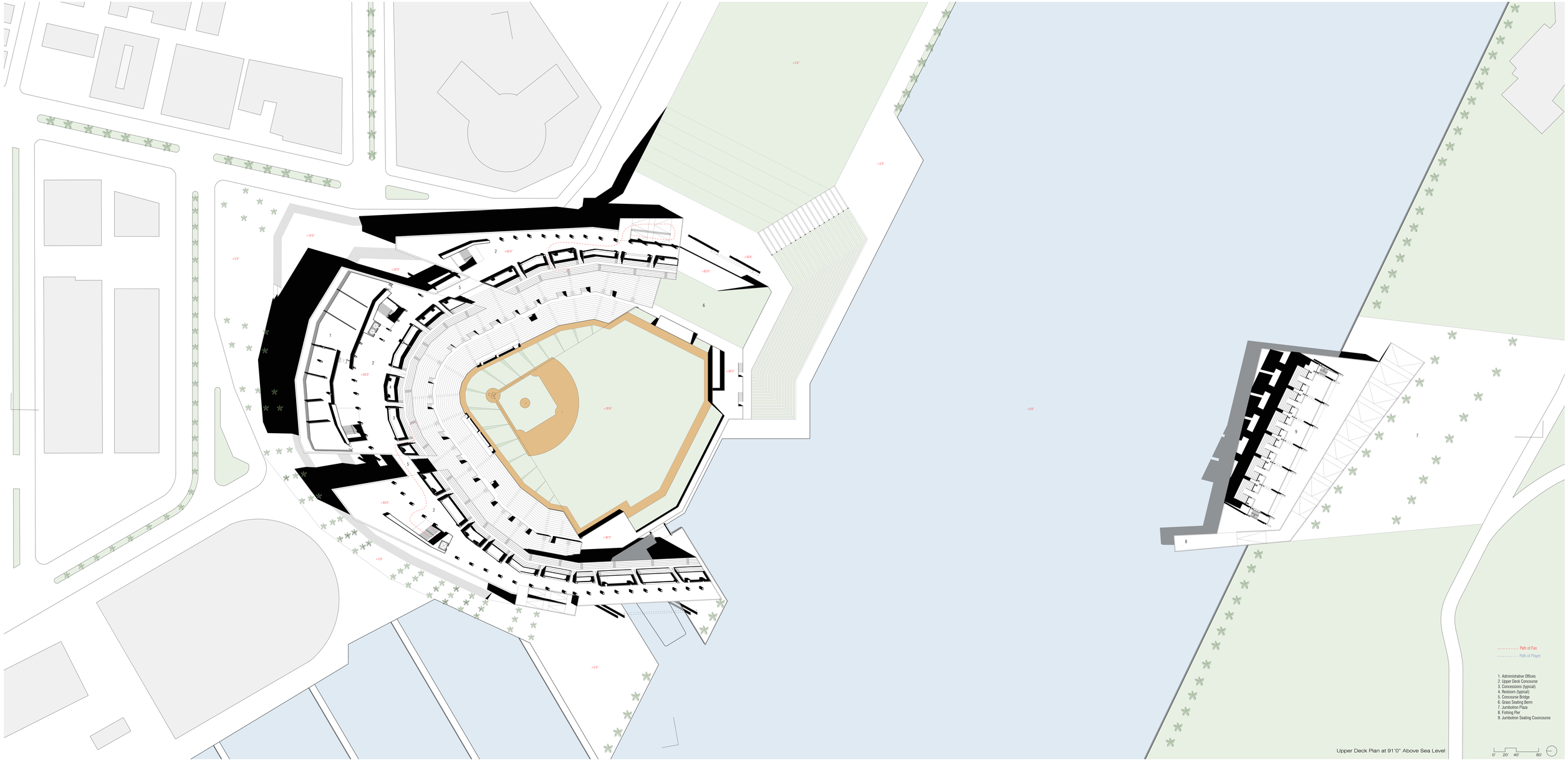


Fig. 94: Presentation Plate 6

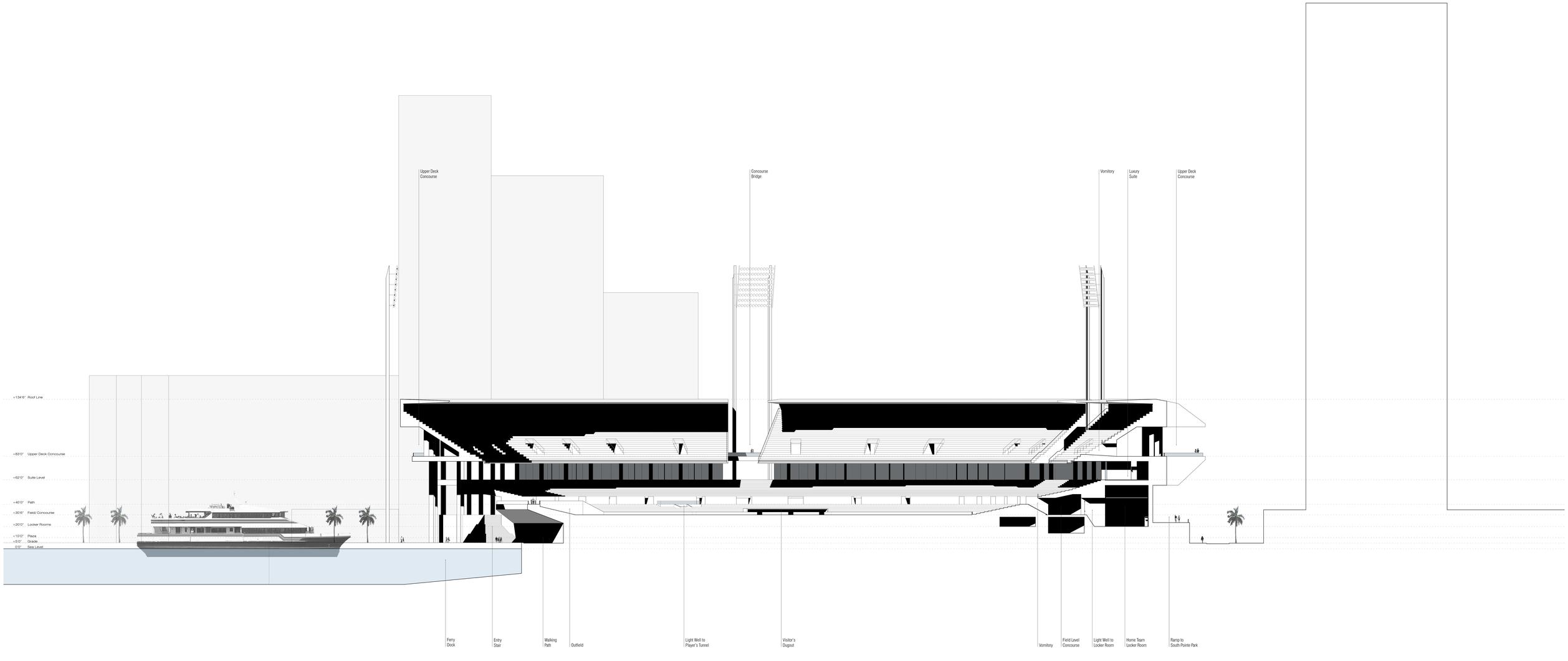

+5'0"
+10'0"
+20'0"
+30'6"
+40'0"
+0'0"
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Path of Fan
Path of Player
1. Lower Plaza
2. Upper Plaza
3. Locker Room Threshold
4. Stadium Threshold
5. Home Team Clubhouse (below)
6. Visting Team Clubhouse (below)
7. Commissary (below)
8. Field Level Concourse
9. Player Tunnel Viewing Space
10. Restaurant
11. Outfield Patio
12. Concessions (typical)
13. Restoom (typical)
14. Amphitheater
Main Concourse Level Plan at 40'6" Above Sea Level
0' 20' 40' 80'



Upper Deck Plan at 91'0" Above Sea Level


+134'6" Roof Line
+83'0" Upper Deck Concourse
+62'0" Suite Level
+40'0" Path
+30'6" Field/ Concourse
+20'0" Locker Rooms
+10'0" Plaza
+5'0" Grade
0'0" Sea Level
Administrative Offices
Upper Deck Concourse
Press Box
Luxury Suites
Open Viewing Patio
Grass Berm Seating
South Pointe Park
Jumbotron Screen
Observation Balcony
Commerce Street
Ticket Turnstile
Coffee Shop and Cafe
Liminal Threshold
Field Level Concourse
Concession Stand
Home Team Dugout
Visiting Team Bullpen
Home Team Bullpen
Outfield Patio
Amphitheater
Government Cut
Fishing Pier
Observation Deck
Jumbotron Bleachers
0' 10' 20' 40'

Section A Cut Through Main Entry, Amphitheater, Channel, and Jumbotron



Section B Cut Through Ferry Dock, Vomitory, Light Well, and Locker Room

0' 10' 20' 40'

Vita

Patrick Zimmerman was born and raised in Bethesda, MD by his parents, Mark and Maggie Zimmerman, with his three sisters, Katie, Marie, and Anna. He attended Our Lady of Good Counsel High School in Wheaton, MD from where he graduated in 2000. He received his Bachelor of Science in Architecture from the University of Maryland, College Park in 2004. In 2007 he married Elana Hommer and upon graduation from the University of Tennessee in 2008 will pursue a career in architecture and urban design in his home state of Maryland.