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**PRESERVING THE DIAMOND BASEBALL STADIUM/BALLPARK
DESIGN: CASE STUDY OF FENW A Y PARK IN BOSTON,
MASSACHUSETTS**

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PRESERVING THE DIAMOND
BASEBALL STADIUM/BALLPARK DESIGN:

CASE STUDY OF FENWAY PARK
IN BOSTON, MASSACHUSETTS

BY

CHRISTINE A. MELLO

A RESEARCH PROJECT SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE AND MASTER OF
COMMUNITY PLANNING AND AREA DEVELOPMENT

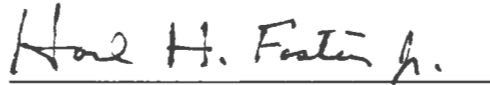
UNIVERSITY OF RHODE ISLAND

1993

MASTER OF COMMUNITY PLANNING
RESEARCH PROJECT
OF
CHRISTINE A. MELLO

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A handwritten signature in cursive script that reads "Howard H. Foster, Jr." is written over a horizontal line.

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Dr. Marcia Marker Feld

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
LIST OF TABLES	v
LIST OF FIGURES	vi
CHAPTER ONE	
INTRODUCTION	1
Problem Statement	2
Significance of the Study	7
Objectives of the Study	8
Methods of Study	9
<i>Data Collection and Research</i>	9
<i>Site Inventory and Analysis</i>	9
<i>Summary of Findings</i>	10
<i>Data</i>	10
CHAPTER TWO	
EVOLUTION OF THE BALLPARK DESIGN	11
Evolution of the Stadium/Ballpark	11
History of Ballpark Design	12
<i>Classic Ballpark</i>	12
<i>Super Stadium</i>	15
<i>Regenerated Classic Ballpark</i>	19
Future Design Trends	21
CHAPTER THREE	
STADIUM/BALLPARK DESIGN	22
Existing Facilities	23
Future Designed Facilities	24
Location	25
Visibility	26
Parking	29
Access	29
Location in Relation to Support Facilities	30
Local Environment	30

TABLE OF CONTENTS (continued...)

CHAPTER FOUR
ECONOMICS OF BASEBALL FACILITIES AND STADIUMS 32

 Ownership 32

 Operating Budgets 34

Revenues 35

Expenses 36

Breaking Even 36

 Financing 37

Advertisements 37

Tax and Bond Revenues 37

Luxury Boxes and Seat Preference Bonds 38

 Effects on Local Economy 38

Supply and Demand 39

Multiplier Effect 40

Economic Impact 41

CHAPTER FIVE
THE CASE STUDY OF FENWAY PARK IN BOSTON, MASSACHUSETTS . . 42

 Introduction 42

 Existing Fenway Park 42

 Future Planning Criteria 44

 Alternative 44

New Stadium 45

Megaplex 47

Renovation and Restoration of Fenway 51

 Discussion and Evaluation of Alternatives 53

Location 53

Parking 54

Access 54

Location in Relation to Support Facilities 55

Financing 55

 Conclusion 56

REFERENCES 58

BIBLIOGRAPHY 59

LIST OF TABLES

Table I....Classic Ballparks	13
Table II....Super Stadiums	17
Table III...Regenerated Classic Ballparks	19
Table IV...Location	27
Table V....Ownership of Major League Stadiums/Ballparks	33
Table VI...Stadium Financial Operating Statement	35
Table VII..Estimated Direct Economic Impact per Visitor	40
Table VIII.Evaluation of Alternatives	56

LIST OF FIGURES

Figure 1..Chicago's Wrigley Field	13
Figure 2..Detroit's Tiger Stadium	14
Figure 3..Boston's Fenway Park	16
Figure 4..The Toronto Sky Dome	18
Figure 5..Texas Rangers (New Ballpark)	20
Figure 6..Oriole Park at Camden Yards	30

CHAPTER ONE

INTRODUCTION

"Baseball, Hot Dogs, Apple Pie, and Chevrolet. They go together in the good ole' U.S.A." That popular cliché was more than a catchy commercial slogan for General Motors, it was a passage that epitomized a nation's passions. Americans today may prefer Honda's and McDonald's but baseball still remains its pastime. The game has transcended the country's history. Through four wars it has remained as constant as the passing of the four seasons. Its heroes have been immortalized throughout musical lyrics and literary works. Its mechanics have been exercised on sandlots far and wide. Baseball for many has become a religion where its followers idolize the players and pray for a pennant. Every religion must have a house of worship, or a shrine, for baseball it is the ballpark (Lowry 1992: 1).

I can still remember attending my first major league baseball game. My dad futilely attempted to explain the rules of the game, but I was much too consumed with the chaotic surroundings to comprehend. As time passed my knowledge of the sport grew by default. Being the older sister of a little leaguer and the daughter of a Red Sox fan I formed my own passions for the game.

The passion that I developed was not as much for the game but for "shrines" in which it was played. Those magical places that have entered into every American's life even if only for a moment whether it was through attending a game, seeing a commercial, or hearing an older relative reliving a memory. These are just

a few of the reasons why baseball was chosen as the topic of this thesis. More importantly, it is shown by the interest in this topic by both baseball fans and non fans.

Problem Statement

From 1909 to 1923 fifteen new ballparks were constructed throughout the country to support the needs of the financially motivated baseball owners. As the national pastime's popularity and attendance grew so did these classic ballparks. Piece-by-piece additional seating was constructed at the various facilities.

Expansion of seating capacity was limited by city streets and buildings. The only way to increase capacity of existing facilities was to build upward. With the use of reinforced concrete and structural steel, baseball parks were able to adopt the upper deck style of seating. "This contrivance allowed more people to sit closer to the action of the diamond than was ever before dreamed possible in the wooden-seat era" (Lowry 1992: xii).

The metropolitan limits caused by the existing city infrastructure resulted in the development of unique ballparks with asymmetrical playing fields and, more importantly, character in design. The denial by the City of Boston to permit the Red Sox organization to expand Fenway Park's left field onto Lansdowne Street led to the creation of a 37 foot tall wall to prevent easy homeruns. This wall, now known as the "Green Monster", is probably the most recognizable icon in baseball today. Boundaries such as these continue to affect the way the game is played.

The 1960's were a time of change for the United States. The Space Race was on, the Civil Rights movement was born, and the country found itself in the midst of a cold war with the Soviet Union. Within in the context of all of this social change and upheaval it was inevitable that baseball would change with also. It was within this era that the concept of super stadiums was born.

With the advent of the automobile earlier in the century, baseball fans, along with the rest of the country, began moving to the suburbs. This gave birth to a new breed of fan that demanded more comfort. Spacious seating, more parking and better concession facilities were among a few of the changes addressed by the new stadiums. However, the most important was the elimination of the obstructed view. This improvement was achieved through the use of new a lightweight, stronger concrete that allowed for the removal of bulky wide columns used to support previous concrete and steel structures.

The super stadium era was characterized by symmetry and precision. Being free of the structural boundaries that their classic ancestors encountered, super stadiums embraced symmetrical playing fields. Many of these multi-purpose stadiums took advantage of artificial surfaces to eliminate the need for turf care. Artificial turf allowed for the development of the indoor playing fields. Its first major use came in 1966, when the grass of the newly constructed Astrodome died during the 1965/1966 off-season. This in turn allowed for easier playing field transition between stadium events particularly, baseball and football.

Recently, a new age of ballpark design has been born. In an effort to reclaim the character and splendor of the classic ballparks of the early 1900's, architects have discovered the so-called Regenerated Classic Design (Lowry 1992: xvi). This style of ballpark takes advantage of structural technology for fan comfort while still creating asymmetrical character and charm.

The Baltimore Orioles are the first Major League team to utilize this style. Their new Orioles Park at Camden Yards has brought baseball from the suburbs back into the city. The use of the Baltimore & Ohio Warehouse and the city's skyline as backdrops give the park an immediate and historic personality as well as demonstrate a conscious effort to integrate with the community.

Success in Baltimore along with future plans to build similar parks for the Texas Rangers and the Cleveland Indians, has put the future of the three remaining classic ballparks in jeopardy. Tiger Stadium in Detroit, Wrigley Field in Chicago, and Fenway Park in Boston are the only classic ballparks that remain in use today.

Tiger Stadium was saved from the wrecking ball in 1974. A move by the Tigers to the new enclosed Silverdome was averted with a preservation campaign by the Detroit fans. Symbolically, the Tiger Stadium Fan Club organized events in which the stadium was hugged by its fans in 1988 and again in 1990 (Richmond 1993).

It is hard to imagine the Chicago Cubs playing under a dome in suburban Schaumburg. But that is what almost happened when the City of Chicago and the team could not come to terms on the issue of playing night games in the North End of

the City. A compromise was reached and though many decried the loss of daytime baseball, on August 9, 1988 Wrigley Field became the last Major League park to succumb to lights.

Although Fenway Park has not yet had any close calls like its classic counterparts, there have been rumblings about it having outlived its usefulness. Fenway, named for the marshy area it was built on, shows all of the symptoms for which its siblings, like Forbes Field (Home of the Pittsburgh Pirates), were wiped out. The seating is tight and uncomfortable, many views are obstructed, and parking is sparse and expensive. This, coupled with limited seating capacity, has put Fenway on the Major League's endangered list.

