

ABSTRACT

Title of Document: [Re]integrating the Stadium Within the City:
A Ballpark for Downtown Tampa

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With little exception, Major League Baseball stadiums across the country deprive their cities of valuable space when not in use. These stadiums are especially wasteful if their resource demands are measured against their utilization. Baseball stadiums are currently utilized for only 13% of the total hours of each month during a regular season. Even though these stadiums provide additional uses for their audiences (meeting spaces, weddings, birthdays, etc.) rarely do these events aid the facility's overall usage during a year.

This thesis explores and redevelops the stadium's interstitial zone between the street and the field. The primary objective is to redefine this zone as a space that functions for both a ballpark and as part of the urban fabric throughout the year.

[RE]INTEGRATING THE STADIUM WITHIN THE CITY:
A BALLPARK FOR DOWNTOWN TAMPA

By

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Dedication

I dedicate this thesis to my family and friends who share my undying interest in our nation's favorite pastime.

Acknowledgements

I would like to thank my parents and my fiancé, Kiley Wilfong, for their love and support during this six-and-a-half year journey. I would also like to thank my committee for all their insight and guidance over this past year. Finally, I would like to thank my fellow classmates for their help and support: Georgina Thibodeaux, Alison Boliek, Lisa Glenn, James Han, Ben Diaz, Eric Joerdens, and Jake Bialek.

Table of Contents

Dedication	ii
Acknowledgements	iii
Table of Contents	iv
List of Figures	vi
Chapter 1: The Civic & Sustainable Stadium.....	1
The Dormant Stadium.....	1
Economic Vitality.....	2
A Stadium for the City	2
Chapter 2: A Ballpark Taxonomy.....	4
Wooden Ballparks.....	4
Jewel Box Ballparks.....	6
Multi-Purpose Ballparks	8
Modern Ballparks	10
Retro-Classic Ballparks.....	12
Retro-Modern Ballparks	14
Contemporary Ballparks	19
The Changing Landscape – From City to Suburbia	21
Chapter 3: Site Selection	24
Population.....	25
Good Urbanism.....	26
Amenities	27
Public Transportation	28
Pedestrian & Vehicular Movement Patterns.....	28
Developable Area	29
Why Tampa?.....	29
Chapter 4: Site Analysis – Downtown Tampa.....	32
Site History.....	32
Site Description.....	33
Contextual Development.....	34
Accessibility & Parking.....	37
Summary.....	41
Chapter 5: A Mixed-Use Stadium	43
Design Objective & Goals	43
Urban Scale Program & Planning	43
Stadium Scale Program & Planning.....	44
Chapter 6: Precedent Analysis	45
Oriole Park at Camden Yards	45
Coors Field.....	47
Fenway Park	49
Chapter 7: Re-interpreting the Interstitial Zone in Tampa.....	51
Design Approach & Strategies.....	51
Field Orientation & Position.....	51

Highway Boundary	52
Urban / Public Spatial Development	53
Sectional Development	55
Chapter 8: Design Solutions and Conclusions.....	60
Site Strategies.....	60
Stadium Strategies.....	68
Appendix A – Facility Usage/Year	77
Typical MLB Stadium Usage/Year	77
Typical NFL Stadium Usage/Year	77
Typical NBA Arena Usage/Year.....	78
Tampa Times Forum Usage/Year.....	78
Tampa Convention Center Usage/Year	79
Restaurant Usage/Year	79
Office Usage/Year.....	80
Commercial and Retail Usage/Year.....	80
Appendix B – Major League Baseball Stadium Capacities.....	81
Appendix C – Tampa Bay Rays Yearly Attendance	82

List of Figures

2.1	South End Grounds, elevated outfield view	5
2.2	Wrigley Field, aerial showing street grid	7
2.3	Riverfront Stadium, aerial	9
2.4	Dodger Stadium, aerial	11
2.5	Oriole Park at Camden Yards, interior	13
2.6	Progressive Field, entrance	15
2.7	Great American Ballpark, entrance	16
2.8	Target Field, façade	18
2.9	Marlins Park, aerial	20
2.10	Urban Transect with Stadium Overlay	21
3.1	Tampa Bay Area Population Density in 2000	29
3.2	2012 MLB Stadium Attendance	31
4.1	Downtown Tampa, Florida, aerial	32
4.2	Immediate Site, Tampa, Florida, aerial	33
4.3	Site photograph by author	34
4.4	Amenities & Points of Interest	36
4.5	Public Transportation	39
4.6	Vehicular & Pedestrian Access	40
6.1	Oriole Park at Camden Yards, Baltimore, MD, aerial	46
6.2	Oriole Park at Camden Yards, Baltimore, MD, map	46
6.3	Coors Field, Denver, CO, aerial	48
6.4	Coors Field, Denver, CO, map	48

6.5	Fenway Park, Boston, MA, aerial	50
6.6	Fenway Park, Boston, MA, map	50
7.1	Typical Stadium Parti – Disengaged	54
7.2	Proposed Stadium Parti – Engaged	55
7.3	Typical Concourse Levels – Continuous	56
7.4	Proposed Concourse Levels - Porous	56
7.5	Defined Levels of Tampa	57
7.6	Kauffman Stadium Section with Levels of Tampa Overlay	58
7.7	Target Field Section with Levels of Tampa Overlay	58
7.8	PNC Park Section with Levels of Tampa Overlay	59
8.1	Site Development – Piano Nobile	60
8.2	Site Development – Boulevard	61
8.3	Site Development – Stadium Placement	61
8.4	Site Development - Street Grid	62
8.5	Site Development – City Bulk	62
8.6	Site Development – New Development Sightlines	63
8.7	Boulevard Perspective	64
8.8	Street Level	65
8.9	Main Concourse/2nd Level Retail Plan	66
8.10	Club Level	67
8.11	Street-Main Concourse Connectivity	67
8.12	Club Level Connectivity	68
8.13	Concourse Planning – Batter Vector	69

8.14	Concourse Planning – Pitcher Vector	69
8.15	Concourse Planning – Massing	70
8.16	Concourse Planning – Seating	70
8.17	Evening Concert Perspective	71
8.18	Main Concourse North Perspective, pitcher and batter	71
8.19	Main Concourse West Perspective	72
8.20	Main Concourse West Perspective, batter	72
8.21	Whiting Street Section	73
8.22	Morgan Street Section	73
8.23	Pierce Street Section	73
8.24	Homeplate Section	74
8.25	Boulevard Section – Gameday	74
8.26	Boulevard Section – Non-Gameday	74
8.27	Morgan Street Entrance Perspective	75
8.28	Morgan Street, Kennedy Street Intersection Perspective	75
8.29	Boggs Street Entrance Perspective	76
8.30	Boggs Street Apartment Perspective	76

Chapter 1: The Civic & Sustainable Stadium

Over the past two decades, sports facilities have become disposable buildings...the facilities are inflexible, and economically and environmentally irresponsible. Worse, they are often irrelevant or irreverent to the communities they serve.¹

-Robert Mankin

The Dormant Stadium

Specialized sports facilities are extravagant and wasteful if their resource demands are measured against their utilization. The core of this argument stems from the period of dormancy these facilities undergo. During these particular times of the year, especially for professional baseball and football stadiums, our prominent city icon is left as just that, an icon with no particular use. Baseball stadiums are currently only utilized for approximately 13% of the hours per month during the regular season. Football stadiums, on the other hand, are utilized approximately 2% during a typical month during the regular season while basketball arenas are approximately 14%. [See Appendix A for data] Save the fifteen to twenty events that might take place during the offseason (basketball stadiums typically host many more events as the indoor arenas provide many more venues), these facilities become a void within our cities. The facility undergoes a period of desolation that it could

¹ (Mankin)

otherwise be utilized through other programmatic needs within the city fabric. By comparison, typical commercial-office buildings are open for approximately 23% of each month; commercial-retail is open approximately 27% and restaurants 65%.

Economic Vitality

What is worse, however, is that these facilities have become disposable and keep being demolished and rebuilt with the exact same model. To put things into perspective, the typical office building has a life expectancy of fifty years. In our current trend, sports venues are rendered obsolete within twenty years. With ever-changing technologies, these buildings quickly become outdated within fifteen years and, worse yet, abandoned within twenty-five. Why does this matter to the public? “Sixteen billion dollars were spent on construction and maintenance between 1997 and 2007.” Most stadiums are built and maintained primarily with taxpayer money. “This expenditure would be acceptable if the sports facility functioned as a true civic resource, accessible for much of the population and acting as a commercial growth engine.”²

A Stadium for the City

How can architecture and urban design define a model stadium whose interstitial zone between the street and playing field is activated as part of the urban fabric on a year-long basis? I believe these facilities have the

² Mankin

opportunity to become public nodes within the urban fabric. This thesis will explore the baseball stadium model in particular and the premise will be to redevelop the interstitial zone between the street and the playing field. The primary objective is to redefine this zone as a space that functions for both a ballpark and the community throughout the year. In all cases, this thesis will aim to integrate the stadium within the fabric of the city.

Chapter 2: A Ballpark Taxonomy

We've heard of and seen the multitude of stadia since the inception of professional baseball, but what truly distinguishes one from another? From Polo Grounds to Wrigley Field to Oriole Park at Camden Yards the game of baseball has forever been a part of our communities and prominent icon in our skylines. Each of these stadia marks a significant progression in our development of the stadium and is vital to understanding where we have been and where we are going.

Wooden Ballparks

Considered the first venue for professional baseball, wooden ballparks were typically large wooden structures; everything from the platforms to the seats was constructed of wood. However, it was typical that iron columns were provided for better support. The layout and size of these stadiums are comparable to today's minor league stadiums. They typically featured one or two levels of inclined seating, high outfield walls displaying advertisements, and bleacher seats overlooking the advertisements.

Despite their instant success, these stadiums were met with the limitations of their materials. The wooden structures eventually began to decay and even worse, caught fire. Some of these were rebuilt, while others were simply demolished and relocated. Twenty-eight stadiums in total were built during this era, the earliest being South End Grounds in Boston in 1871.

Other prominent ballparks include Huntington Avenue Grounds in Boston, National League Park in Philadelphia, Oriole Park in Baltimore, Palace of the Fans in Cincinnati, Polo Grounds in Manhattan, Robison Field in St. Louis and West Side Park in Chicago. These stadiums would eventually give way to their long-lasting counterpart: fire-resistant ballparks constructed of steel and concrete known as “jewel boxes.” The last of these stadiums recorded for demolition was Robison Field in 1926.³



**Fig. 2.1 - South End Grounds, Boston. elevated outfield view. (c1893)
(Boston Public Library)**

³ (Baseball Park)

Jewel Box Ballparks

As the original wooden ballparks began to be phased out after fires and demolition those which were rebuilt were fashioned of concrete and steel. These parks began to integrate themselves into professional baseball by the beginning of the twentieth century. Thought of to embody the “golden age” of baseball, these stadiums were well known for their green seats, large roofs, intimacy and major use of exposed steel, brick and stone. Two Philadelphia ballparks paved the way for the Jewel Box age – Baker Bowl in 1895 and Shibe Park in 1909.

With these stadiums also came the traditional two-tiered grandstands. Steel pillars elevated the second level directly above first, allowing the upper tier a much closer proximity to the field. This standard would last for decades until Yankee Stadium I became the first to accommodate three tiers. At that point, Yankee Stadium I then defined the new standard until the most recent shift back to two tiers of seating.

Another characteristic of the stadiums were their asymmetrical outfield dimensions. Because most of the Jewel Box ballparks had to be built to fit within the constraints of city blocks, the outfield dimensions had to accommodate for the street grids. Prior to this, stadiums were required to be built to controlled dimensions according to the game rules. The result was a dramatic shift from anything seen in the Wooden Ballpark era and one in which many prominent icons took root.

These ballparks would also begin accommodate other sports, most notably soccer and football, but the primary focus was on baseball. Fifteen stadiums in all were built during this era, the most prominent of which included the aforementioned as well as Braves Field in Boston, Comiskey Park in Chicago, Crosley Field in Cincinnati, Ebbets Field in Brooklyn, Forbes Field in Pittsburgh, League Park in Cleveland, Polo Ground IV in Manhattan, and Tiger Stadium in Detroit. The last of these stadiums to be demolished was Yankee Stadium I in 2010. While they are not the exact structures originally built, the last two surviving stadiums both still used today are Wrigley Field in Chicago and Fenway Park in Boston.⁴



Fig. 2.2 - Wrigley Field, Chicago. aerial showing stadium conforms to street grid. (2012) (Bing Maps)

⁴ (Baseball Park)

Multi-Purpose Ballparks

The rise of multi-purpose ballparks took hold during the 1960s, during which a total of eight stadiums were constructed. Until the arrival of the retro ballpark in 1992, baseball stadiums across the country began to take on the persona of “cookie-cutter” or “concrete donut” stadiums. These stadiums were typically tall circular or square structures constructed entirely of bare reinforced concrete. They were also typically completely enclosed, thus being called the plain “cookie cutter” reputation. These parks were conceived with the idea in mind that they would accommodate not only baseball but football, soccer, and other sports as well. They were to facilitate each of these equally and in doing so would be advantageous to not only the owners but also the cities. The first park originally built as a multiple-purpose park was Robert F. Kennedy Memorial (RFK) Stadium in Washington, D.C. in 1961.

