

AN ANALYSIS OF THE AMERICAN OUTDOOR SPORT FACILITY:
DEVELOPING AN IDEAL TYPE ON THE EVOLUTION OF PROFESSIONAL
BASEBALL AND FOOTBALL STRUCTURES

DISSERTATION

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By

Chad S. Seifried, B.S., M.Ed.

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Dissertation Committee:

Professor Donna Pastore, Advisor

Professor Melvin Adelman

Professor Janet Fink

Approved by

Advisor
College of Education

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ABSTRACT

The purpose of this study is to analyze the physical layout of the American baseball and football professional sport facility from 1850 to present and design an ideal-type appropriate for its evolution. Specifically, this study attempts to establish a logical expansion and adaptation of Bale's Four-Stage Ideal-type on the Evolution of the Modern English Soccer Stadium appropriate for the history of professional baseball and football and that predicts future changes in American sport facilities. In essence, it is the author's intention to provide a more coherent and comprehensive account of the evolving professional baseball and football sport facility and where it appears to be headed.

This investigation concludes eight stages exist concerning the evolution of the professional baseball and football sport facility. Stages one through four primarily appeared before the beginning of the 20th century and existed as temporary structures which were small and cheaply built. Stages five and six materialize as the first permanent professional baseball and football facilities. Stage seven surfaces as a multi-purpose facility which attempted to accommodate both professional football and baseball equally. Finally, stage eight demonstrates a breaking away from the multi-purpose facility back to the single-purpose structure.

This work proposes professional baseball and football sport facilities were limited in some manner by their location. However, economic goals mainly drove the professional sport facility to evolve. Thus, professional sport facilities transformed from temporary to permanent structures into magnificent theatres once baseball and football matured and sport entrepreneurs could depend on people spending more of their disposable income and leisure time within them.

Finally, this work holds professional sport facilities grew to accommodate larger crowds and incurred modifications which made them into highly effective selling machines. Ultimately, this piece demonstrates the history of professional sport facility development, in essence, is the story of man's eager search to make human interaction easier and more pleasurable in a permanent environment. Future professional sport facilities will likely continue these trends but should pay attention to other considerations such as reducing the massive costs associated with the increasingly growing structures.

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VITA

November 19, 1974 Born – Lancaster, Pennsylvania

1998 B.S. Exercise and Sport Science,
The Pennsylvania State University

2001 M.Ed. Sport Administration,
The University of Louisville

2002 - present. Graduate Teaching Associate,
The Ohio State University

PUBLICATIONS

Research Publication

1. Seifried, C.S. (May/June 2005). Using Videotaped Athletic Contests Within Mosston's Teaching Methods. *Journal of Physical Education, Recreation, & Dance*, 76 (5), 36-38.
2. Seifried, C.S. (September/October 2004). Maximize Success in Basketball with a Complete Scouting Report. *Strategies*. 18 (1), 26-29.
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Major Field: Education

TABLE OF CONTENTS

SECTION	PAGE
ABSTRACT.....	ii
ACKNOWLEDGEMENTS	iv
VITA	vii
LIST OF TABLES	xi
LIST OF FIGURES	xiv
 CHAPTER 1- INTRODUCTION	 1
Introduction	1
Purpose of Study	7
Research Questions	14
Outline of Chapters	15
Rationale for Subject Selection	18
Definition of Terms	22
Significance	26
Limitations	33
 CHAPTER 2- METHODOLOGY	 36
Introduction	36
Research Design and Methodology	38
Primary and Secondary Sources	40
Historical Criticism	43
Data Collection and Analysis	47
Ideal-type	52
 CHAPTER 3- TEMPORARY BASEBALL AND FOOTBALL FACILITIES ...	 61
Introduction	61
The Earliest Areas of Play	66
Massachusetts Townball and the New York Area's Elysian Fields	69
The Introduction of Football	76
Conclusion for Stage Two	80
Early Enclosures and Union Baseball Grounds	83
The Cincinnati Red Stockings, Sport Entrepreneurs, and Professional Leagues ...	88
Football Becomes Professional	94