In an effort to improve Fenway the Red Sox organization has made changes to its facility over the past decade. The cold metal benches in the centerfield bleachers were replaced with flip down reserved seating. The addition of skyboxes in 1985 and a new luxury pressbox in 1991 attracted corporate sales and improved press relations, but did little to increase overall capacity. Current capacity for the facility is approximately 35,000. This figure is well under the Major League average thus severely limiting the ability to earn revenue or to properly host special events (All-Star games, World Series, etc.).

Players are initially thrilled to play in the old ballpark but are eventually dismayed with its inadequate locker room and parking facilities. Fans enjoy its serenity but are displeased with the lack of cleanliness in restrooms and concessions.

The subtle hints of dissatisfaction displayed by Red Sox management, players, and fans, may presently not be enough to cause the Red Sox to flee their familiar confines. But as the business of baseball continues to expand, change for the Red Sox becomes inevitable. In the wake of recent television contract disputes, big market teams like the Red Sox will be faced with diminishing television revenues. To stay competitive within Major League Baseball the Red Sox organization will be forced to maximize stadium gate revenues. Fenway Park, as it stands today, will not be able to meet those needs.

This study examines potential solutions for the Red Sox organization to consider in solving the ballpark dilemma. The options considered in this study include: building a new stadium, building a combined stadium with the New England Patriots (such as the proposed Boston Megaplex), or the renovation of the existing Fenway Park.

A detailed investigation of the evolution of ballpark architecture followed by an analysis of the major aspects of ballpark design and financing serves as the basis for this study. Final solutions are developed through the application of criteria derived from these various aspects. Conclusions and recommendations reached in this study are intended to provide the Red Sox organization with viable alternatives to face the inevitable.

Significance of the Study

Many believe the sport of baseball is mired in a very turbulent time. The once simple "national pastime" has become a complicated international business. It finds itself becoming more removed from its fans and the towns in which it resides. Baseball has become a fraternity made up of millionaire members that charge for autographs, it is played in cities that often find themselves intimidated by greedy owners who threaten to move their franchises whenever their needs are not met.

This cynical shadow that has been cast over baseball amplifies the significance of planning in stadium design. For example, politicians will be less inclined to allocate tax dollars to finance a sporting complex if the actual organization or sport itself is not well-liked. On the other hand, fans may be unwilling to patronize a local team if the financial burden of a new facility is reflected in ticket prices. These are a few of the many issues that must be balanced by planners during the conception of a ballpark.

The decisions associated with such a facility not only have local impact, but often carry regional, and sometimes national influence as well. This study's look at Fenway Park will later show how a ballpark spans these three territorial tiers. For instance, the fiscal condition of Boston and Massachusetts is not conducive to a major investment in a sporting complex. But the Red Sox organization has a responsibility to address the needs of its out of state fan base (most of New England). And the fact that Fenway Park is viewed as a national historic landmark with a nationally recognized Major League Baseball icon also holds relevance.

Objectives of the Study

Apply research on baseball park design and finance to a case study for Fenway in an effort to assist decision makers in determining the fate of Fenway Park and the best alternative for Boston, the Red Sox organization, and Major League Baseball. Research results provide goals and objectives as well as criteria to examine the existing Red Sox facility. Potential solutions regarding the best alternative for the Red Sox organization are then presented.

This study examines the effects of the integration of a newly constructed or renovated facility on the local community. This includes the investigation of surrounding land uses as well as the research of the effects on encompassing amenities. The impact on the economy of neighboring businesses is also examined.

The research presented attempts to measure pros and cons on the regional economy. The benefit of both the temporary construction and long term service employments for the facility are discussed. Techniques for managing the fiscal liabilities accrued during the project are also addressed.

Besides its look at Fenway as an American entity, this study addresses the problem of deteriorating ballparks nation-wide. The solutions devised in this research project may also serve as guidelines to similar problems that may arise during the development of new, the replacement of old, or the renovation of existing ballparks.

Methods of Study

Data Collection and Research

Preliminary analysis is derived from the library research of baseball stadiums and ballparks. In addition, all of the individual major league franchises have been contacted for information regarding the design of their stadium/ballpark. This information is used to determine the relevant design issues which should be addressed. Research for this phase will also involve a review of data, collected from various agencies within the Boston area, to determine the general impact of a sports facility on the surrounding community.

Site Inventory and Analysis

Information required for the case study includes an inventory of Fenway Park and the surrounding vicinity. This inventory contains historical, physical, and economic aspects of the study area. Physical characteristics are examined as follows: location, land use, transportation, and facility layout. Economic aspects of the analysis focus on current financing procedures. The historic value of Fenway is also analyzed during this phase. The findings are applied to the park, serving as the basis for conclusions reached in the Summary of Findings.

Summary of Findings

The final phase of this study is based on the above mentioned research and analysis. A selected list of criteria have been from previous research which were then generated for use in a matrix to evaluate the alternatives presented for Fenway Park. Based upon the results of this investigation, a qualified decision making process regarding the fate of the Park and the most viable solution for the Red Sox organization is proposed. The alternatives to be addressed include; Building a new stadium, Building a combined facility with the New England Patriots, or the Renovation and restoration of Fenway Park.

Data

Data presented in this study have been acquired from various sources which address the issue of baseball and its playing fields. In particular, data was obtained from planning and economic journals, the Urban Land Institute Publications, sporting articles, and books regarding actual stadium/ballpark design as well as the application of background material on design and financing. The Case Study data was derived from field research and local community statistics. Preliminary research also included data collected from all of the major league franchises.

CHAPTER TWO

EVOLUTION OF THE BALLPARK DESIGN

This chapter outlines the progression of ballpark design since the turn of the century. Data collected for this chapter will be applied as part of the design solutions for the Red Sox organization.

Evolution of the Stadium/Ballpark

"Stadium design is not hard mathematics alone, but the skill and ingenuity of the designer who applies his knowledge and experience to achieve a unique and superb result. It is progressive and adaptable. We will see new materials used, covered grandstands built, movable stands erected, better lighting installed, moving ramps to ease the climb and other new concepts tried. The people will be much the same but with new and different wants which must be satisfied." This is how the foremost baseball park designer, Homer Borton, foresaw the evolution of ballparks in 1956 (Lowry 1992: xi).

The evolution of ballpark design began as a result of new technological advances in bridge design. These structural improvements in bridge design were then easily applied as support for a variety of structures including ballparks (Pastier 1993: 29). As new building materials and practices are being developed they are continually being applied by engineers and designers to all aspects of baseball from the stadium structure itself to the corporate boxes and the bleaches.

History of Ballpark Design

Just as predicted, the design of ballparks have undergone major renovations since the beginning of the century. The three main eras of design include the classic ballpark, the super stadium, and the regenerated classic ballpark. These eras, while resulting in architectural designs typical of the time, have allowed the fundamentals of the game of baseball to go unchanged. Some of the more significant architectural firms to influence the design of ballparks include: Osborn Engineering designers of Yankee Stadium; Howard Tamm Bergendoff who designed Royals Stadium; and Hellmuth Obata Kassabaum (HOK) designers of the "new" Comiskey Park and Oriole Park at Camden Yards (Richmond 1993: 17).

Classic Ballpark

The classic ballpark era began as the sport became more popular and ticket revenues increased, thus justifying the expense of increased size. The development of the classic ballpark era in the early 1900's resulted in the building of steel and concrete ballparks for fifteen of the sixteen Major League ballclubs (Richmond 1993: 31). Only three of these parks remain in use as major league fields today. The remaining classic ballparks are Boston's Fenway Park, Chicago's Wrigley Field, and Detroit's Tiger Stadium (see Table I). Of these classic ballparks, Detroit's Tiger Stadium, has been listed on the National Trust's 1991 list of America's Eleven Most Endangered Historic Places (Pastier 1993: 27).

Table I..Classic Ballparks

Ballpark/Team	Occupancy	Capacity	Owner
Fenway Park Boston Red Sox	1912	34,171	Private
Wrigley Field Chicago Cubs	1914	38,710	Private
Tiger Stadium Detroit Tigers	1912	52,416	Private

Different from the financing of today's ballparks the majority of the classics were developed with private owner funds. Wrigley Field is an example of a ballpark that was originally financed by the Wrigley family. Figure 1 shows a view of the "classic" Wrigley Field. The longstanding success of Wrigley Field is believed by



Figure 1..Chicago's Wrigley Field

many to have been derived from the fact that "the Wrigley's poured money into their jewel up on the North Side..." while so many of the owners did nothing to ensure the success of their parks (Richmond 1993: 35).