Some parks also underwent renovations to accommodate additional uses. Depending on its original use these stadiums shapes varied between non-geometric to rectangular. Candlestick Park and Anaheim Stadium were both originally baseball parks renovated for football, while Sun Life Stadium was a football stadium renovated for baseball.

Multiple-purpose stadiums also brought about one particular innovation, the cantilevered upper deck. Rather than use the steel pillars introduced in Jewel Box ballparks, which also obstructed fans’ views, the upper deck was extended upwards and set back away from the field, allowing

the lower tier to be free of columns. In addition, without the added columns, the roof could no longer be large enough to cover the entire upper tier. This resulted in a much shallower roof covering only the uppermost rows while also exposing fans to the elements.

Added complications included the orientation of the seating, the addition of luxury boxes, and the greatly increased distance from the field of play. The added capacity for football games was far too large for baseball and even the largest crowds seemed scarce. Also problematic was the additional space needed to accommodate football and soccer events. This added dimension pushed even the field level seats to a great distance. Even football events proved to be problematic as the reverse was true; field level seats were far too close to the field of play.

The last of the multi-purpose stadiums to be built were Toronto's Rogers Centre, which opened in 1989, and Tropicana Field in St. Petersburg in 1990. Each of these stadiums is unique in that they are only two indoor multi-purpose facilities still in use by professional baseball teams today. O.co Coliseum in Oakland is the only remaining purely open-air multi-purpose stadium still used by baseball today. Other significant multi-purpose stadiums built during this era includes Atlanta-Fulton County Stadium in Atlanta, Busch Memorial Stadium in St. Louis, Cleveland Municipal Stadium in Cleveland, Mile High Stadium in Denver, Qualcomm Stadium in San Diego, Riverfront

Stadium in Cincinnati, Shea Stadium in Queens, Three Rivers Stadium in Pittsburgh, and Philadelphia Veterans Stadium in Philadelphia.⁵



Fig. 2.3 - Riverfront Stadium, Cincinnati. aerial of tall, circular concrete form. (c1980)
(http://www.flickr.com/photos/brent_nashville/110006713/sizes/o/in/photostream/)

Modern Ballparks

During the midst of the multi-purpose stadium boom some teams opted for what came to be known as the Modern ballparks. The first to do so was Milwaukee County Stadium in 1953. These ballparks mirrored some of the practices seen in its multi-purpose stadium counterparts, but they also included some new features. The similarities between the two types of stadiums includes cantilevered upper decks, section seating designated by different colors, and bland concrete exteriors. The primary difference, however, was that they were built as baseball-only facilities; this meant much

⁵ (Baseball Park)

smaller crowds, seating directed towards home plate instead of the center, and a much more intimate atmosphere. As opposed to the original multi-purpose stadiums, several modern stadiums have managed to remain in use since their original construction, needing only renovations to keep the facilities up to date.

The relocation of two New York teams, the Giants and Dodgers, resulted in the first two truly modern stadiums. Candlestick Park was constructed first but later was converted into a multi-purpose park. Dodger Stadium, on the other hand, remains a baseball-only park just as it did when it was originally built. Also built initially as a modern ballpark, Anaheim Stadium, which was modeled after Dodger Stadium, eventually was renovated for football only later was converted back to baseball only. Despite the original Yankee Stadium being built as a jewel box park, it underwent extensive renovations during 1973-75 and was converted into more of a modern style ballpark. However, many of the characteristics that defined it as classical jewel box were also retained, making it the only stadium to overlap the two types. U.S. Cellular Field in Chicago was the last modern ballpark to be built in North America, but renovations from 2001-09 have made it appear more like a retro-classic ballpark.⁶

⁶ (Baseball Park)



Fig. 2.4 – Dodger Stadium, Los Angeles. aerial of multi-colored seating directed towards home plate. (2012) (Google Maps)

Retro-Classic Ballparks

As Rogers Centre in Toronto and U.S. Cellular Field in Chicago marked the end of the multi-purpose stadiums and modern stadiums, respectively, Oriole Park at Camden Yards in Baltimore marked the beginning of what is considered the Retro-Classic Ballpark. As much as the retro design, which isn't universal among the new parks, Camden Yards signaled an era of stadiums with smaller capacity and an emphasis on integrating the facility with its downtown environs.⁷ The Retro-Classic Ballpark was comparable to the newer parks in that they enjoyed luxury boxes and more restrooms and concession areas. Added, however, were indoor concourses with open views to the field which allowed fans to maintain the visual connection to the game at all times. The aesthetics of the Retro-Classic

⁷ (Dodd)

Ballpark shifted back to that seen in the jewel box style. Also reintroduced from this style were the green seats, bricks, stone, and green-painted exposed steel. In addition, the outfield fences mimicked the jewel box parks' angled fences and atypical dimensions.⁸

The grandstand, however, did not reflect the Jewel Box Ballparks. Instead, the new layout's primary focus was to ensure everyone had a good view. Columns were removed, as seen with the modern parks, but the upper deck was now drawn back and shrunk; this resulted in larger middle decks, thus emphasizing a terraced effect and alleviating the need for a cantilever. The terrace also directly correlated with the exterior, a feature that is a trademark of modern parks.

Since Camden Yards opened in 1992, two-thirds of all major league teams have opened new ballparks, each of which contains unique features. Twelve stadiums in total were built or renovated in the retro-classic style between the years of 1992 and 2009. The most recent of which include Citi Field in Queens (modeled after Ebbets Field) and Yankee Stadium II in Bronx (modeled after the original of 1923); each ballpark was completed in 2009. Other stadiums include AT&T Park in San Francisco, Busch Stadium III in St. Louis, Citizens Bank Park in Philadelphia, Comerica Park in Detroit, Coors Field in Denver, PNC Park in Pittsburgh, Rangers Ballpark in Arlington, Turner Field in Atlanta, and U.S. Cellular Field in Chicago.⁹

⁸ (Baseball Park)

⁹ (Baseball Park)



Fig. 2.5 – Oriole Park at Camden Yards, Baltimore. interior shows a return to the green seating as well as the stepped grandstand. (2008) (<http://www.flickr.com/photos/kevinfarner/2617535090>)

Retro-Modern Ballparks

Camden Yards' influence on the stadiums that preceded it was very apparent. However, not all of the stadiums fell into the retro-classic mold. Others strived for a more modern appeal. These stadiums are classified as Retro-Modern Ballparks. These ballparks combined elements seen in the Retro-Classic Ballparks – particularly the angular, asymmetrical fences of varying heights, a small upper deck, stepped tiers, and a single color palette – with a new interpretation of the building skin. Rather than continue the use of brick, as seen in the retro-classic style, these stadiums' exteriors featured white or grey-paneled steel. Masonry, if there was any, was limited to the use

of sandstone or limestone. Some stadiums even featured more innovative elements such as curtain walls or retractable roofs.

The first stadium considered purely retro-modern was Progressive Field in Cleveland, completed only two years after Camden Yards in 1994. The park's interior shares many of the typical features of the retro-classic model, while its exterior pairs grey-paneled steel with a glass façade. The second retro-modern ballpark to open was Chase Field in Phoenix in 1998. Its design included an innovative retractable roof and operable panels on its facade. These elements, along with a swimming pool, differed vastly from anything seen in the jewel box designs. The interior, however, maintained the tradition of the previous retro stadiums. What made Chase Field significant, though, was that it was the first of four ballparks to feature retractable roofs during the retro-modern era.¹⁰

¹⁰ (Baseball Park)



Fig. 2.6 – Progressive Field, Cleveland. entrance comprised of grey-paneled steel paired with recessed glass façade and sandstone bay (2011) (<http://www.flickr.com/photos/sheldoyle/5806198629/>)

Angel Stadium of Anaheim became the first stadium to renovate its facility to the retro-modern design, which was also its second renovation after its construction in 1966. After its prior renovation to convert the stadium into a multi-purpose facility to accommodate the Los Angeles Rams, the stadium was converted back into a baseball only facility from 1996 to 1998. With this renovation, the stadium's technologies were updated, as were the interior and exterior of the building; upon its completion in 1998 the stadium made the transition from modern to retro-modern.¹¹

¹¹ (Baseball Park)

The second half of the retro-modern movement brought about an even larger push away from the classic ballparks. Cincinnati's Great American Ballpark, which opened in 2003, was the first stadium to take this leap. Its contemporary looking, glass-wrapped façade was unlike anything that had been built up until that point in time and the beginning of a stadium design which was willing to embrace less familiar forms.¹² Great American Ballpark was the signifying point in which designers – Populous, more specifically – began to explore stadium elements that responded to 21st century designs.



Fig. 2.7 – Great American Ballpark, Cincinnati. entrance showing glass façade. (2011)
(<http://www.flickr.com/photos/39669102@N07/5726884987/>)

¹² (Byrnes)

Five years later in Washington, D.C., Nationals Park was next to respond to this shifting paradigm, pushing its envelope even farther than that seen in Cincinnati. Its exterior incorporated a much more substantial amount of glass juxtaposed to white concrete. The design was also the first to achieve a LEED certification, reaching a LEED Silver status. In another five years, the retro-modern style finally reached its peak in 2010 with Target Field in Minneapolis. The evolution of the stadium extended to a much more contemporary and dramatic exterior and canopy. Its playful and dramatic exterior reduces it to almost unrecognizable as a stadium to the perspective of the passer by. The cantilevered glass sits atop a limestone base that was particularly designed to accommodate the site's small area of eight acres. Target Field's principal architect, Earl Santee of the design firm Populous, goes on to explain that, "the exterior was also an artistic interpretation of the culture of Minnesotans: a dichotomy of cosmopolitan and natural."¹³ Despite the stadium's obvious shift into the realms of contemporary design, its interior still fashions what is considered retro: asymmetrical, unique-shaped fences and a singular color scheme.¹⁴

¹³ (Spicer)

¹⁴ (Byrnes)



Fig. 2.8 – Target Field, Minneapolis. façade incorporates large expanse of glass atop limestone base. (2010)
(<http://kcrballparksofthemwl.wordpress.com/2010/04/16/target-field/>)

Contemporary Ballparks

Over the past twenty years, baseball stadiums have made remarkable strides towards much more contemporary designs. None have been more so than Marlins Park in Miami. Finished in 2012, the stadium embodies a purely forward-thinking, contemporary design, ending two decades of retro stadium development. The stadium was designed by Populous, the same firm which designed Camden Yards and many of the other retro stadiums. This new style, however, separates itself from the retro ballparks in that the stadium shifts its focus to the experience of the present-day culture of the stadium's

surrounding area, ultimately rejecting the concept of retro.¹⁵ Its curvilinear features and sculptural glass, paired with Miami-Deco tiles and bright color scheme, are very telling of its context. The juxtaposition of the stadium to its context forms a somewhat didactic relationship, amplifying the unique features and ideals found in Little Havana. Greg Sherlock, a Populous project designer, adds, "In this particular case, we didn't adopt anything stylistically. It's sculpture quality, and with sculpture, there are no rules. We wanted an experience that connects the fan experience to the city of Miami and its people and its climate and culture."¹⁶ He goes on to say that, "[it] is all about Miami. It's consistent with the essence of the buildings that are down here—white plaster and graceful forms, which are somewhat of an abstraction of the look and feel of Miami Deco."¹⁷ Earl Santee adds, "For the first time, you can embrace art and architecture and baseball in one building form. It's not just the art in the building, but the building itself is a piece of art."¹⁸

As seen by many other contemporary designs, the Marlins Park makes bold use of glass, a sculptural exterior, bright color palette, and artwork. Additionally, the ballpark embraces newer and sustainable technologies, many of which resulted in the stadium's LEED Silver rating. Some of these features include a retractable roof, sliding glass walls, and climate controlled functionality.

¹⁵ (Baseball Park)

¹⁶ (Justice)

¹⁷ (Mazmanian)

¹⁸ (Dodd)



Fig. 2.9 – Marlins Ballpark, Miami. concept aerial showing curvilinear form. (<http://miami.marlins.mlb.com/mia/ballpark/index.jsp>)

The Changing Landscape – From City to Suburbia

The development of the baseball stadium in regards to the urban transect has varied over time. The origins of baseball began as an organized sport on the outskirts of the city in open fields and public parks and well away from the city center. As the sport gained popularity and organized teams turned professional the desire to accommodate the growing number of fans and games shifted the landscape to well within the city centers and the working class neighborhoods. As a result of this shift, classic ballparks typically had minimal space for parking and relied mostly on public transportation. Wrigley Field in Chicago is a prime example of this condition.