The classic ballpark was integrated into the existing urban neighborhood making access nothing more than a short walk or trolley ride away from home or work, as shown in Figure 2 of Detroit's Tiger Stadium. The location of these modern ballparks on finite spaces brought about the development of odd shaped playing fields that were easily adapted to enhance the ability of certain players. Fenway Park, as

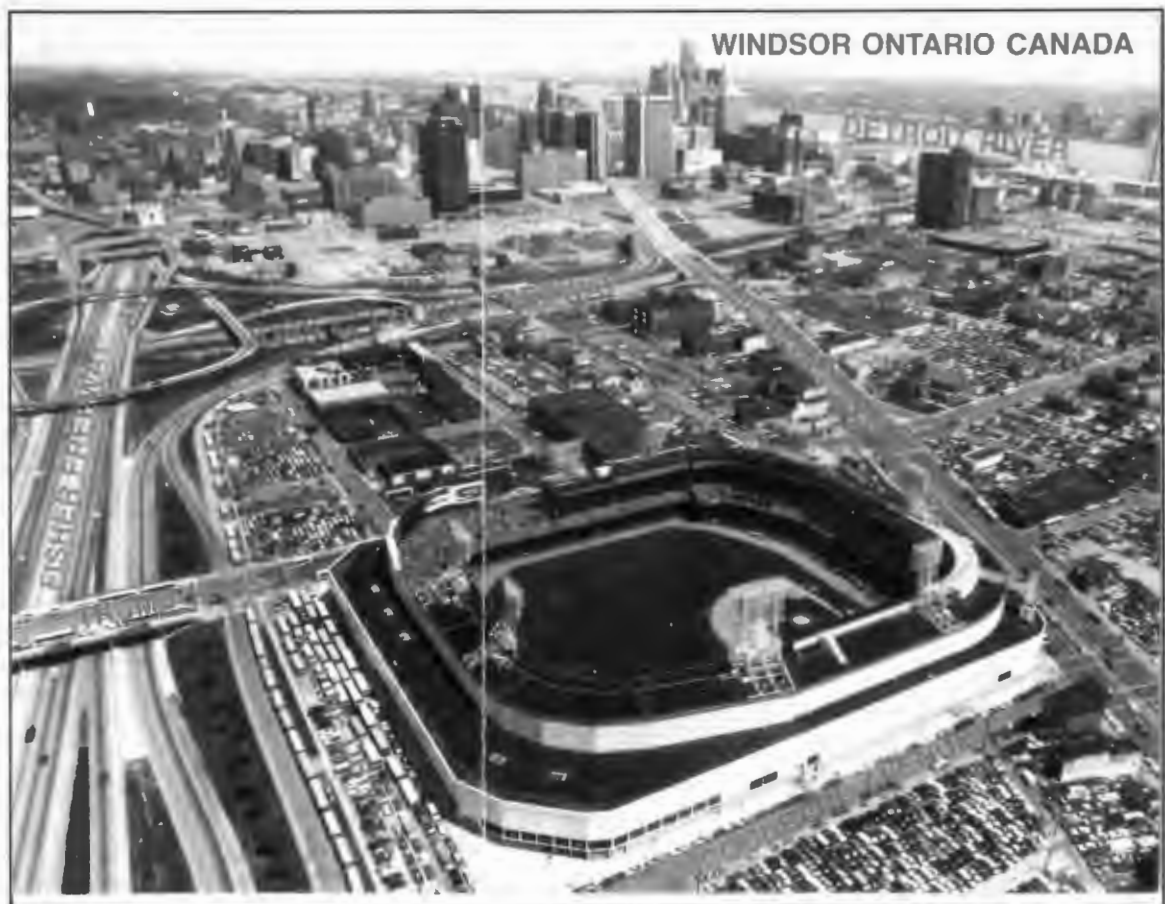


Figure 2..Detroit's Tiger Stadium

shown in the Figure 3 floor plan, is an excellent example of how many of the classic ballparks were influenced by the existing confines of the city.

Towards the end of the classic ballpark era as the world was engulfed in World Wars I and II, the desires of the American baseball fan changed as a result of the new found technology and independence. In the middle of all of this turmoil two ballparks were built (Pastier 1993: 27). These parks, which were built between the World Wars are Cleveland Stadium, home of the Cleveland Indians and Yankee Stadium, home of the New York Yankees.

Super Stadium

Super Stadiums were first introduced in the 1960's. As the desires of fans changed, baseball met the challenge. Multi-purpose stadiums were erected to increased revenue and comfort. The increased cost of these facilities also called for new funding strategies which in this case lead to public financing. The massive relocation of many Americans to the suburbs allowed for the development of stadiums which could stand alone. Increased dependence upon with the automobile created the need for parking at the stadium. As a result of these changes in the American lifestyle, baseball moved to the suburbs. Table II provides a list of super stadiums.

With the age of the super stadium came the advent of the multi-purpose sports facilities. These new facilities allowed cities with both professional baseball and football to develop "one size fits all" facilities. The first of these developments being the home of the Atlanta Braves baseball team, Atlanta Fulton County Stadium in

Fenway Park, Boston. A study of corners and angles after the 1933-34 renovation.

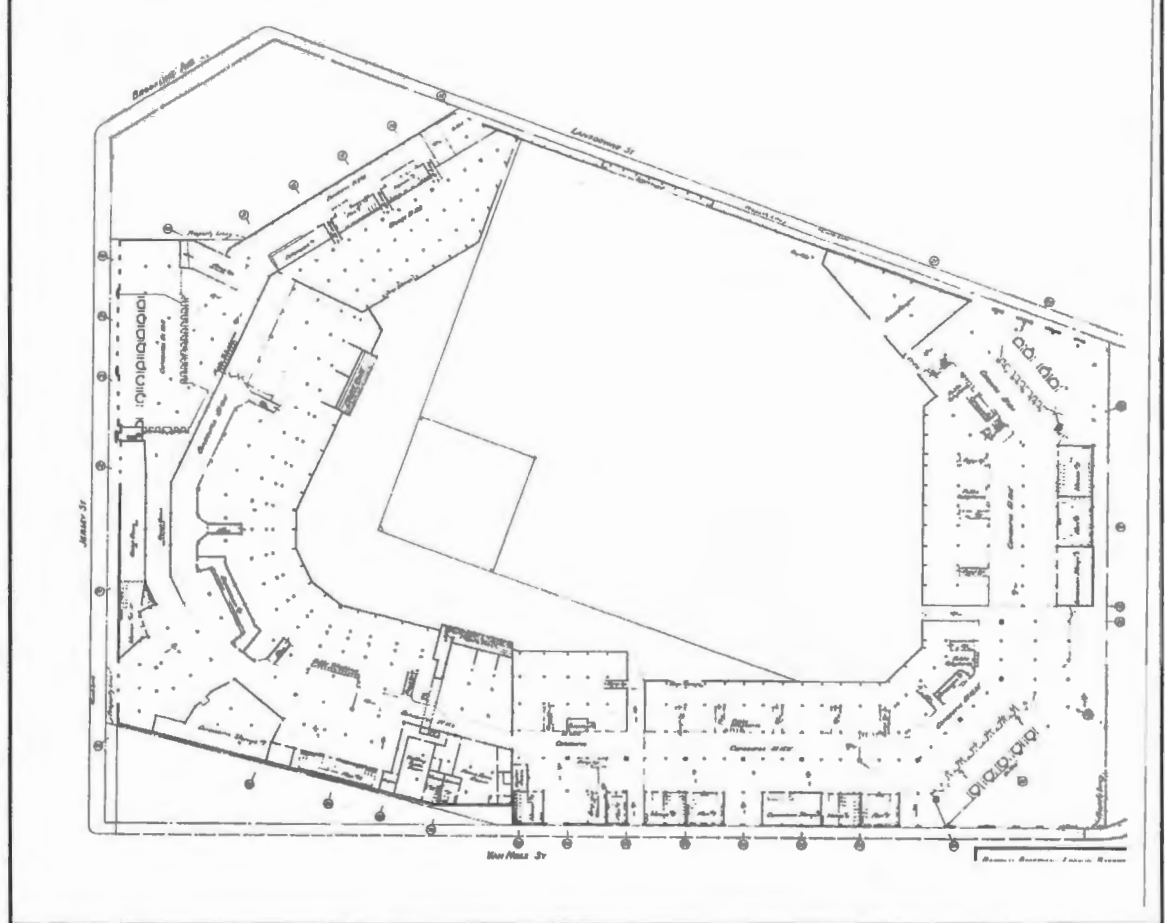


Figure 3. Boston's Fenway Park

1966. Presented in Figure 4 is the Toronto Sky Dome floor plans and seating arrangement for baseball, football, and soccer events.

This era of design also brought about the indoor stadium followed by the indoor/outdoor stadium with its retractable roof. The introduction of these new

Table II..Super Stadiums

Stadium/Team	Occupancy	Capacity
Fulton County Stadium Atlanta Braves	1966	52,007
Anaheim Stadium California Angles	1966	64,593
Comiskey Park Chicago White Sox	1991	44,702
Riverfront Stadium Cincinnati Reds	1970	52,392
Mile High Stadium Colorado Rockies	1993	NA
Joe Robbie Stadium Florida Marlins	1993	NA
AstroDome Houston Astros	1965	54,816
Royals Stadium Kansas City Royals	1973	40,625
Dodger Stadium Los Angeles Dodgers	1962	56,000
County Stadium Milwaukee Brewers	1953	53,192
Metrodome Minnesota Twins	1982	55,883
Stade Olypique Montreal Expos	1977	60,111
Shea Stadium New York Mets	1964	55,601
Oakland Coliseum Oakland Athletics	1968	47,450
Veteran's Stadium Philadelphia Phillies	1971	62,382
Three Rivers Stadium Pittsburgh Pirates	1970	58,729
Busch Stadium St. Louis Cardinals	1966	56,227
Jack Murphy Stadium San Diego Padres	1969	59,254
Candlestick Park San Francisco Giants	1960	62,000
Kingdome Seattle Mariners	1977	57,748
Arlington Stadium Texas Rangers	1972	43,508
Skydome Toronto Blue Jays	1989	50,516

NA- Not Available

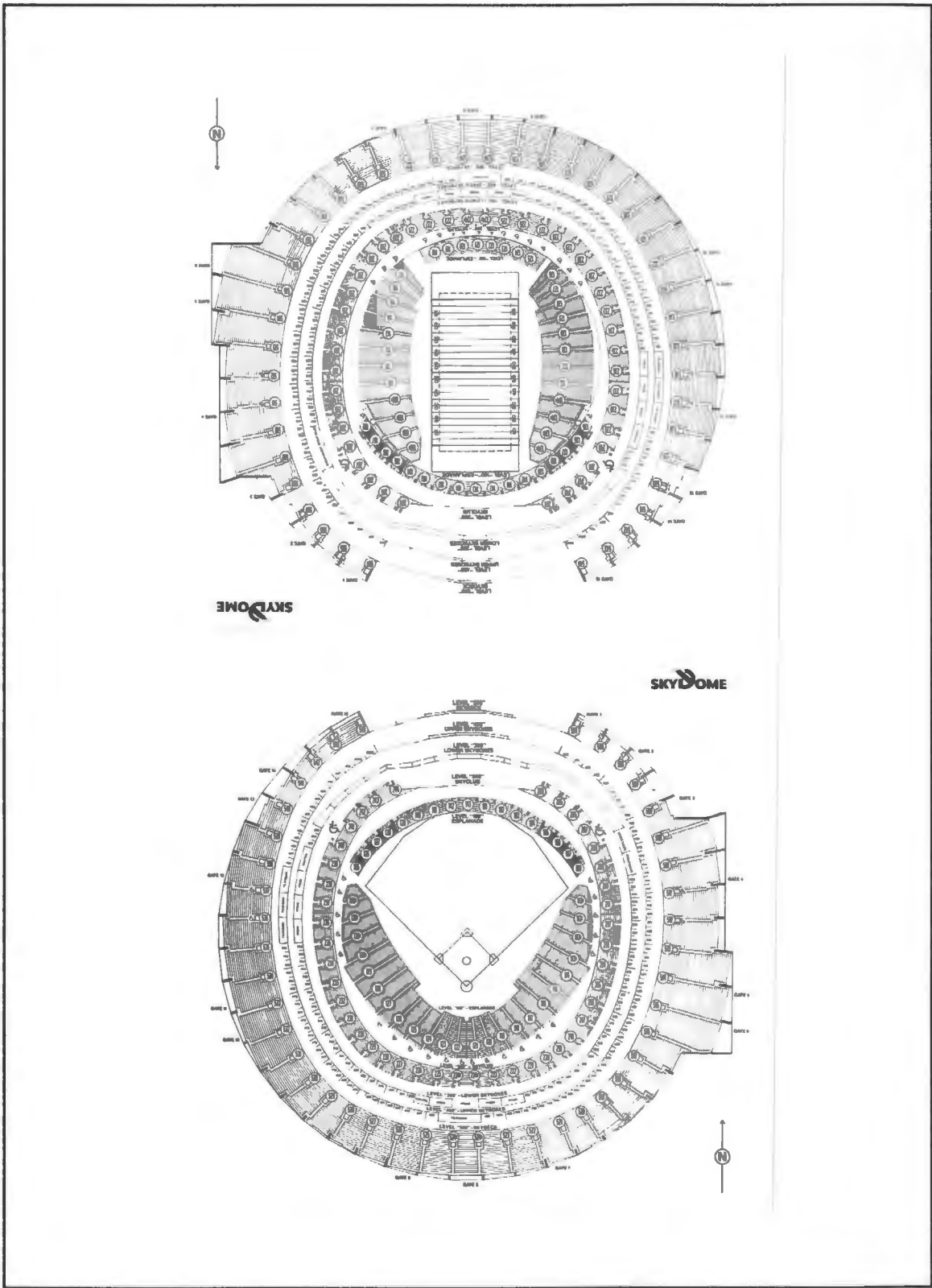


Figure 4..Toronto Sky Dome

facilities by the Toronto Blue Jays and the Montreal Expos in 1989 eliminate the influence of inclement weather on the game.

Regenerated Classic Ballpark

The start of the 1990's has brought about the third era of ballparks. The regenerated classic ballpark is a result of emergence of post-modernism among other things. Stadium names have even begun to change with the physical structure to now contain the word ballpark instead of stadium. Table III provides a list of ballparks which have recently been completed as well as those currently proposed for development during this era.

Table III..Regenerated Classic Ballparks

Ballpark/Team	Occupancy	Capacity
Oriole Park at Camden Yards Baltimore Orioles	1992	46,500
Proposed Ballparks		
(Not Named to Date) Cleveland Indians	1994	42,000
Coors Field Colorado Rockies	1995	43,000
(Not Named to Date) Texas Rangers	1994	48,100

Another major contributor to this regeneration is the media which often focuses on the unique characteristics of the ballpark. Media identity allows the viewer to achieve quick recognition with regards to what teams are playing and

where. This identification with the physical aspects of the park as well as the surrounding area and general trivia foster the interest of both sports fans and the general public.

This new era of design has emerged as a result of political/funding policies which allow participation and support from team owners, players, local governments, voters, and most importantly baseball fans. Oriole Park at Camden Yards and the proposed Texas Rangers facility are two such examples of this new found coordination. Shown in Figure 5 is a model of the Texas Rangers new park which is scheduled to open in the Spring of 1995.

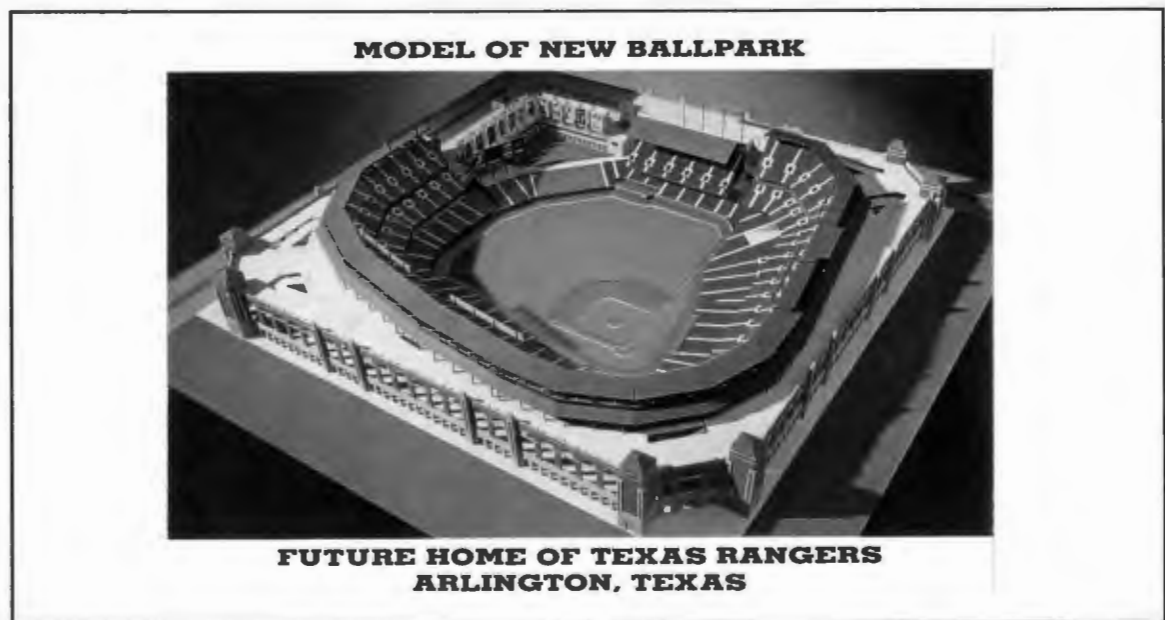


Figure 5..Texas Rangers (New Ballpark)

Consistent with past eras, the regenerated classic ballpark developed as Major League Baseball began its newest wave of expansion. The 1993 expansion teams of the Colorado Rockies and the Florida Marlins, emphasize the interest of cities in

obtaining Major League teams and their willingness to provide new modern facilities. This in turn fostered a concern by many baseball cities that officials must act quick to meet the demands of professional teams.

Future Design Trends

"While the last one hundred years of baseball have brought about dozens of advances, the game has remained fundamentally unchanged" (Garber 1990: 178). This quote expresses how ballpark design will most likely continue to change in the future while the fundamentals of the game prevent some aspects of the field from ever changing. As with past trends, however, ballpark design will continually change to meet the challenges of the day.

While predictions regarding the direction that ballpark design will take can not be made one thing is for sure, improvements will always have to be made. This statement is true whether one is referring to the three remaining classic ballparks or the super stadiums which are also being considered as inadequate by some. The most important aspects of future design however must focus on the fact that ballparks are "...public buildings in the truest sense" and whether they are part of the classic, super stadium, or the regenerated classic ballpark era, they are all a part of American history and examples of each design era must be preserved (Pastier 1993: 85).