In some instances, early ballparks were abandoned altogether as the locations were not well served by mass transit.¹⁹



Fig. 2.10 – Urban Transect by Andres Duany with baseball stadium overlay by author (<http://bettercities.net/images/9795/rural-urban-transect>)

As the mindset of many Americans shifted towards the “American Dream,” people left the urban centers and settled in suburbia. The heavy reliance on the automobile that followed particularly influenced the classic stadium model by requiring a much greater need for parking spaces. Some ballparks alleviated this problem by constructing parking garages within the vicinity. Newer ballparks that chose to stay in the city responded by providing generous amounts of parking. Others, however, decided to follow the people and affixed themselves to the edges of the downtowns, while others within the suburbs. In both instances the ballpark became surrounded with a “sea” of parking. Across America, ballparks were transforming their adjacent

¹⁹ (Baseball Park)

landscapes into endless rows of parking, making sure to provide for the masses.²⁰

Over the past two decades, retro stadiums have primarily chosen to shift their locations back to an urban setting. These stadiums have provided both an ample amount of parking while also utilizing public transportation.

²⁰ (Baseball Park)

Chapter 3: Site Selection

As seen in the prior chapter, the locations of current and past ballparks have varied from suburbia to well within downtown areas. I feel that some of the best ballparks are those located in the downtown areas. More so, I feel that the most successful stadiums are not only in their downtown, but integrated within their respective downtowns. These stadiums offer the population the ability to easily transition from work day to game day. They are also accommodated easily by vehicular and public transportation. Additionally, they offer their users the added benefit of easy access to other amenities within the area.

Twenty years ago, Camden Yards in Baltimore set the precedent for the location of future ballparks. While in Oriole Park, the relationship to Baltimore is very apparent. The same goes for Progressive Field in Cleveland, Coors Field in Denver, Petco Park in San Diego, and Nationals Park in Washington DC. Timothy Chapin states that, "proponents for new sports facilities in Detroit, Seattle, San Diego, and Phoenix have centered their pro-facility argument not on the concept that a new facility is a metropolitan economic development tool (in terms of jobs and taxes), but that the facility is a catalyst for the physical redevelopment of portions of the city's core. Since 1980, 34 cities in North America have invested in new sports facilities in downtown or near downtown areas, in part to drive

(re)development of urban districts.”²¹ There are several stadiums in which this is quite the opposite. These are stadiums which have been developed outside of the downtown areas and well within the suburban scene. Some of these include Kaufmann Stadium in Kansas City, Dodger Stadium in Los Angeles and Turner Field in Atlanta.

For this thesis, I will locate my stadium within a downtown area. I have utilized six criteria for determining my site: population, good urbanism, amenities, public transportation, pedestrian and vehicular movement patterns, and developable area.

Population

Population density of the downtown area is one of the primary factors for determining a particular site. On game days, the stadium location would benefit from and be able to accommodate for the inflow and outflow of large numbers of people. On days other than game days, this larger population would help to sustain the everyday use of the stadium. The stadium’s placement in the city would ideally be within or just outside of the business or recreation core of the downtown area, as this would provide workers a quick getaway from the business of a typical workday. Locating the stadium in such an area would also allow workers a quick two or three block walk to the ballpark after work to enjoy an evening game, and provide the opportunity for other amenities such as retail or commercial services.

²¹ (Chapin)

Good Urbanism

Another important selection criterion is the stadium's location within what can be considered good urbanism. But what really is good urbanism? Many have described and written about what they consider this. Edmund Bacon, John Barnett, and Christopher Alexander appropriately sought to redevelop urban centers, provide public space and provide mixed uses, yet all three developed large master plans that used idealized typologies and design. While all valid, these ideas did not address the small scale composition. Kevin Lynch, an urban planner, outlines seven points as his theoretical framework for an urban strategy: (1) vitality, (2) fit, (3) sense, (4) access, (5) control, (6) efficiency and (7) justice.²² While these points are more generic in terms, they, in addition to those mentioned above by Bacon, Barnett, and Alexander, encompass the framework on which the New Urbanist ideals were formed.

New Urbanist standards build upon the aforementioned ideas by implementing more stringent design parameters. New Urbanism addresses a variety of scales, ranging from the region down to the individual building. Its core ideas promote walkable, human-scaled neighborhoods; mixed-use; connectivity; shared public space; and sustainability.²³ At the regional level, some important points that tie into my project are the promotion of infill development, new developments that blend with the existing urban pattern,

²² (Kaliski 97-98)

²³ (Congress for New Urbanism)

the introduction of mixed-use development and re-development, and transportation alternatives (transit, pedestrian, bicycle) that maximize access and mobility throughout the region. The next level, which comprises neighborhoods, districts, and corridors, also has several principles that apply to my thesis. These include providing the many activities of daily living within walking distance; appropriate building densities and land uses within walking distance of transit stops; concentrations of civic, institutional, and commercial activity embedded in neighborhoods and districts; and a range of public open space spread throughout the neighborhoods.²⁴

All of these core ideas reiterate the type of location in which I am pursuing. I feel it is extremely important to look to cities which have begun to develop its downtown areas in such a way in order to have the necessary pieces to facilitate the longevity of the stadium development. I also realize that the ideas brought forth by the Congress for the New Urbanism as well as prior urban designers do not address all of the issues that comprise successful downtown areas and, as such, should only be observed as ingredients that make up the whole.

Amenities

In order to provide its users with other opportunities for activities, the stadium would provide quick and easy access to other amenities within the immediate area. Locating the stadium within a quarter to half a mile to other

²⁴ (Congress for New Urbanism)

amenities – places to eat, shop, entertain, and stay – within its context will help sustain the economic viability of the facility.

Public Transportation

Public transportation is also an important factor for locating the proper site. Multiple forms of public transportation (light rail, metro, buses, and shuttle services) will be pertinent for providing access to the stadium. In addition, multiple arrival and departure locations will help to accommodate for the movement of large numbers of people. These forms of transportation will help to maximize access to and from the stadium and also promote connectivity at the city and regional levels.

Pedestrian & Vehicular Movement Patterns

Movement patterns to and from the stadium will also be an important selection factor. The flow of vehicular traffic to and from the stadium would best be served by primary roads into the downtown area, rather than secondary and tertiary streets. One or more accessible routes that can support large numbers of vehicles on any given day will help to alleviate the stresses on the roadways.

Additionally, it will be important to locate the stadium within an area that is pedestrian friendly. Such an area would allow for easy access to public transportation as well as other parts of the downtown area. It would also provide efficiency in moving large numbers of people.

Developable Area

The site on which the stadium is located would provide enough space to support both stadium and city functions. In many ballparks the recommended developable area is around fifteen to twenty acres. The stadium functions should have reasonable space around its periphery to provide for the additional program which serves the community.

Why Tampa?



Fig. 3.1 – Tampa Bay Area Population Density in 2000. White dashed circles show 5 and 10 mile radii respectively. St. Petersburg has at least half of its land mass within the bay area whereas Tampa is surrounded by land.

Despite being located within the General Urban Core on the Urban Transect, Tropicana Field, the Tampa Bay Rays existing stadium, has been under much scrutiny in recent years. Some have gone as far to say that Tropicana Field is the worst of all of professional baseball. Criticism has been drawn from several issues: the four catwalks which hang from the ceiling, the bullpen locations, the warehouse-like interiors and the current location. The latter of these, location, has resulted more so in the Rays current difficulties.

Despite the Rays ability to field a winning ball club, the team has experienced a drastic drop in attendance. According to Drew Lamar, “anyone who has spent any time in the Tampa Bay area understands the geographical relationship between Tampa and St. Petersburg, which sits about 20 minutes west of Tampa, just across the Bay. The problem is that the majority of expansion for the area is happening directly north and east of Tampa, making the trip to [Tropicana Field] closer to 45 minutes. Factor in typical 7 p.m. game times with rush-hour traffic and we're looking at a one-hour drive to get to a baseball game. One hour to drive to a game means one hour to drive home, and for a weeknight game people aren't spending their money to be out until almost midnight for a baseball game. It's just not happening, no matter how fanatic people are about the Rays.”²⁵ Recently, Major League Baseball Commissioner Bud Selig called out Rays’ fans for the consistently low attendance, calling it “inexcusable.” “To study the attendance figures every day and see that they're 29th in attendance, it's inexcusable,” Selig

²⁵ (Lamar)

said. "Nobody can defend that. This is a very competitive baseball team. The average Major League attendance is between 31,000 and 32,000. And if my memory is serving me well, Tampa Bay's attendance is around 19-something. It's disappointing."²⁶ Selig, and Rays' executives have continually called for the Rays to move out of Tropicana Field and into a much better facility and location to sustain their operations.

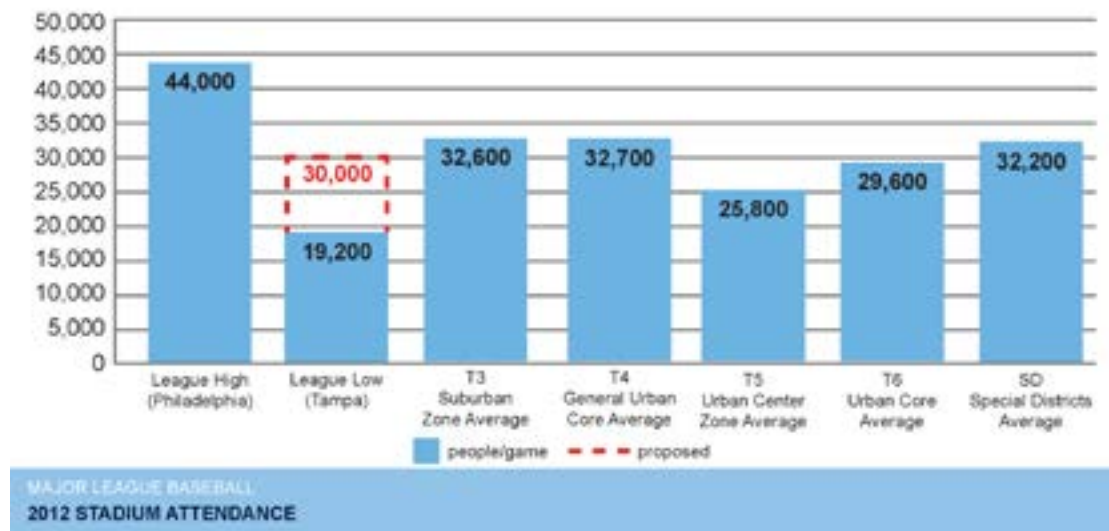


Fig. 3.2 – 2012 MLB Stadium Attendance. Data collected from ESPN.com

²⁶ (Bauman)

Chapter 4: Site Analysis – Downtown Tampa



Fig. 4.1 – Downtown Tampa, Florida. aerial with site boundary by author. (Google Maps)

Site History

The immediate site has had several prior developments. Prior to 2000 the site consisted of five structures – two parking garages, an attorney’s office and two unknown structures. The rest of the approximately eighteen acre site is surface parking. By May 2002 the two unknown structures had been demolished and converted into additional surface parking. Still existing are the Whiting Street Garage at the intersection of Marion and Whiting Street, an unnamed garage along Florida Avenue and Washington Street, and Alley, Clark & Greiwe Attorneys at Law along Pierce and Washington Street.



Fig. 4.2 – Immediate Site, Tampa, Florida. aerial with site boundaries and current building locations by author. (Bing Maps)

Site Description

The site is located within Tampa’s Central Business District. Located at the southern end of Marion Street between Florida Avenue and Jefferson Street, it is comprised of approximately ten city blocks. The north side of the site is capped by Washington Street while the southern boundary is formed by Brorein St and I-618 Selmon Expressway.

The site is relatively flat with a change in elevation of approximately three feet from the northern edge to its southwestern corner. The site measures approximately 856 feet along its western side, 1,098 feet along its northern side and 615 feet along its eastern side. The southeastern part of the site is curved and aligns itself to the Selmon Expressway while the southeastern half is aligned to Brorein Street and is approximately 540 feet in

length. Vegetation exists predominately as street trees. Other trees are found between the Florida Avenue and Morgan Street block of the site. All four of the northernmost blocks of the site are entirely paved as is the southwestern most block. The rest of the site is a combination of paving stones, sand, gravel and small patches of grass.



Fig. 4.3 – Site photograph by author (August 2012)

Contextual Development

The city of Tampa is surrounded on three of its sides by water, the Hillsborough River to the west, the Ybor Channel to the east and the Garrison Channel to the south. It is comprised of the Gateway District to the northwest, the Channel District to the east, the Riverfront District to the southwest, the

Cultural Arts District to the west, and the Central Business District. Some of the primary amenities include the Center for the Performing Arts, located along the Hillsborough River in the Cultural Arts District; The Florida Aquarium, located in the Channel District along the Ybor Channel; the Channelside Bay Plaza, located along the Garrison Channel; St. Pete Times Forum which is just south of the Selmon Expressway; and the Tampa Convention Center, located at the southwestern most point.