Former Baseball Commissioner Giamatti described what he envisioned as his ideal for baseball as being able "to provide an environment where a player can finally perform at his best." This statement should serve as the "golden rule" for all design.

CHAPTER THREE

STADIUM/BALLPARK DESIGN

"Now that all but three of baseball's classic parks have vanished, nostalgia has become the latest trend in stadium design. Stadium architects and promoters promise facilities combining old-fashioned intimacy and character with all the latest amenities and technological advances" (Pastier 1993: 85). Of course, whether this newest trend in stadium design is applied to the development of a new facility or is used in the renovation of an older facility, the following basic principles play a major role in the design process.

The design process begins with a baseball team and its need for a place to play. Physical design elements of any ballpark, whether new or old, good or bad, are an integral part of its existence. Each of these elements, whether in or out of the park, can be modified with one exception. The one unchangeable in the design is the dimensions of the diamond which must be consistent from one stadium to the next. Increased emphasis on actual stadium design has resulted in the stadium and its features becoming as important as the game itself. The basic physical aspects associated with stadium design include: location, visibility, parking, access, the stadium's location in relation to support facilities, and to some extent the local environment.

The most important aspect of stadium design however is derived from each ballpark, whether new or old, being its own unique entity with its own characteristics

and goals. This chapter outlines the general design process which may be applied to the renovation of existing facilities or the building of new ones.

Existing Facilities

Ballparks and stadiums currently in use within Major League Baseball, were developed during the three eras of design, as described in Chapter Two. Existing facility design has developed along side technological advances that affect everything from the building facade to the playing field grass.

Throughout the existence of the "modern day" ballparks of this century, two engineering firms have been principally responsible for their design. The first of these firms was Osborn Engineering of Cleveland, Ohio who developed many of the classic structures. The other firm, Hellmuth, Obata & Kassabaum (HOK) of Kansas City, Missouri, has been responsible for the more recent super stadiums and the regenerated classics. Today, both firms are actively involved in the design of many of the proposed ballparks for the rest of the century. Another firm entering into the market is David M. Schwarz/Architectural Services, based in Washington, D.C., who is designing the new Texas Rangers facility.

Very often the design process or portions of it are applied in some form or another to ballpark renovations in an effort to make them more competitive in today's baseball industry. Up until just recently, refurbishing attempts have been somewhat successful. "Ballparks, especially the older ones, were dynamic functional entities that were frequently expanded, remodeled, and repaired. This flexibility was, in fact,

one of their strengths and a source of much of their charm. They were rarely perfect and finished; more often, they were products of remodeling and accretion. But even their great adaptability has failed to ensure their continued existence" (Pastier 1993: 85). The question of their continued existence is due in part to the fact that baseball is a business in which people are trying to make money therefore design enhancements are being done to increase that profit.

Future Designed Facilities

The most common rationale for developing a new stadium is for it to serve as a catalyst for future growth and development within a given area. A regular misconception associated with design of future stadiums is that they can be designed to successfully imitate an existing facility. As described by Chris Carver, a principal manager at HOK Sport, a common occurrence at the firm is that "people come to us and say they want Camden Yards, and that just doesn't work. We don't do the same building twice. Camden Yards wouldn't work in any other site but where it is. What we try to do is grasp the essence of Camden Yards, see why it works, and then take it to the next step with the next building" (Brashler 1993: 10).

Steps taken during the design process include all of the aspects previously discussed including: location, visibility, parking, access, location in relation to surroundings, and the environment. The difference in applying these to a new facility is that they will all be applied to the project in a different way depending on the desired goal or feeling which is to be accomplished upon completion of the project.

In the book Green Cathedrals, Lowry states "that to fulfill their purpose in our National Pastime, they must be allowed to have their own personalities and characteristics, or, in other words, to be unique and asymmetrical" (Lowry 1990: vii).

Location

Dating back to the time of the Greeks, stadiums have been traditionally located within major cities. True even today, the majority of ballparks are located in major United States Cities. The location of the Major League Baseball expansion teams, the Colorado Rockies and the Florida Marlins, was consistent with baseball's history of locating ballparks in major metropolitan centers.

One aspect of the location of ballparks that has changed however is its placement within the confines of the city. As described in Chapter Two, ballparks were first located in the center of the city and close to the workplace. As a result of the advent of the automobile, ballparks were moved out of the main metropolitan areas resulting in super stadiums. More recent trends in baseball have resulted in ballparks being moved back into the middle of America's most popular cities.

Factors associated with the location of existing as well as new major league facilities include marketability, accessibility, and parking. Marketability to the media appears to be one of the main factors in the location of ballparks, particularly with the fairly new large sum television contracts. The term "appears" is used in the previous sentence because even though St. Petersburg, Florida has a stadium as well as the 13th largest media audience in the country, it still was not awarded a Major League

Baseball team during the recent expansion (Fatsis 1993: F1). The reference to accessibility as having an influence in the location of a ballpark, includes the distance and ease of access to and from the highway. The existence of public transportation is also used in determining the relative accessibility of a ballpark. The availability of parking and its location in relation to the stadium is also a major factor involved in locating a ballpark. The locations of the Major League Baseball teams along with the available public transportation and parking options are shown in Table IV.

The final decision in the location of a Major League ballpark however, has been and continues to be ultimately decided by Major League Baseball itself. This control is "like no other sport and no other industry,.. protected since the 1920's under the anti-trust exemption, creating America's last monopoly" (Fatsis 1993: F1).

Visibility

The size of a ballpark was initially determined by the size and shape of the available site, now the size of the site is determined by the footprint of the proposed ballpark. In either case, the basic structure of a ballpark has a number of long blank walls which are visible to anyone outside the facility. "These high and long blank walls present design challenges to architects working with a downtown site. Sloped sites make it easier for the designer to "hide" the massive structure, create pedestrian-oriented plazas, and achieve a scale of development more in keeping with nearby building facades" (Petersen 1990: 20).

Table IV..Location

Stadium/Team	Location	Public Transportation
Fulton County Stadium Atlanta Braves	Atlanta, GA	Yes
Oriole Park at Camden Yards Baltimore Orioles	Baltimore, MA	Yes
Fenway Park Boston Red Sox	Boston, MA	Yes
Anaheim Stadium California Angles	Anaheim, CA	Limited
Wrigley Field Chicago Cubs	Chicago, IL	Yes
Comiskey Park Chicago White Sox	Chicago, IL	Yes
Riverfront Stadium Cincinnati Reds	Cincinnati, OH	Limited
Cleveland Stadium Cleveland Indians	Cleveland, OH	No
Mile High Stadium Colorado Rockies	Denver, CO	Limited
Tiger Stadium Detroit Tigers	Detroit, MI	No
Joe Robbie Stadium Florida Marlins	Miami, FL	Yes
AstroDome Houston Astros	Houston, TX	Limited
Royals Stadium Kansas City Royals	Kansas City, MO	Limited
Dodger Stadium Los Angeles Dodgers	Los Angeles, CA	Limited
County Stadium Milwaukee Brewers	Milwaukee, WI	Limited
Metrodome Minnesota Twins	Minneapolis, MN	Limited
Stade Olympique Montreal Expos	Montreal, Quebec	Yes
Shea Stadium New York Mets	Flushings, NY	Yes
Yankee Stadium New York Yankees	Bronx, NY	Yes
Oakland Coliseum Oakland Athletics	Oakland, CA	Yes

NA- Not Available

Table IV..Location (Continued)

Stadium/Team	Location	Public Transportation
Veteran's Stadium Philadelphia Phillies	Philadelphia, PA	Yes
Three Rivers Stadium Pittsburgh Pirates	Pittsburgh, PA	Limited
Busch Stadium St. Louis Cardinals	St. Louis, MO	Limited
Jack Murphy Stadium San Diego Padres	San Diego, CA	Limited
Candlestick Park San Francisco Giants	San Francisco, CA	Limited
Kingdome Seattle Mariners	Seattle, WA	Limited
Arlington Stadium Texas Rangers	Arlington, TX	No
Skydome Toronto Blue Jays	Toronto, Ontario	Yes

NA- Not Available

While not all architects have the same exact site to work with, they are all faced with the challenge of creating aesthetically inviting view of the outside as well as the inside of the ballpark. Visibility also involves the use of icons in design in an effort to create an instant correlation between that icon and a certain park.

The term visibility can also take on a totally different meaning to include the actual line of sight for each seat in the ballpark. The use of new computer systems affords architects a chance to view the field before even one single brick has been placed on the site.

Parking

The location of parking in relationship to ballpark is an essential part of its success. Requirements for parking vary from one ballpark to another. In particular, the amount and location of parking required is dependant on the availability and popularity of public transit service in the area. Another aspect of parking is whether it is publicly or privately owned. Designers of newer stadiums have taken into account the need for parking within the site. Older stadium design did not give as much consideration to providing parking for patrons which in turn has greatly influenced ticket revenues.

Access

The success of any ballpark relies heavily on its ability to attract maximum capacity crowds for any given game. Access to any given ballpark, as previously stated, is directly affected by the availability of public transportation and the location of the facility in relation to main traffic routes. In particular, consideration should be given to the fact that all attendees will arrive and depart during the same brief time period before and after the game. Access routes to and from the stadium should therefore disperse traffic in an effort to maintain a pleasant atmosphere for the duration of the event (Petersen 1990: 21).