Fig. 4.4 – Amenities & Points of Interest. Base image provided by the City of Tampa. Alterations made by author.

Directly west of the immediate site is the University of South Florida's Center for Advanced Medical Learning and Simulation (CAMLS) and the Old Fort Brooke Municipal Parking Garage, a ten story parking garage. The One Tampa City Center sits just north of the garage and directly northwest of the site. It is thirty-nine stories tall and the third tallest skyscraper in Tampa. To the north of the site is the Suntrust Financial Center, a thirty-six story skyscraper (the fourth tallest in Tampa). Also north of the site at the intersection of Morgan, Jackson and Washington is a small three story building; here is Gilligan's Hideaway, a small restaurant; The UPS Store; Lonnie's Sandwiches; and other office space tenants. The Morgan, Pierce, and Washington block just north of the site consists of a small storage building and three attorney offices. The Pierce, Jefferson, and Washington cross street block just north of the site is comprised of an electrical grid and surface parking. Directly northeast of the site is the Sam Rampello Downtown Partnership School. The block just east of the site at the intersection of Washington, Whiting, and Jefferson Streets has three small buildings – Allegra Print & Imaging, the Deep Lounge bar, and an unleased office building.

Accessibility & Parking

Accessibility to the site is well supported by Tampa's existing transit-oriented development. This includes near-direct access via primary north/south arterials and the Selmon Expressway. The Marion Transit Center, located a fifteen minute walk north of the site along Marion Street serves as

the primary distribution point for the Hillsborough Area Regional Transit (HART) system. HART is comprised of thirty-two local routes and thirteen express routes which service the Tampa International Airport as well as all of Hillsborough County. This network utilizes almost two hundred buses and thirty vans. A trolley system of two routes and nine rubber-tired trolleys serves Downtown Tampa exclusively. Finally, the TECO Line Streetcar System provides a direct connection to historic Ybor City, located northwest of Tampa. Tampa also promotes a rideshare program for those arriving to the city via vehicle.²⁷

As has been described, the site is surrounded by several parking garages and various lots, all which offer approximately 12,000 parking spaces. Of this number, 11,000 are located in garages and lots while an additional 1,000 spaces are metered on-street spaces.²⁸ These numbers account for the spaces taken away by the proposed development.

²⁷ (Hillsborough Area Regional Transit Authority)

²⁸ (City of Tampa, Florida)



Fig. 4.5 – Public Transportation. Base image provided by the City of Tampa. Alterations made by author.



Fig. 4.6 – Vehicular & Pedestrian Access. Base image provided by City of Tampa. Alterations made by author.

Summary

The Central Business District in Downtown Tampa is an ideal location for the placement of the proposed stadium as it offers several promising factors. First, the block sizes within Tampa are very reasonable, ranging from two hundred to two hundred and fifty feet in length. The streets are very walkable with the inclusion of street trees for shading, paving patterns, and a gracious sidewalk width. The streets are also narrow, allowing for quick exchanges from one side of the street to the other. Approximately 50,000 people work in Tampa and 2,000 people reside there, providing eyes on the street throughout the day. Additionally, services are local. Tampa offers access to a hospital, police and fire stations, city hall, educational establishments, as well as other services. It also provides a variety of public transportation systems, making accessibility particularly easy. The city also offers an ample amount of parking through garages, lots, and street parking. Finally, Downtown Tampa provides the opportunity for space for storefront retail as the street level is comprised primarily of commercial-retail spaces.

Tampa also is inhibited by a few factors as well. The downtown area is desperately lacking in residential space. The primary residential area within Tampa resides outside of the Central Business District in the Channel District. Very few apartment buildings are currently near the business district. Secondly, the downtown area has a small number of retail establishments. These predominately exist in the Cultural Arts District and the Channel District. Additionally, most of the amenities are dispersed around the

periphery of Tampa near the bay area. Finally, Downtown Tampa is sea of parking. In order to be sustainable and bring in additional opportunities for the city, more density will be needed.

Chapter 5: A Mixed-Use Stadium

*If a ballpark is part of a larger economic revival effort, it can spur or quicken the pace of other commercial development and housing.*²⁹

-Oakland Tribune, 2002

Design Objective & Goals

The objective of the mixed-use stadium is to add to the urban population by place-making. The primary goal is to increase the amount of mixed-use development offered within the stadium's interstitial zone. The second goal is to increase pedestrian accessibility to the stadium. Next, it is important to better link the stadium to public transportation opportunities within the downtown areas. Finally, an increased utilization of the field during non-gamedays would help to serve the stadium outside of the regular season attendance.

Urban Scale Program & Planning

At an urban scale the proposed stadium would offer participation on a variety of levels. These could include office spaces, commercial-retail spaces, entertainment venues, and residential. This mixed-used development would offer a variety of opportunities for the downtown area, increasing its potential as usable space for both the stadium and the city. Additionally, the proposed change in the interstitial zone would provide a strengthened interaction between the stadium and the existing urban fabric. No longer would the

²⁹ (Gammon and Burt)

stadium be disengaged from its context, but it would allow for porosity and a continuous movement system that ties directly into the concourse and engages the existing context. The concourses would then have the opportunity to participate in the urban fabric as development could align to both the inner “street” (concourse) and the exterior street (existing fabric). Finally, the proposed stadium would provide a correlation between the main spaces along the major thoroughfare, resulting in a defined “place” along the path.

Stadium Scale Program & Planning

The stadium scale offers the opportunity for stadium programming to function adjacent to and alongside city programming. Stadium needs such as restrooms, health stations, security, etc. would be intermingled among the urban fabric allowing for a continuous public access outside of the typical gameday. These spaces would function similarly to the way a mall does and offer a supporting function to the rest of the programming. In addition, the circulation within the stadium would offer a continuation of the primary paths of travel into the stadium and not impede the accessibility to programmed areas.

Chapter 6: Precedent Analysis

Oriole Park at Camden Yards

Oriole Park at Camden Yards is located within the Urban Core (T6) on the Urban Transect. It is positioned just west of the inner harbor and within the major core of downtown Baltimore. Many seats within Camden Yards maintain a visual connection with the Baltimore skyline. However, recent developments in the area have blocked some of these views. The ballpark also was designed to incorporate the B&O Warehouse into the planning of the park and grounds. In this regard, Camden Yards is quite successful at knitting itself into the existing fabric of the city. The street that is created by the separation of the stadium and warehouse is named Eutaw Street and serves as a pedestrian only street. This street is lined with shops and restaurants and provides views into the stadium so as the visitors can catch a glimpse of the field. Camden Yards is also served by the Baltimore Light Rail, which provides a direct service to the BWI Airport, and the MARC commuter rail, which connects Baltimore regionally to Washington D.C. The stadium is also served by the Maryland Transit Administration. Despite fourteen straight seasons with a losing record prior to this year's resurgence the Orioles have continually brought in fans to the ballpark, averaging a little over 26,500 fans per game, good for 20th out of 30 teams.



Fig. 6.1 – Oriole Park at Camden Yards, Baltimore, MD. aerial of stadium within its context. (2012) (Bing Maps)



Fig. 6.2 – Oriole Park at Camden Yards, Baltimore, MD. map of stadium within its context. (2012) (Bing Maps)

Coors Field

Coors Field is located within the Urban Center Zone (T5) on the Urban Transect. The field is positioned just north of the downtown area. When Coors Field was opened in 1995, its impact on Denver and the surrounding area was substantial. It provided a spring board for physical development in the area: housing units doubled and retail and restaurant development experienced a similar boom. Coors Field acted as a catalyst and was the centerpiece for an entire downtown redevelopment plan. The surrounding density and urban population has also been significant to the stadium's success. Approximately 99 percent of Denver County residents live within 10 miles of downtown.³⁰ Coors Field is also serviced well by public transportation and even offers its fans bicycle parking. Despite nine losing seasons since 2001, the Rockies have continually kept a large fan base, averaging nearly 32,500 fans per game this year, and ranking 13th out of 30 teams.

³⁰ (Jaffe)



Fig. 6.3 – Coors Field, Denver, CO. aerial of stadium within its context. (2012) (Bing Maps)



Fig. 6.4 – Coors Field, Denver, CO. map of stadium within its context. (2012) (Bing Maps)

Fenway Park

Fenway Park is located within the General Urban Core (T4) of the Urban Transect. The field is located approximately three miles from Downtown Boston along the Massachusetts Turnpike. Fenway Park is very site specific as its field dimensions have a direct correlation to its block size, paying homage to the Jewel Box era ballparks. The ballpark is embedded within its block, and its facades seem to represent anything but a typical baseball stadium. As a result, Fenway blends in quite well to its context, appearing more so as a warehouse than stadium. The stadium is surrounded by restaurants, bars, and retail and civic buildings. Fenway is served by the Massachusetts Bay Transportation Authority Green Line subway as well as by the Framingham/Worcester commuter line trains. Regardless of winning and losing seasons, the Red Sox are continually near the top of the standings in average fans per game. 2012 was no different as Fenway Park averaged 35,500 fans per game, ranking 8th of 30 teams.



Fig. 6.5 – Fenway Park, Boston, MA. aerial of stadium within its context. (2012) (Bing Maps)

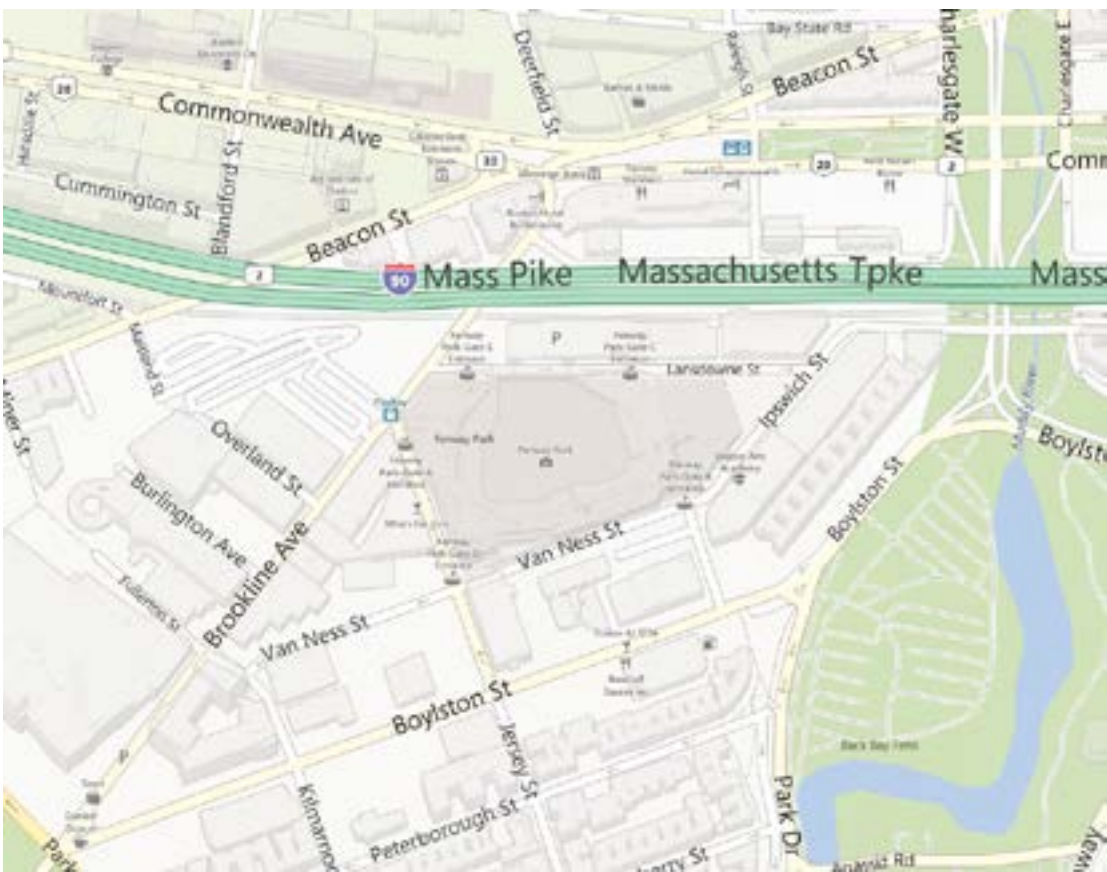


Fig. 6.6 – Fenway Park, Boston, MA. map of stadium within its context. (2012) (Bing Maps)

Chapter 7: Re-interpreting the Interstitial Zone in Tampa

Design Approach & Strategies

The ultimate objective for this thesis was to develop the interstitial zone of the proposed stadium so that it works in conjunction with a prototypical stadium. The seating bowl and field were not designed in this thesis, only the interstitial zone adjoining the seating bowl. The seating bowl and its respective field were selected through an analysis of existing stadiums which fit within the proposed seating capacity of 35,000 people. This was achieved through three primary means: the proposed and planned developments around the site; by addressing the condition of the multi-level building on a flat site; and by urban and public spatial development. The proposed stadium would also elevate the usage rate from 13% to 30% during a typical month.