Location in Relation to Support Facilities

Another important aspect of locating and designing a ballpark are the surroundings in the vicinity. This is attributable to the style of the surrounding buildings as well as the services and amenities available to fans before and after the game. These issues are particularly important when trying to integrate a ballpark into its surroundings. Oriole Park at Camden Yards is an example of such intergration which was designed with the neighboring warehouses in mind. The use of an adjacent warehouse served as excellent backdrop for the ballpark which describe as "feeling as though it's always been there." The use of the warehouse as an icon has been adopted by the media for instant viewer identification and by players as a hitting target which has not been met yet in a game (see Figure 6).



Figure 6..Oriole Park at Camden Yards

Local Environment

The importance of local environmental conditions on actual ballpark design is something that has subtly been incorporated into Major League facilities since the turn of the century. Players and fans alike are often dismayed by the local environmental conditions at many ballparks. Examples of ballparks with unbearable conditions

associated with the local environment include: Cleveland's proximity to Lake Erie and its damp chilly springs: San Francisco's Candlestick Park and its winds: and Arlington Stadium's record high heat. More recently the future Coors Field in Denver is being designed with the high altitude in mind because of its potential impacts on players and the actual game. Major problems associated the local environment may be overcome through the use of the domed stadium which eliminates all of the environmental factors.

CHAPTER FOUR

ECONOMICS OF BASEBALL FACILITIES AND STADIUMS

Baseball is a simple game. You hit the ball, you catch the ball, and you throw the ball. Sometimes you'll win. Sometimes you'll lose and sometimes it'll rain. These cliches were profoundly passed from the veteran catcher to a rookie pitcher in the motion picture Bull Durham. The only problem was that he forgot to mention that after you hit, throw, and catch, you sign the ball for ten dollars. And you may win, you may lose, it may rain, or you may go on strike.

In 1922 the United States Supreme Court ruled that baseball would be considered a game and not a business. "Their lack of foresight into today's sporting world has lead to the immunization of baseball from statutes designed to promote and protect free commerce" (Fatsis 1993: F1). This exception has allowed the sport to grow into a 1.7 billion dollar a year commercial industry.

This chapter will examine how the business of baseball influences the fate of the facilities in which the game is played. As part of this chapter, ownership leverage, fiscal management, financing, and economic impact will be discussed.

Ownership

Ownership is an ambiguous term in baseball because there are many commodities to own. First, you must have a baseball team franchise (St. Petersburg, Florida has found out the hard way, as this chapter will show), then you need a

Table V..Ownership of Major League Stadiums/Ballparks

City	Ownership
Anaheim Stadium	Public
Arlington Stadium	Public
Fulton Count Stadium	Public
Camden Yards	Public
Fenway Park	Private
Comiskey Park	Private
Wrigley Field	Private
Riverfront Stadium	Public
Cleveland Stadium	Public
Tiger Stadium	Private
AstroDome	Public
Royals Stadium	Public
Dodger Stadium	Private
County Stadium	Public
Metrodome	Public
Stade Olympique	Public
Yankee Stadium	Public
Shea Stadium	Public
Oakland Coliseum	Public
Veteran's Stadium	Public
Three Rivers Stadium	Public
Busch Stadium	Public
Jack Murphy Stadium	Public
Candlestick Park	Public
Kingdome	Public
Skydome	-

ballpark, concession facilities, and parking lots. All of these things are required for success but are not necessarily possessed by the same owner. In fact, the ownership of any of these enterprises may be made up of lone proprietors, partnerships, corporations, or municipalities. This indefinite arrangement creates a chaotic atmosphere in the business of baseball. A balance between the monetary forces must be achieved for a franchise to thrive. Table V shows the current ownership status of Major League Baseball teams.

The biggest advantage, however,

is given to those who own the team.

Jerry Reinsdorf, Chicago White Sox's primary owner, enjoyed this leverage while negotiating with the State of Illinois. In 1988 he threatened to move the team to St. Petersburg if his demands for a new stadium were not met. This threat was branded as "Big League Blackmail" by Marcia Berss in Forbes magazine. She went on to say that "...maybe blackmail is too strong a word. But what do you call it when a Major

League Baseball team owner tells municipal officials to build a new team stadium or he'll move the team to a city at will?" (Berss 1992: 45)

When the smoke cleared, St. Petersburg was still team-less and the White Sox began playing in their new 135 million dollar Comiskey Park. This method of bargaining is not unique to Chicago. Similar deals have been struck in Baltimore and Cleveland. Currently the Milwaukee Brewers owner Bud Selig is pondering a move to greener pastures if his team is not provided with a new home. He claims, "without Major League sports, Milwaukee would be like Des Moines." Don't be surprised if St. Petersburg is mentioned again. The city built a 115 million dollar baseball park with hopes of wooing an existing team or landing an expansion team. Unfortunately for the town, neither happened. The empty stadium now stands as a bargaining chip for team owners in negotiations for new ballparks and better leases.

Operating Budgets

According to figures provided by the Urban Land Institute nearly all arenas and stadiums with baseball and football make approximately 2.3 million dollars annually. Table VI shows an financial operating statement for a typical all purpose stadium. It breaks down the approximate revenues and expenses accumulated by a medium sized city's sports complex during a typical fiscal year.

Table VI..Stadium Financial Operating Statement

Revenue		
Stadium Rentals		
Baseball	\$ 492,000	
Football	670,000	
Bowl Game	11,000	
Total Stadium	\$ 1,173,000	
Concessions		
Baseball	\$ 1,111,000	
Football	219,000	
Special Events	53,000	
Total	\$ 1,383,000	
Parking	\$ 1,105,000	
Advertising	300,000	
Special Events	275,000	
Total Revenue	\$ 4,236,000	
Expenses		
Salary and Wages		\$ 657,000
Repairs and Maintenance		203,000
Utilities		418,000
Insurance		79,000
Contract Services		218,000
Parking Expenses		150,000
Other Expenses		147,000
Total Expenses		\$ 1,872,000

Revenues

Sports arenas generate revenue by renting their facilities to the teams in the town where they reside. Sometimes cities will rent their arenas at unfavorable rates to attract a team or to keep it from leaving. Funds are also raised through stadium rental for special events (Super Bowl, All-Star Game, concerts, etc.).

In many stadiums and ballparks the building can receive more revenue through the sale of concessions than rent. The sale food, beverages, and merchandise often offset revenues lost through adverse leasing agreements. Parking and advertisements are other money-making enterprises that help to balance stadium revenues.

Expenses

Personnel expenses are probably the highest liability in a facility's operating statement. Vendors, ushers, ground crews, and security makeup a considerable payroll. Repairs and maintenance vary from one stadium to another, but can escalate with unforeseen breakdowns and periodic facelifts. Big market stadiums tend to use substantial amount of water and electricity. Other expenses are accrued due to insurance, contract fees, and parking facility upkeep.

Breaking Even

In many of the cities that own their own sporting complex, the goal is for the operating budget to break even. If the facility can draw enough fans to keep it from losing money it won't need support from the municipal budget. The city offers will also be bolster through tax revenue collected prospering businesses associated with stadium goers.

Financing

During the Classic Ballpark Era, mentioned in Chapter One, ballparks were usually built by the owner of the franchise. This allowed the team to reap all of the profits accrued because of the games' attendance. As team payroll and building expenses sky-rocketed the old time monopolization of team and stadium gave way to municipal financed complexes. In recent years, more creative ideas have been used to help minimize the tax burden for debt repayment of stadium construction and renovation. The primary sources of stadium and arena financing are through advertisements, tax and bond revenues, and luxury seat advanced sales.

Advertisements

The sale of advertisement rights in a stadium to cover debt is quite popular. Scoreboard messages and display signs throughout the facility can raise considerable revenues. Pittsburgh's Three River Stadium leases 15 signs for 10 years at \$100,000 each.

The sale or lease of the stadium's name to a corporation can collect a large amount of upfront capital. Buffalo's Rich Stadium received a 1.5 million dollar gift from the Rich corporation for its name being incorporated into the facility name.

Tax and Bond Revenues

There are a few creative ways to transfer the burden of a sports complex construction debt to the tax payers and patrons of the facility. These methods include

the use of bonds. A community's general fund can be tapped annually through the use of a general obligation bonds. By defining revenue sources such as facility profits, hotel taxes, and admission taxes, a city may be able to secure a revenue bond. If the municipality wishes to pledge the net increases of property taxes, it can secure a tax increment bond.

Combinations of bond arrangements may be used to provide enough funds for stadium construction. For instance, both Arrowhead and Royals Stadiums (Harry S. Truman Sports Complex) in Kansas City, Missouri were funded with 78% in general obligation bonds and 22% in revenue bonds.

Luxury Boxes and Seat Preference Bonds

The advance purchase of season tickets for prime viewing seats and luxury boxes has become popular to many corporations as a means of entertaining business associates. It has also become a necessary means of raising funds for stadium reconstruction and renovation.

Effects on Local Economy

Since the early 1980's city officials and local business leaders in many communities have begun showing increased interest in obtaining major league franchises. The goal of these communities is in most cases a "concerted effort to capitalize on America's infatuation with sports" (Macnow 1989: 48).