Field Orientation & Position

Optimal baseball field orientations call for home plate to face in an East Northeast direction. Over half of Major League Baseball stadiums are aligned to this orientation while others are oriented North (six), Northwest (one), or Southeast (six). Various reasons have allowed these stadiums to be oriented as such: owner's boxes, prevailing winds, open or closed stadiums, significant contextual features, etc. The proposed stadium for Downtown Tampa is oriented along a Southeast axis. The primary takes advantage of the main

entrance along Marion Street as well as reinforces development along the western and northern boundaries of the stadium.

Highway Boundary

Four strategies were explored for accommodating the Selmon Expressway, located just south of the site. The first of these strategies is to leave the highway as is, developing just within the site boundary. The second strategy is denoted as poche, which calls for development underneath the highway and brings the stadium edge much closer to the highway. The third strategy is referred to as the shroud. Essentially it encases the highway, allowing for development to come directly up to the highway with opportunities for elevating it above the highway as well. The final strategy is a take on the “Big Dig” in Boston. This scheme takes into account the existing street grid above and buries the highway, so as it does not affect the flow of the city and provides an uninterrupted connection to the waterfront.

For the purposes of this thesis, the stadium was designed by keeping the highway “as is.” Because this thesis deals specifically with programming the interstitial zone, this part of the project was meant to serve the purpose of future master planning. As a final proposal, the highway would be buried, offering more porosity and a much better connection to the waterfront.

Urban / Public Spatial Development

After studying the typical stadium edge in regards to its block, a much different proposal was designed. Taking into consideration the existing street grid, the stadium parti was altered to offer a continuation of all the streets through the bulk of the stadium. This led to a joining of the existing street grid to the “street” within the stadium. The split of the bulk allows for a continuous movement system and ultimately brings the city within the stadium.

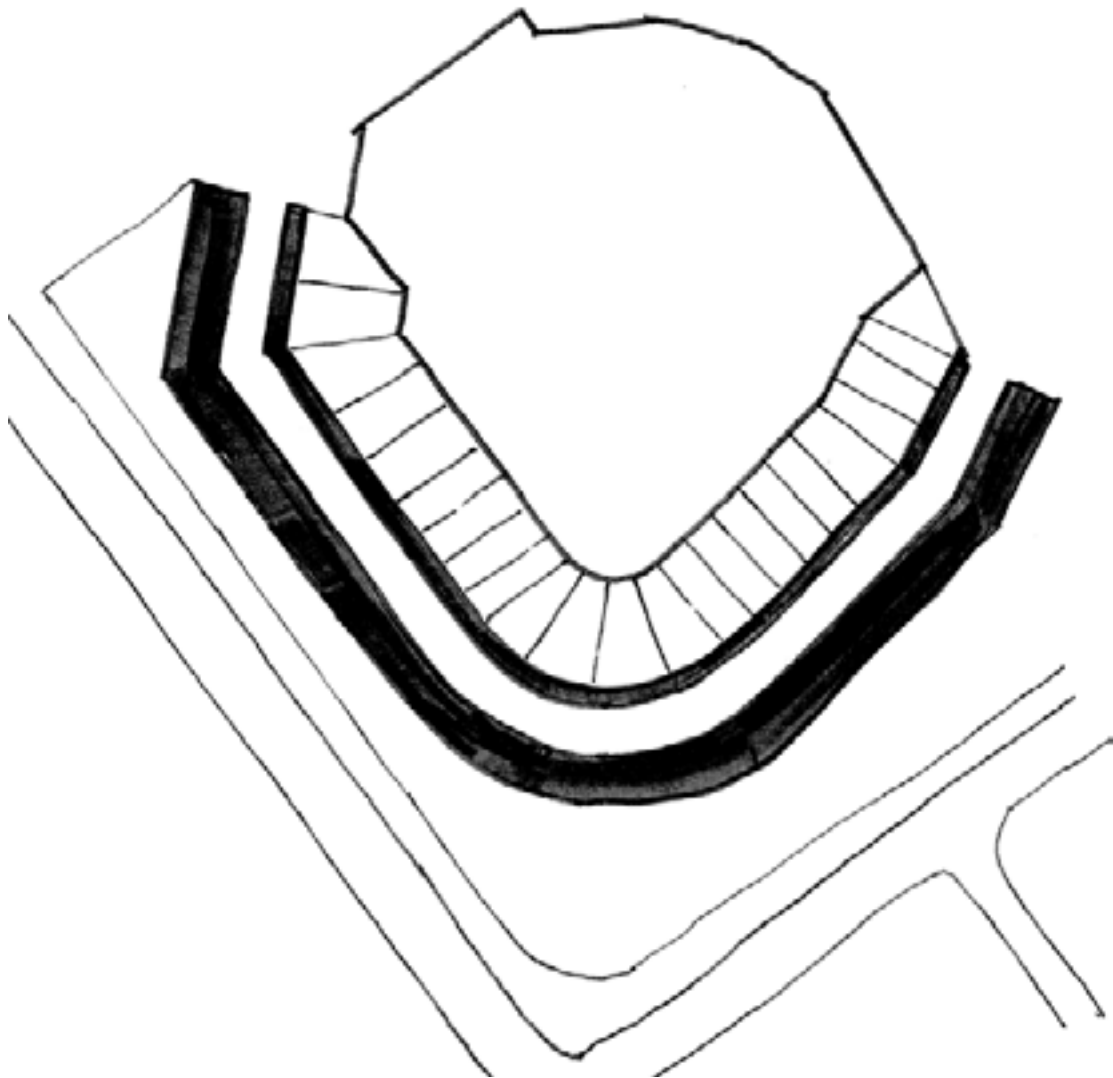


Fig. 7.1 – Typical Stadium Parti – Disengaged (image by author)

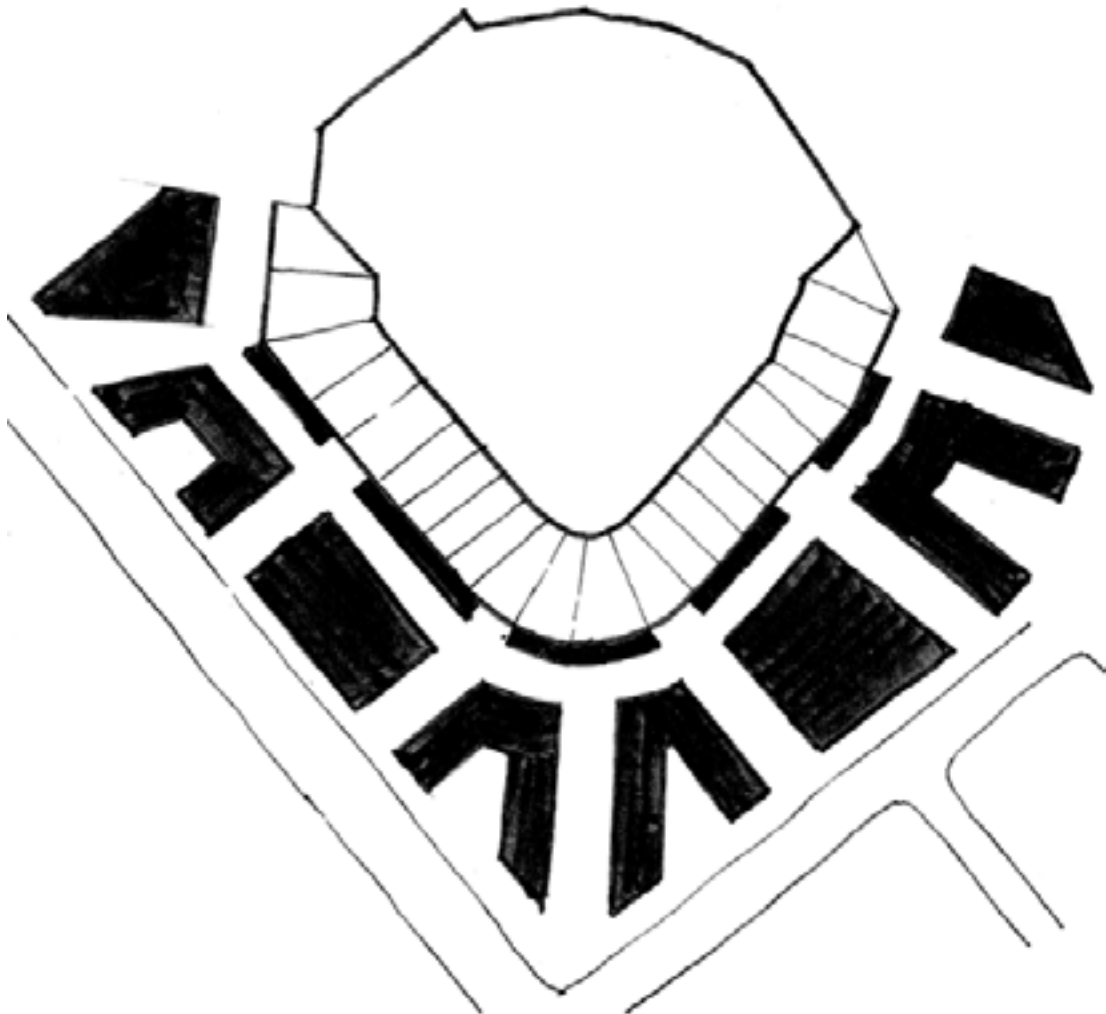


Fig. 7.2 – Proposed Stadium Parti – Engaged (image by author)

Sectional Development

The ballpark was analyzed in section to understand the relationships between the stadium bowl section and the proposed development. The first of these was daylighting. Typical ballpark sections have continuous slabs for each of the concourses. The proposed model is split at strategic locations, allowing for light wells and daylighting to reach the main concourse.



Fig. 7.3 – Typical Concourse Levels – Continuous (image by author)

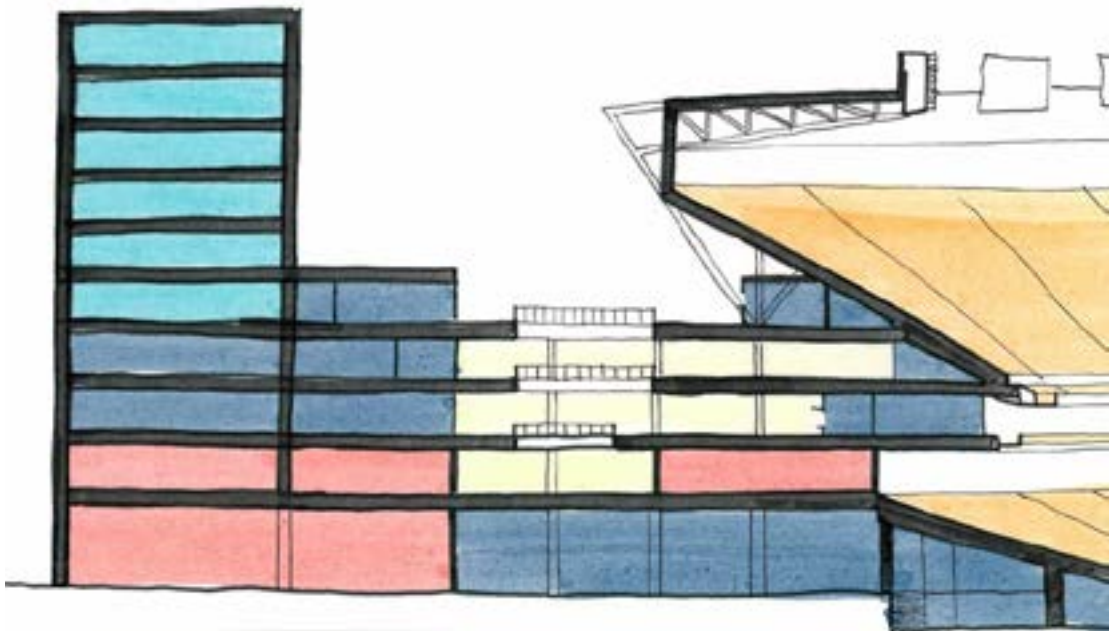


Fig. 7.4 – Proposed Concourse Levels - Porous (image by author)

Secondly, the stadium was analyzed in section with respect to the defined levels in Tampa. It was established that the water table was approximately sixteen feet below the ground level. The first level retail reached a height between ten to fifteen feet while the second level retail ranged between twenty to twenty-five feet. Additionally, a level of bulk was found to be within a fifty foot range of eighty-five feet to one hundred and thirty-five feet. This level of bulk was established by the top portion of the buildings before the tower element appeared.