The business of baseball, as in any industry, is ruled by the economic principles of supply and demand. These basic axioms are highlighted by the more complex theory of multiplier spending effects. An understanding of these measurements are imperative in the recognition of economic impact in a baseball marketplace.

Supply and Demand

A baseball team is a business that supplies a product, a baseball game, to its customers, the fans. The team performs in 162 games a year, half in its facility at home and half at its opponents ballpark. The baseball customers consume the product by attending the team's facility or by viewing it through a licensed supplier, the television networks. As in any other market, the demand for the product is effected by its quality. In baseball's case a team's quality is proportional to its winning percentage.

Obviously other factors play upon this economic model. The demand by fans to see specific teams and favorite players perform will fluctuate throughout the season. The point at which this theory differs from classic macro economics is the determination of the price. In a supply and demand graph, the intersection of the two curves determine price and quantity. In a baseball season these two determinates are usually constant, while the curves shift.

Multiplier Effect

A successful sports complex can be a catalyst to its surrounding economy. Hotels, restaurants, and specialty shops thrive in the vicinity of stadiums due to the spending potential possessed by thousands of people attending its events. The money spent by fans in a ballpark marketplace is transferred to the local employees of the various enterprises.

Each reinvestment of these earnings within the local market is referred to as a spending round. The larger and more diverse a local economy is the more spending rounds will occur. This principle is called spending multiplier effect, shown in Table VII. The analysis of this recursive function is critical to the measurement of economic impact of a ballpark in a city.

Table VII..Estimated Direct Economic Impact per Visitor

Average Expenditure per Day	\$30 (or less)
Percent Requiring Overnight Accommodations	5-10% (or less)
Weighted Average Length of Stay (Days)	NA
Total Direct Economic Impact	\$35 (or less)
Relative Degree of Impact through New Dollar Generation	Low

(Shown in 1984 Dollars)

Economic Impact

As previously stated, the influence of a major sports facility will be demonstrated in the generation of new businesses in the encompassing area. On the flip side, the raising of such complexes can have detrimental effects on the immediate community.

The pros and cons must be carefully weighed before embarking on the stadium business. While a public assembly facility can revitalize a metropolitan district and create jobs, it may also cause additional costs for municipal services (waste disposal, police, sewer and water, etc).

Chapter Five

The Case Study of Fenway Park in Boston, Massachusetts

Introduction

The basis for the survival of Fenway Park has rested on its historic and nostalgic laurels. But that may change. The State of Massachusetts has been examining the possibility of building a domed stadium for the NFL's New England Patriots. The inclusion of the Red Sox as a summer tenant may be too alluring for the franchise to pass up. Fenway Park has the lowest seating capacity in the Major Leagues and to fill it during the chilly Boston spring and fall seasons becomes a difficult task when the team is not winning. A domed stadium would eliminate weather and seating limitations while offering the city a chance to host huge money making events like the Super Bowl and the All Star Game.

The goal of the chapter is to develop a list of criteria from which an evaluation of the three viable alternatives currently available to the Red Sox organization can be examined. This list which is based on the previously discussed design and financing issues is developed specifically for Fenway Park but is designed to provide guidelines for examining various options for any ballpark.

Existing Fenway Park

Fenway Park, home of the American League's Boston Red Sox opened on April 20, 1912. The original owner, John Taylor, had the ballpark built on the site

of the former marsh called the Fens, hence the name Fenway. Osborn Engineering designed Fenway along with many of the other parks built during the classic ballpark era. As perceived by the size and shape of the ballpark, it is easily determined that the park was incorporated into an existing urban network which in turn has a major influence on its design. These metropolitan limits placed on the ballpark added to its character.

The denial by the City of Boston to permit the Red Sox organization to expand Fenway Park's left field onto Lansdowne St. led to the creation of a 37 ft tall wall to prevent easy home runs. This wall, now known as the "Green Monster," is probably the most recognizable icon in baseball venues today. Trends in the regenerated classic design now try to imitate the icon concept in the hopes of providing television views instance recognition of where the game is being played. Besides character these icons, like the "Green Monster" often create asymmetrical playing fields that effect the way the game is played.

Still in use today by the Red Sox organization, the ballpark's capacity has been reduced from 35,000 in 1912 to 34,171 in 1991 with the inclusion of such things as box club seating, known as the 600 Club, in 1988. It boasts the smallest foul territory in the Majors. The playing surface is still bluegrass.

During refurbishing in 1934, a four-alarm fire broke out destroying most of the renovations, but damage was repaired in time for opening day. Since then the installation of other amenities such as the lights that were installed in 1947 and the electric message board of 1976 have gone much smoother. One thing that has not

succumbed to modern technology is the manual scoreboard located out on the left field wall.

Future Planning Criteria

Listed below are the potential alternatives for the fate of Fenway Park. The descriptions presented are general recommendations which just outline some of the possibilities and should be examined in much more detail before anyone even attempts to determine the fate of Fenway and the Red Sox organization. The list of criteria used in this investigation was derived from the previous design and financing chapters. It is comprised of three main categories: development strategies, design and site issues, and financing which consist of the following criteria: location, parking access, location in relation to support facilities, and financing. These design and financing were chosen to be the most important criteria with regards to the Red Sox and their service area.

Alternative

Provided below is a brief overview of the three most viable options currently available to the Red Sox. The alternatives listed include the New Stadium, Combined Stadium, and Renovation and Restoration of Fenway.

New Stadium

A decision to build a new home for the Boston Red Sox would be a difficult one to make. After the debate between nostalgic fans and modern developers ensued a style, site, and design plan for a new facility would have to take place. Let's face it Fenway Park is a tough act to follow.

Development Strategy

If it is decided that Fenway Park is no longer viable to serve the Boston Red Sox and their fans, then plans for a new stadium must be made. In a case such as this it would behoove the City of Boston to mimic the efforts of the City of Baltimore in their construction of Oriole Park at Camden Yards. The two metropolitan areas have similar geographic and demographic make ups. Not to mention, both towns are filled with a rich baseball tradition.

Baltimore used the construction effort to rejuvenate a deteriorating waterfront district and to ensure the longevity of its major league franchise. Boston however will be primarily concerned with providing a more integrated municipal facility. The alleviation of traffic congestion and parking shortages coupled with an increase in seating capacity will hopefully result in higher attendance figures and more revenue for the city. Baltimore and Toronto have attracted over 4 million fans each year since their new parks opened. Fenway Park has averaged approximately 2 million attendance for the last 10 years. While this figure is considered successful, it is limited by the capacity of the league's smallest park.

Design and Site Issues

Boston like Baltimore would be looking to start fresh. If done right, a new ballpark in Boston could attract new fans and corporate sponsors, while still attending to the nostalgia of current followers. Therefore, developers should look to embrace the Regenerated Classic architectural style for the Red Sox new home. The new design should encompass asymmetrical quirks like the ones that made its predecessor so revered. Besides the aesthetic feel that these amenities evoke in the ballpark goer, they also create an instant visibility through the eyes of the media.

The proposed ballpark should be conducive to the game of baseball. This means that it should be an open-air field with real grass. To keep the fans close to the action, the foul territory should be minimized.

The new facility, while Classic in style would be modern in design. The stadium should have a capacity of between 45 and 50 thousand. This could be accomplished through the use of upper deck seating structures. An array of luxury suites would be marketed very successfully in the Boston business district.

A ballpark of this capacity should be built as close as possible to one of the city's major traffic arteries and if possible it should straddle the Boston metropolitan rail transportation system (MBTA). The on site parking should hold approximately 10,000 cars. These facilities could be used by baseball fans at night and by the business community during the weekdays.

Financing

The total cost of a comparative structure to the one proposed is approximately \$50 million. Site acquisition and preparation costs will vary from location to location. Sometimes land may be swapped for development rights in the area surrounding the facility.

The advanced sale of advertising rights and luxury suites could provide sufficient start-up capital for the project. The balance of the debt could be compensated with funds raised through revenue bonds and local hotel and restaurant tax.

Megaplex

Since the ill-planned, beer-named, cement stadium went up in Foxboro, MA, there have been nothing but complaints. Shaeffer Stadium (now Sullivan Stadium) did nothing for beer for which its named and has done less for the team that calls it home. Besides the cold metal benches, a lack of parking, and the arctic winds that blow through its wind tunnel design, the stadium's accessibility is limited to the two lane highway on which it was built. Although the road is not far from two major interstate throughways, the wait for the 60,000 fans to funnel out is less than desirable.

Currently, the New England Patriots are on the NFL auction block. Relocation threats have been made by perspective buyers that plan to purchase the

team and move it to a town with a better facility. New owners are demanding that a new domed facility be constructed in the Boston metropolitan area.

This proposal has come at a time when the Boston Red Sox may be willing to sign on to a new stadium lease. As the current Fenway Park's amenities continue to deteriorate, the temptation to maximize gate revenues may become too strong to ignore. A domed facility would shelter baseball fans and players during the inclement spring and fall evenings. The arena would be a perfect structure to attract special events like the All-Star game and the Super Bowl. The worth of dual sport Megaplex to the Red Sox, Patriots and the City would be significant.