Fig. 7.5 – Defined Levels of Tampa (image by author)

These defined levels were then overlaid onto existing stadium sections that fell within the stadium capacity of around 35,000 people. Three stadiums, Kauffman Stadium, Target Field, and PNC Park were chosen as possibilities for the prototypical stadium which was to be inserted for use in the project. Each stadium was aligned to the levels to determine feasibility of integration. Ultimately, the PNC Park section was chosen as its levels were most easily aligned to that of Tampa's.



Fig. 7.6 – Kauffman Stadium Section with Levels of Tampa Overlay. Section obtained from outside source with alterations by author.



Fig. 7.7 – Target Field Section with Levels of Tampa Overlay. Section obtained from outside source with alterations by author.



Fig. 7.8 – PNC Park Section with Levels of Tampa Overlay. Section obtained from outside source with alterations by author.

Chapter 8: Design Solutions and Conclusions

Site Strategies

The main concourse level of the stadium aligns to the top of Downtown Tampa's first level retail area forms a Piano Nobile for the stadium.

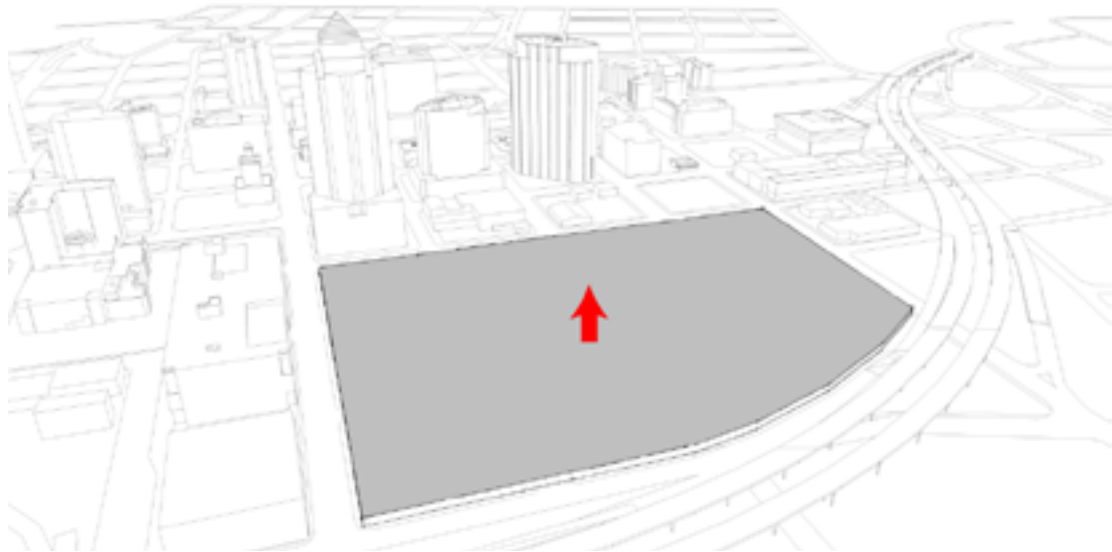


Fig. 8.1 – Site Development – Piano Nobile. Image by author.

The Piano Nobile was then split to emphasize the continuation of the main thoroughfare connecting the stadium to the Whiting Street Transit Center.

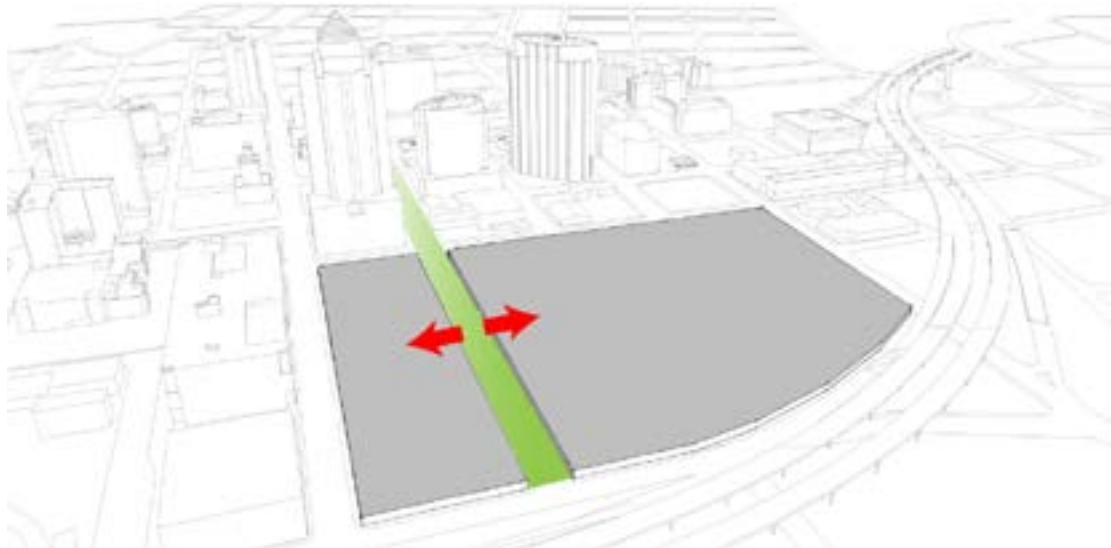


Fig. 8.2 – Site Development – Boulevard. Image by author.

The stadium orientation and placement allows for commercial-retail along the boulevard as well as along Washington Street to the north.

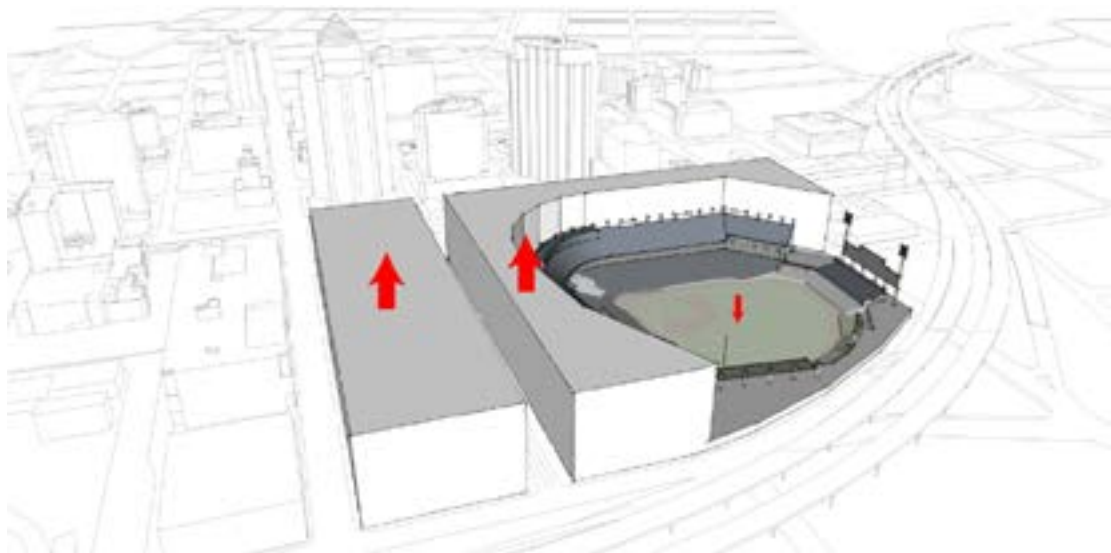


Fig. 8.3 – Site Development – Stadium Placement. Image by author.

The stadium bulk and adjacent development were then split to promote accessibility and provide a direct connection to the main concourse.

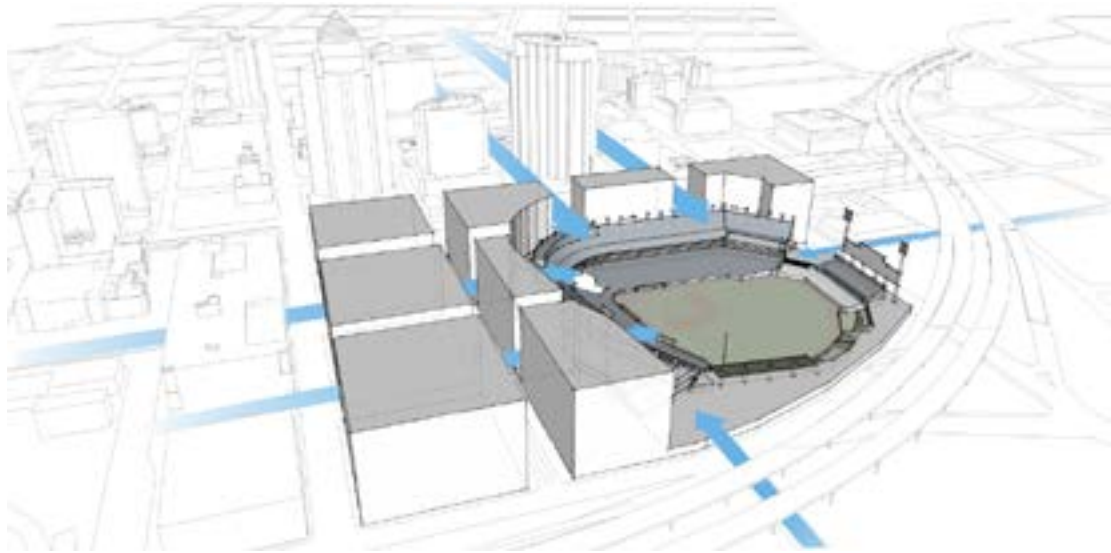


Fig. 8.4 – Site Development – Street Grid. Image by author.

The first level of the ‘tower’ portion of each building is defined by the bulk found in Downtown Tampa.

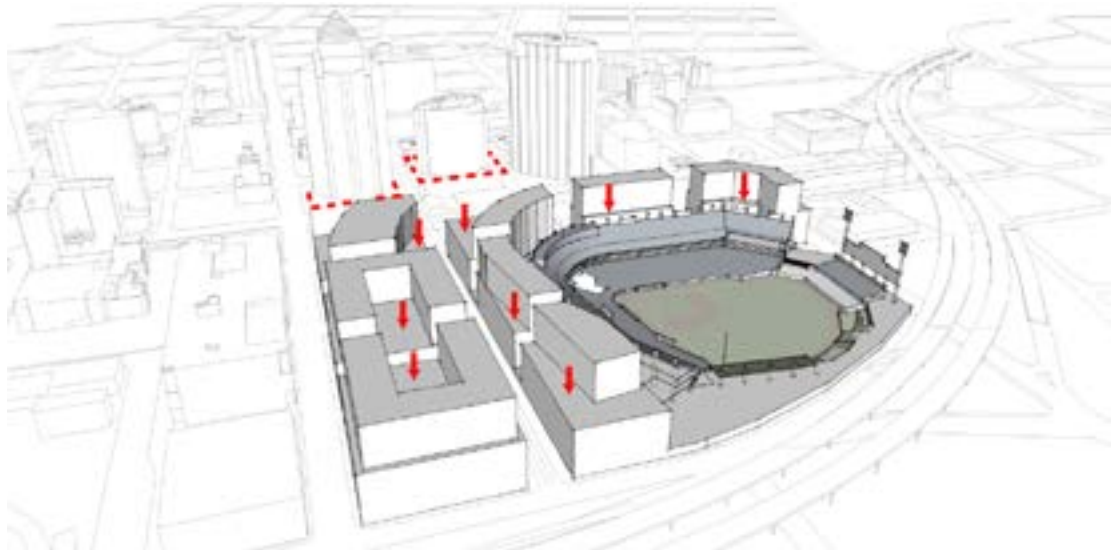


Fig. 8.5 – Site Development – City Bulk. Image by author.

The two apartment buildings were splayed to provide sightlines to the stadium and the office building was split to provide a continuous sightline of Downtown Tampa from seating in the outfield.

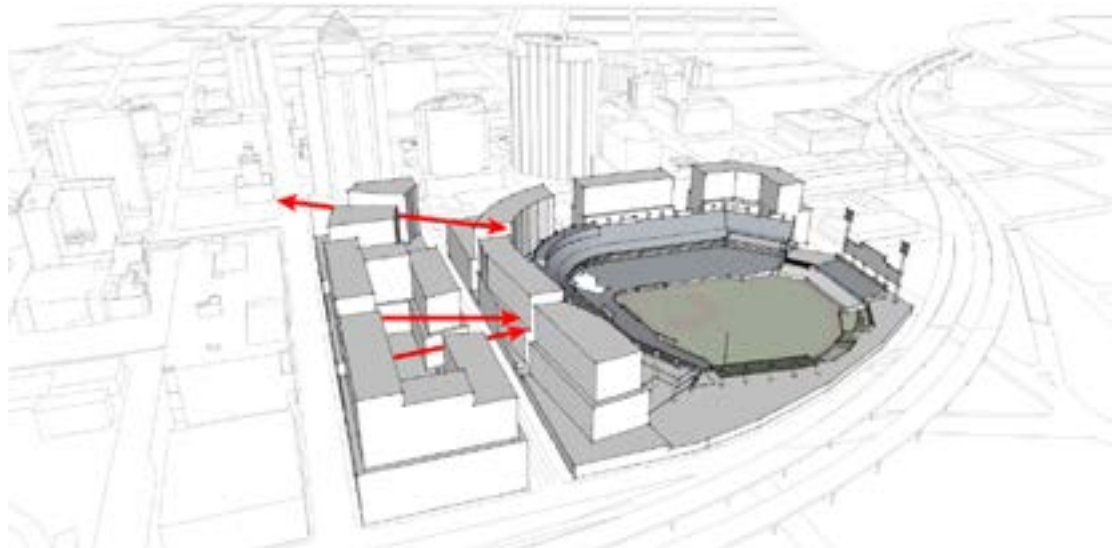


Fig. 8.6 – Site Development – New Development Sightlines. Image by author.