Development Strategy

Although the primary uses for the Megaplex would be for football and baseball, the potential to attract other money making entities should be considered. Another major sporting resource to fill the area could come from NCAA. Hosting a major collegiate bowl game or the NCAA Division I Final Four Basketball Tournament would generate huge revenues in the city of Boston. The new building could also be used to accommodate conventions.

With this in mind, representatives of prospective clients should be included in the facility's design process. Members of the community and supporters of the teams should also be included in this sort of advisory committee. The concept of community brainstorming, ensures that each special interest is heard before construction. This will cut down on the amount of complaints received afterwards.

Design and Site Issues

The seating capacity of the Megaplex should be greater than a conventional stadium. It should be able to house up to 80, 45, and 30 thousand for football, baseball, and small court sports respectively.

The cost of constructing such a facility will vary immensely. The bottom line will depend on figures covering site acquisition and construction fees. Site acquisition costs will obviously depend on the location selected. A domed stadium of this size would require 50-150 acres of land depending on the amount of parking provided. The closer to the city the more the land will cost. In similar situations across the country, the land for arenas and stadiums is donated by real estate investors in exchange for the rights to develop the area surrounding the complex.

The construction of the stadium itself will hinge on the design method chosen. Domed complexes with hard surface roofs will draw construction costs of \$100-150 million (New Orleans's Superdome or Seattle's Kingdome). Comparatively sized complexes with air-supported translucent roofs will cost about half as much (The Minneapolis Hubert Humphrey Metrodome and the Indianapolis Hoosier Dome). Building a dome that retracts or moves can triple the costs to erect an indoor stadium. The City of Toronto boasts baseball's only retractable roof stadium. It also must carry the debt of its \$500 million dollar price tag.

A stadium of this size should be located adjacent to one of the city's major traffic arteries. The incorporation of a commuter rail station (MBTA) into the design of the Megaplex could be part of the solution to the human logistic problems the city

will face (much like the way the Boston Garden and North Station are the same building today). The parking volume will depend on the land availability at the site. These lots could double as commuter lots during the week.

Financing

The Megaplex project could cost as much as \$200 million to construct. The State of Massachusetts is not economically positioned to expend that amount of funds. To finance start-up costs, the Patriots and Red Sox should solicit the use of luxury suites. The 161 luxury boxes bring in \$35 million annually. The future sale of seats and advertising rights could help the project get off the ground. Grants from the federal government may be obtained in an effort to seed the heavily unemployed region with good jobs. The bulk of the project however will have to be financed through the use of bonds. Massachusetts citizens already pay a weighty income and property tax. The use of tax increment bonds could easily end the political futures for those on Beacon Hill who attempt their implementation. The repeated deficits suffered by Boston and Massachusetts render general obligation bonds useless. A creative use of revenue bonds must be used to offset Megaplex debt. Taxes on admission, hotel rooms, and concessions could supplement the annual proceeds accrued by the stadium.

Renovation and Restoration of Fenway

For baseball enthusiasts this would be the most popular solution. Structurally, Fenway Park is in fine shape due to its regular maintenance (Steinbreder). Functionally it's awkward. Like many of the parks build during the classic era, Fenway has been augmented piece-by-piece over the past 80 years. If Fenway is to survive the economic pressure of major league baseball, it must increase its capacity from the current 34,142 to at least 45,000. To accomplish this, Fenway's current grandstands must be raised to give way to a multi-level viewing area.

Development Strategy

The effort will require a re-development strategy. If Fenway is to be gutted, a temporary home for the Red Sox will have to be found. The nearby Braves Field, now the Boston University football stadium, could be temporarily conformed to host baseball again. A scheduling of games at some of the Red Sox's nearby minor league ballparks could help to bolster fan support while providing a place to play.

The main objective in a renovation of this magnitude is to preserve as much nostalgia as possible. Although much of the grandstand must be removed, it would be possible to leave much of the playing field and bleachers in tact.

Design and Site Issues

The new grandstands should have more comfortably spaced seating. These seats should also be free of obstructed views. The use of advanced concrete

structures could enable designers to build upperdecks and increase the amount of Luxury suites. These design improvements would give Fenway Park the amenities it needs to compete in today's baseball market.

The only major problem that needs to be solved is parking. Most of the parking in the area around Fenway, is privately owned. This free enterprise allows for price gouging at the expense of the fans. The increase of 10,000 seats will create a greater demand for presently inadequate parking that already exists.

Planners should investigate improvements to municipal transportation and additions to area parking. The close proximity of MBTA rail lines (behind the Park parallel to Lansdowne St.) gives potential to the addition of a bigger subway station. This would drastically decrease the post/pre-game congestion suffered in the Kenmore Square T-station. The acquisition of real estate in the Fens area should be a priority of the city. As buildings deteriorate over the next few decades, the land that they occupied should be bought. Both the improvement of rail service and the gradual increase of parking will allow Fenway to operate indefinitely.

Financing

Ironically the site preparation costs for a Fenway renovation would be considerably more than those for a new stadium. The demolition of the present facility and the removal of the waste could cost as much as \$3 million dollars. The construction cost of the new grandstands however should not exceed \$50 million.

Because of the preservation-like nature of a Fenway renovation, designers may be able to receive charitable corporate contributions as well as federal grants to offset debt. The financial state of Massachusetts and Boston will inhibit politicians from using general obligation or tax increasing bonds. The use of revenue bonds bolstered by luxury box sales would have to be used to finance the majority of the facility's debt.

Discussion and Evaluation of Alternatives

Based upon the previously discussed options presently available for each alternative, it is necessary to evaluate the specific issues which will potentially have the biggest impact for the Red Sox organization. These criteria which include location, parking, access, location in relation to support facilities, and financing, will be addressed in an effort to outline a method for choosing an alternative. This process will also lay out the complexity of making a choice under even the most general of conditions.

Table VIII provides a matrix of the issues which are most likely to have the greatest impact on each of the alternatives. The classification used in this system goes from 1-6 with 1 having the least impact and 6 having the greatest impact.

Location

The importance of location with regards to this examination is derived from the stand point of where a new stadium or megaplex would be located. Renovation of

the existing facility on the other hand would not be impacted at all by location because the site has already been established. At the other extreme is the megaplex which would be most highly impacted by location since this facility would probably require the largest land area.

Parking

The effects of parking on each of the alternatives would be virtually none existant for the new stadium design and the megaplex since they would be required as part of the design and site acquisition. The renovation of the existing facility would be most effected by parking. While there is a definite impact on the existing facility, the effects are minimized by the availability of other parking alternatives and means to access the games.

Access

The issue of access as it relates to this evaluation appears to appears to have the same impact on all three of the alternatives presented. This is because the two "new build" alternatives would most likely be located next to major transportation arteries for easy access and egress to and from the facility. The existing park on the other hand may not have as direct access to the transportation network, but it very accessable to the urban workers and dwellers of Boston.

Location in Relation to Support Facilities

Although none of the alternatives discussed in this chapter are critically affected by their location in relation to support facilities, the two new designs must ensure proper placement for full use of all the amenities currently available in the New England metropolitan region. Renovation of the existing Fenway Park would not have to focus on this concern because it is currently located within easy access to a variety of amenities such as public transportation, hotels, and restaurants.

Financing

The impacts of financing on these three sports facilities are evaluated by their overall cost for construction. Using this method, the megaplex would obviously cost the most and the renovation of Fenway would cost the least. This method of examination should be typically evaluated in much more detail to ensure that all aspects of financing and long term commitments be fully examined.

Table VIII..Evaluation of Alternatives

ALTERNATIVE	NEW STADIUM	MEGAPLEX	RENOVATION AND RESTORATION OF FENWAY
Location	3	6	1
Parking	1	1	3
Access	3	3	3
Location in Relation to Support Facilities	3	3	1
Financing	3	6	1

Least Impact = 1

Greatest Impact = 6

Conclusion

Upon completion of this research paper it was determined that the most appropriate alternative for the Red Sox organization is for a complete renovation and restoration of Fenway Park. While there are many reasons for the this choice, the most influential factors in reaching this decision are derived from the historic value of Fenway Park, and current trends which try to recreate the classic parks. The importance of preserving these parks for Major League use was best stated in a plea by John Pastier in the Historic Preservation Magazine, "Now that Baltimore has shown the strengths and limitations of contextual neotraditional ballpark design, it is important that none of the three remaining classic parks be sacrificed to less intimate

replacements built at public expense. Wrigley Field, Fenway Park, and Tiger Stadium are national treasures and deserve continued existence by virtue of their accumulated history, their distinctive forms, and their ability to put fans far closer to the game than any recent ballpark. Too long overlooked by the preservation movement, these capacious and functional landmarks- public buildings in the truest sense- must not be permitted to vanish like their cohorts" (Pastier 1993: 85).

In closing, the reason for America's infatuation with baseball will never be fully understood, but maybe the following quote will present a little insight into understanding it. "It is designed to break your heart. The game begins in the spring, when everything else begins again, and it blossoms in the summer, filling the afternoons and evenings, and then as soon as the chill rains come, it stops and leaves you to face the fall alone. You count on it, rely on it to buffer the passage of time, to keep the memory of sunshine and high skies alive, and then just when the days are all twilight, when you need it most, it stops" (Lowry 1992: i).

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