At the beginning of the boulevard, the head of the stadium is defined by a public plaza supported on either side by ticketing booths. The entrance and ticketing areas are shaded by arbors, which also help to enclose the inner plaza, much like the loggia at St. Peter's at the Vatican does. This plaza leads directly to a ballpark museum at street level or continues to the Piano Nobile via stairs which continue along the same path defined by the inner arbors.



Fig. 8.7 – Boulevard Perspective. Image by author.

Along the boulevard, the stadium program includes spaces for retail and restaurants. In addition, a hotel lobby is positioned at the end of the street. Directly across from the museum is an office building. The other two blocks on the opposite side of the boulevard have been formed by the intersecting streets. These blocks are each comprised of apartment complexes with commercial-retail along the boulevard and podium parking buried within.

Along Washington Street to the north are additional retail and restaurant spaces. In addition, at the Morgan Street entrance an opening provides access to a bar which is situated directly behind home plate and offers one of the best views of the field. At the eastern side along Jefferson Street is a mechanized parking structure.



Fig. 8.8 – Street Level. Image by author.

A second level of retail, tied directly to the spaces below along the boulevard and Washington Street, engages the main concourse. These spaces are then offset next to the stadium bowl by additional development, creating an additional street for the users to occupy. Stadium program such as restrooms, security, and health services are dispersed throughout the inner development. A large open space at the southern edge of the stadium offers users a gathering space.



Fig. 8.9 – Main Concourse/2nd Level Retail Plan. Image by author.

The club level offers additional restaurants and retail. It also marks the separation of levels between the development around the stadium and that within. The development around the periphery of the stadium is now residential above each of the prior retail and restaurant spaces, team office spaces above the museum, and a hotel. The adjacent development consists of the office tower, and two apartment buildings.



Fig. 8.10 – Club Level. Image by author.

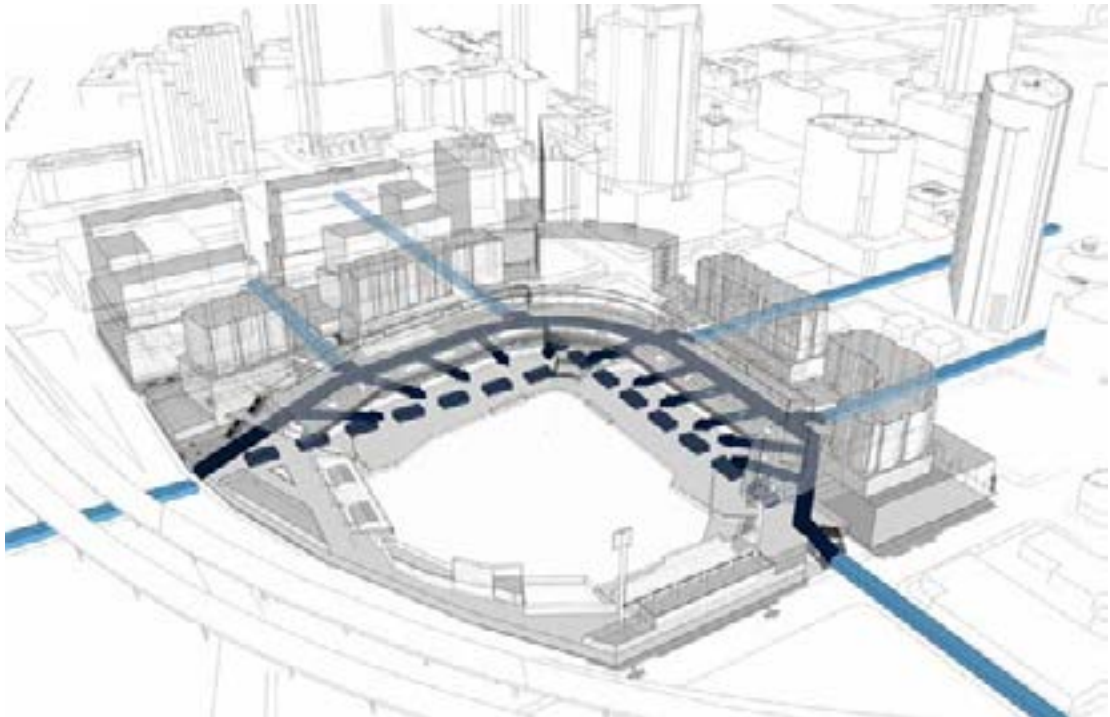


Fig. 8.11 – Street-Main Concourse Connectivity. Image by author.

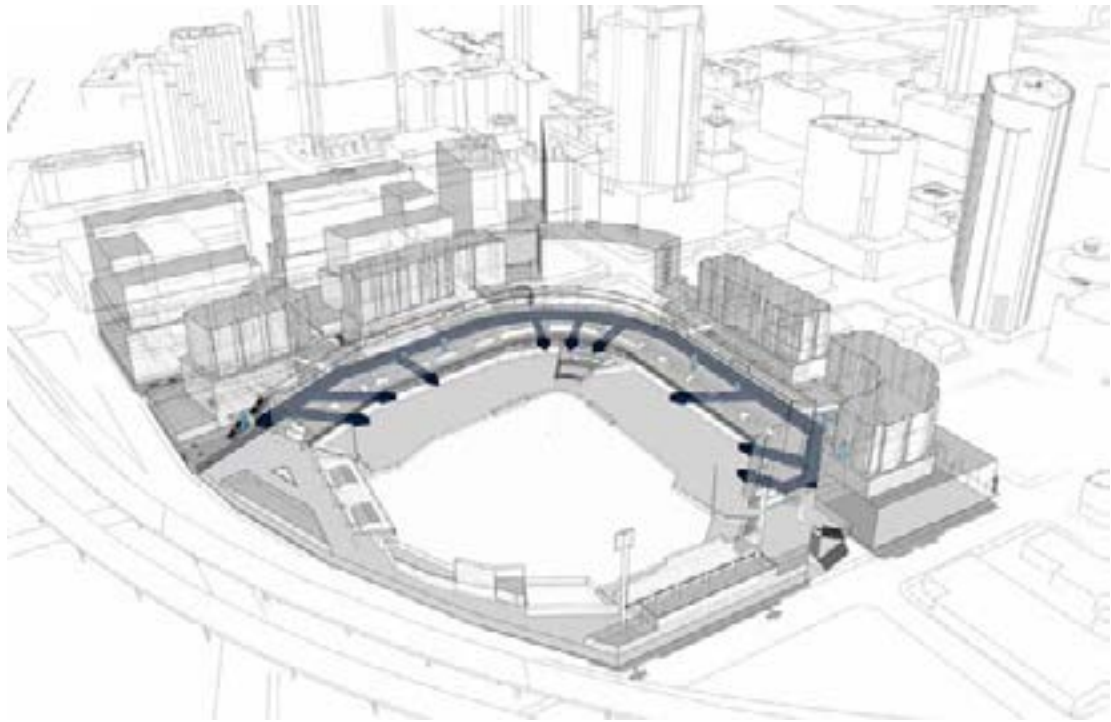


Fig. 8.12 – Club Level Connectivity. Image by author.

Stadium Strategies

Vectors were used to establish sightlines between the entrance points and the batter and pitcher. These vectors were then overlaid and the areas between the overlaps define programmable space. This inner bulk was then split to allow for porosity and connectivity to the seating bowl.



Fig. 8.13 – Concourse Planning – Batter Vector. Image by author.



Fig. 8.14 – Concourse Planning – Pitcher Vector. Image by author.



Fig. 8.15 – Concourse Planning – Massing. Image by author.



Fig. 8.16 – Concourse Planning – Seating. Image by author.



Fig. 8.17 – Evening Concert Perspective. Image by author.



Fig. 8.18 – Main Concourse North Perspective. View framed for both pitcher and batter. Image by author.



Fig. 8.19 – Main Concourse West Perspective. View toward south. Image by author.



Fig. 8.20 – Main Concourse West. View framed for batter only. Image by author.



Fig. 8.21 – Whiting Street Section. Image by author.



Fig. 8.22 – Morgan Street Section. Image by author.



Fig. 8.23 – Pierce Street Section. Image by author.



Fig. 8.24 – Homeplate Section. Image by author.

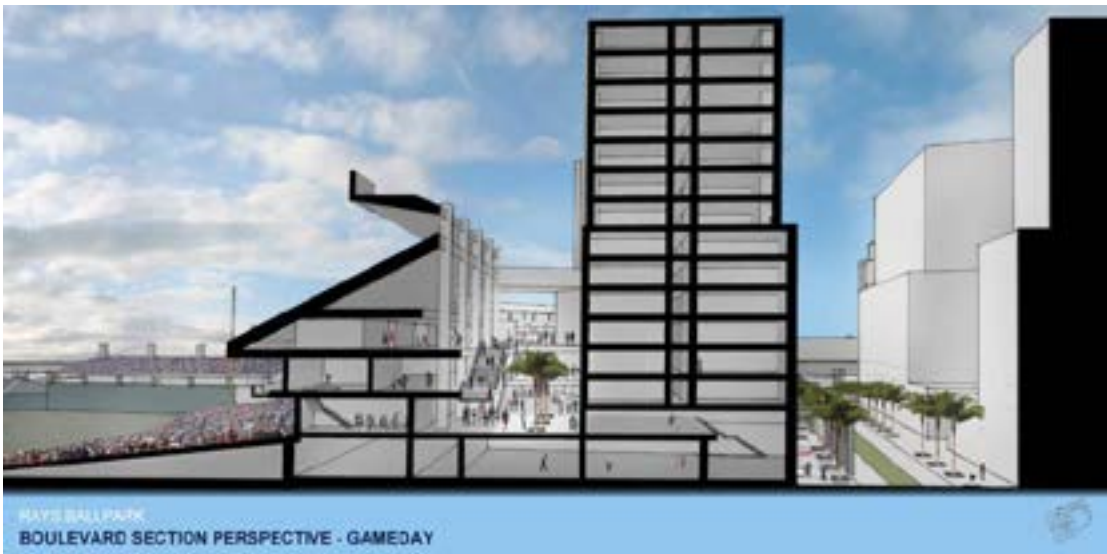


Fig. 8.25 – Boulevard Section – Gameday. Image by author.



Fig. 8.26 – Boulevard Section – Non-Gameday. Image by author.

A visual connection is maintained from the city to the stadium and well as from the stadium to the city along each of the entrance streets.



Fig. 8.27 – Morgan Street Entrance Perspective. View towards city. Image by author.



Fig. 8.28 – Morgan Street, Kennedy Street Intersection Perspective. View towards stadium. Image by author.



Fig. 8.29 – Boggs Street Entrance Perspective. View towards apartments. Image by author.

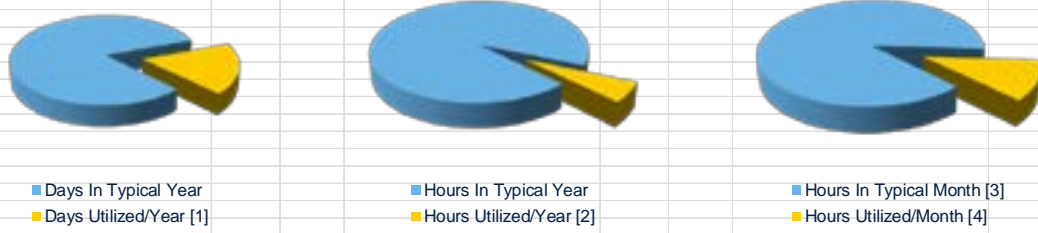


Fig. 8.30 – Boggs Street Apartment Perspective. View towards stadium. Image by author.

Appendix A – Facility Usage/Year

Typical MLB Stadium Usage/Year

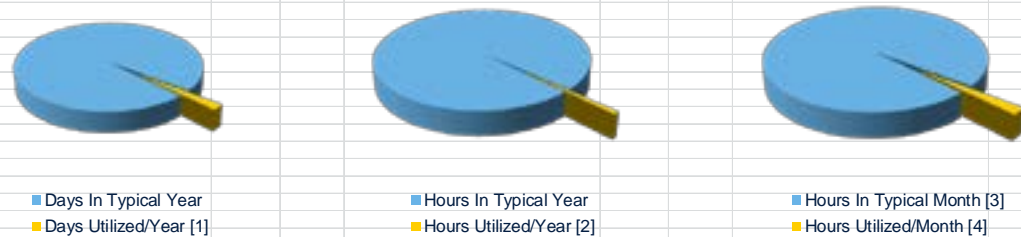
Days In Typical Year	365	Hours In Typical Year	8760	Hours In Typical Month ^[3]	720
Days Utilized/Year ^[1]	81	Hours Utilized/Year ^[2]	567	Hours Utilized/Month ^[4]	95
Percentage	22.2%	Percentage	6.5%	Percentage	13.1%



¹ A typical regular season has 82 home games. Does not account for playoff games or other venues.
² A typical game is between 2.5 - 3 hours long with an additional combined 3 - 4 hours before and after games.
³ Average of 30 days/month.
⁴ Regular season April - September. Playoff games held during November. Not typically used December - March.

Typical NFL Stadium Usage/Year

Days In Typical Year	365	Hours In Typical Year	8760	Hours In Typical Month ^[3]	720
Days Utilized/Year ^[1]	8	Hours Utilized/Year ^[2]	80	Hours Utilized/Month ^[4]	16
Percentage	2.2%	Percentage	0.9%	Percentage	2.2%



¹ A typical regular season has 8 home games. Does not account for playoff games or other venues.
² A typical game is between 3 - 4 hours long with an additional combined 5 - 6 hours for before and after games.
³ Average of 30 days/month.
⁴ Regular season September - January. Playoff games held during January. Used minimally February - August.

Typical NBA Arena Usage/Year

Days In Typical Year	365	Hours In Typical Year	8760	Hours In Typical Month ^[3]	720
Days Utilized/Year ^[1]	200	Hours Utilized/Year ^[2]	1041	Hours Utilized/Month ^[4]	101
Percentage	54.8%	Percentage	11.9%	Percentage	14.1%

■ Days In Typical Year
■ Days Utilized/Year [1]

■ Hours In Typical Year
■ Hours Utilized/Year [2]

■ Hours In Typical Month [3]
■ Hours Utilized/Month [4]

¹ A typical regular season has 41 home games. Additional venues range between 100 - 175 events / year.
² A typical game is between 2 - 3 hours long with an additional combined 3 - 4 hours before and after games. Other venues range between 4 - 6 hours.
³ Average of 30 days/month.
⁴ Regular season October - April. Playoff games held May - June. Used year-long for additional venues.

Tampa Times Forum Usage/Year

Days In Typical Year	365	Hours In Typical Year	8760	Hours In Typical Month ^[3]	720
Days Utilized/Year ^[1]	150	Hours Utilized/Year ^[2]	1050	Hours Utilized/Month ^[4]	88
Percentage	41.1%	Percentage	12.0%	Percentage	12.2%

■ Days In Typical Year
■ Days Utilized/Year [1]

■ Hours In Typical Year
■ Hours Utilized/Year [2]

■ Hours In Typical Month [3]
■ Hours Utilized/Month [4]

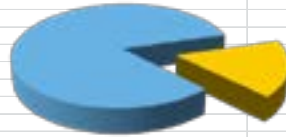
¹ Venues range between 100 - 175 events / year.
² Event range between 3 - 4 hours long with an additional combined 3 - 4 hours before and after events.
³ Average of 30 days/month.
⁴ Typically between 12 - 15 events / month.

Tampa Convention Center Usage/Year

Days In Typical Year	365	Hours In Typical Year	8760	Hours In Typical Month ^[3]	720
Days Utilized/Year ^[1]	200	Hours Utilized/Year ^[2]	1800	Hours Utilized/Month ^[4]	150
Percentage	54.8%	Percentage	20.5%	Percentage	20.8%



■ Days In Typical Year
■ Days Utilized/Year [1]



■ Hours In Typical Year
■ Hours Utilized/Year [2]



■ Hours In Typical Month [3]
■ Hours Utilized/Month [4]

¹ Events range between 100 - 200 events / year spread out over multiple days.

² Event range between 4 - 6 hours long with an additional combined 3 - 5 hours before and after events.

³ Average of 30 days/month.

⁴ Typically between 5 - 25 events / month.

Restaurant Usage/Year

Days In Typical Year	365	Hours In Typical Year	8760	Hours In Typical Month ^[3]	720
Days Utilized/Year ^[1]	355	Hours Utilized/Year ^[2]	5680	Hours Utilized/Month	473
Percentage	97.3%	Percentage	64.8%	Percentage	65.7%



■ Days In Typical Year
■ Days Utilized/Year [1]



■ Hours In Typical Year
■ Hours Utilized/Year [2]



■ Hours In Typical Month [3]
■ Hours Utilized/Month

¹ Typically open every day but Federal Holidays.

² Based on 7am - 11pm daily hours.

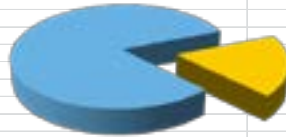
³ Average of 30 days/month.

Office Usage/Year

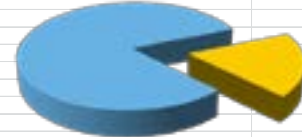
Days In Typical Year	365	Hours In Typical Year	8760	Hours In Typical Month ^[3]	720
Days Utilized/Year ^[1]	250	Hours Utilized/Year ^[2]	2000	Hours Utilized/Month	167
Percentage	68.5%	Percentage	22.8%	Percentage	23.1%



■ Days In Typical Year
■ Days Utilized/Year [1]



■ Hours In Typical Year
■ Hours Utilized/Year [2]



■ Hours In Typical Month ^[3]
■ Hours Utilized/Month

¹ Typically open Monday - Friday except for Federal Holidays.

² Based on 40 hour work week.

³ Average of 30 days/month.

Commercial and Retail Usage/Year

Days In Typical Year	365	Hours In Typical Year	8760	Hours In Typical Month ^[3]	720
Days Utilized/Year ^[1]	302	Hours Utilized/Year ^[2]	2288	Hours Utilized/Month	191
Percentage	82.7%	Percentage	26.1%	Percentage	26.5%



■ Days In Typical Year
■ Days Utilized/Year [1]



■ Hours In Typical Year
■ Hours Utilized/Year [2]



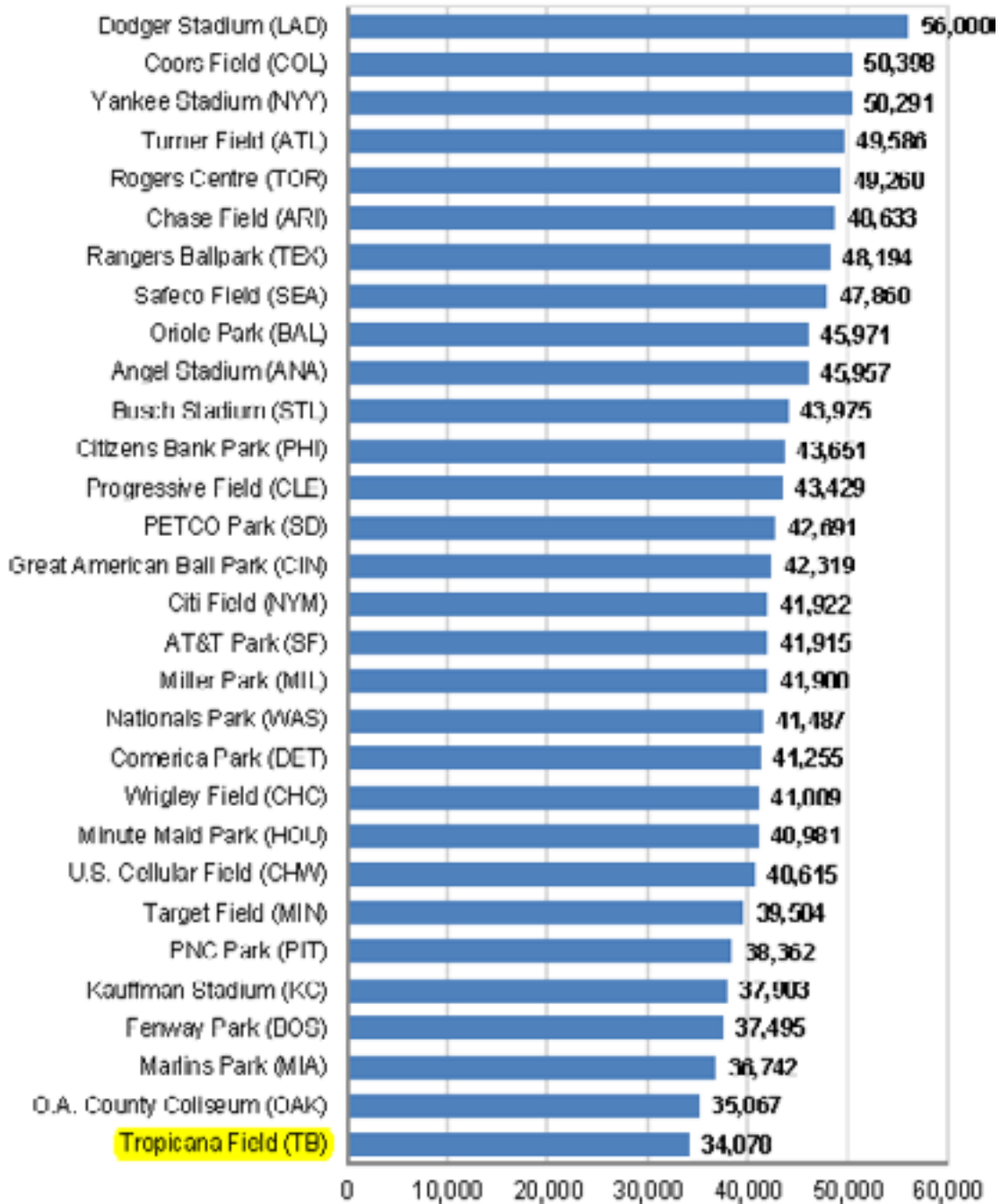
■ Hours In Typical Month ^[3]
■ Hours Utilized/Month

¹ Typically open Monday - Saturday except for Federal Holidays.

² Typically 8 hour days Monday - Friday and 4 hour days on Saturdays.

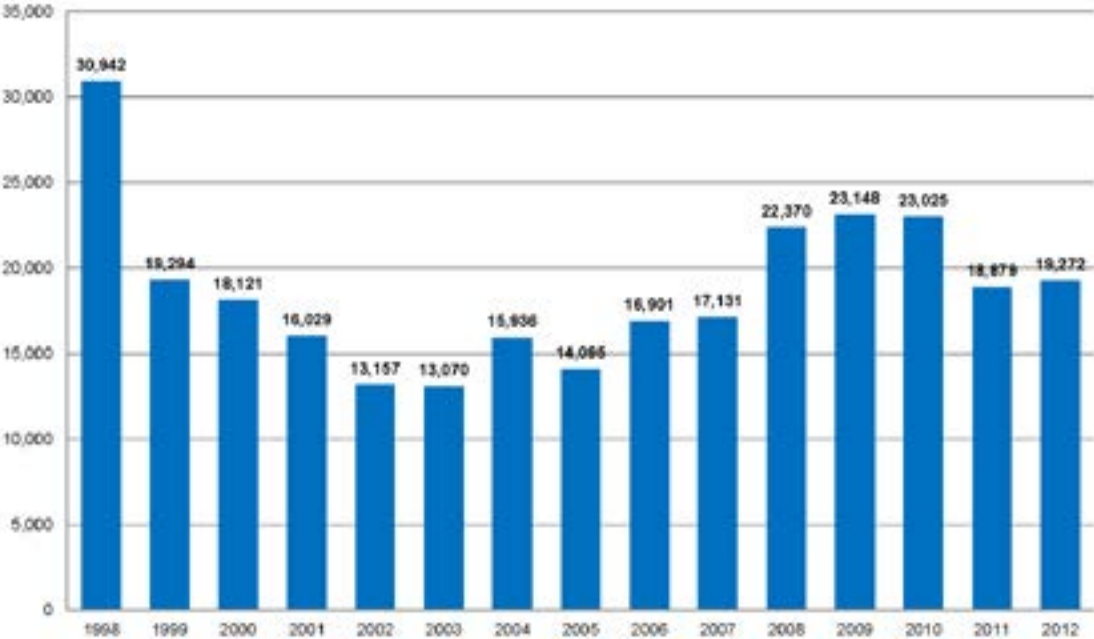
³ Average of 30 days/month.

Appendix B – Major League Baseball Stadium Capacities



*data collected from ESPN.com

Appendix C – Tampa Bay Rays Yearly Attendance



*data collected from ESPN.com

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