Conclusion for Stage Three	96
Increasing the Complexity: Expansion and Renovation Efforts	102
Fires and Collapses	105
Crowd Control	108
Conclusion for Stage Four	113
 CHAPTER 4- THE FIRST PERMANENT SPORT FACILITIES: 1903-1952	 117
Introduction	117
Bigger and Bolder Sport Facilities: An Investment in Concrete and Steel	125
Harvard Stadium and the First Permanent Sport Facilities	127
Location, Location, Location	131
Conclusion for Stage Five	139
Introduction to the Superstadium	148
The Power of Ruth and a new Baseball	151
Expansion and Renovation: Accommodating the more Spectacular Event	158
Night Lights and the Press	163
Conclusion for Stage Six	172
 CHAPTER 5- THE LATE MODERN ERA: 1953-1991	 179
Introduction	179
The Impact of Television	186
Distinctive Structures of Stage Seven Facilities	194
A Change of Scenery	209
The Free Standing Superstadium	215
Minor League No More	218
Conclusion for Stage Seven	222
 CHAPTER 6- THE POST MODERN BALLPARKS: 1992-PRESENT	 238
Introduction	238
Latent Structures of Stage Eight Facilities	248
Overt Structures of Stage Eight Facilities	252
Technological Innovations Shaping Stage Eight Facilities	258
Conclusion for Stage Eight Facilities	269
 CHAPTER 7- CONCLUSION	 273
Eight Stage Ideal-type	273
Future Recommendations for Professional Sport Facilities	286
Extensibility: Attending Games at Home and in the Home	293

APPENDICES

A	Pre-modern Era	302
B	Early modern Era	313
C	Late modern Era	343
D	Post modern Era	372
E	Eight stage Ideal-type for Evolution of Professional Sport Facility	386

LIST OF REFERENCES	390
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LIST OF TABLES

TABLE	PAGE
1.1 Current MLB new constructions/renovations since 1989	5
1.2 Current NFL new constructions/renovations since 1989	6
2.1 Alternate sport facility names	52
4.1 Major League Baseball parks hosting professional football	123
4.2 College/High School and municipal stadiums and professional football ...	124
4.3 Home runs per year in ballparks pre-1903	154
4.4 Home runs per game in each major league	156
Appendix A Pre-modern Era	
A.1 Pre-modern seating capacity	302
A.2 Pre-modern construction costs	305
A.3 Pre-modern dimensions	306
A.4 Pre-modern ballpark estimated lifespan and location	308
Appendix B Early Modern Era	
B.1 Rival major league baseball attendance	314
B.2 National League (NL) attendance	315
B.3 American League (AL) attendance	319
B.4 Early Modern new construction dimensions	322

B.5	Early Modern new construction costs	324
B.6	Early Modern new construction capacities	326
B.7	Surface area of early modern	329
B.8	Length of early modern new construction	330
B.9	Renovation costs to early modern	331
B.10	Dimensions of early modern renovations	332
B.11	Early Modern renovation capacities	334
B.12	Early Modern estimated lifespan and location	336

Appendix C Late Modern Era

C.1	Rival professional football league attendance.....	344
C.2	NFL attendance 1934 to present	345
C.3	Restrooms of Late Modern new constructions	347
C.4	Estimated Late Modern concession stands	348
C.5	Luxury seating of Late Modern era	349
C.6	Surface area of Late Modern era	351
C.7	Onsite parking Late Modern	352
C.8	Dimensions of Late Modern	355
C.9	Seating capacity of Late Modern	359
C.10	Construction costs of Late Modern	363
C.11	Late Modern Facilities list and location	366

Appendix D Post Modern Era

D.1	Restrooms and concessions of Post Modern	373
-----	------------------------------------------------	-----

D.2	Disabled seating Post Modern	374
D.3	Luxury seating Post Modern	375
D.4	Surface area Post Modern	377
D.5	Construction Costs Post Modern	378
D.6	Seating capacity Post Modern	380
D.7	Post Modern facilities list and location	382

LIST OF FIGURES

<u>FIGURE</u>	<u>PAGE</u>
2.1 Bale (2001) 4-stage Model of Stadium Evolution	60
3.1 Stage 1 Facility development	67
3.2 Massachusetts version of baseball	71
3.3 New York version of baseball	74
3.4 Stage 2 football Facility development	82
3.5 Stage 3 Facility development	99
4.1 Stage 5 Facility development	139
4.2 Stage 6 Facility Development	173
5.1 Stage 7 Facility development	236
6.1 Stage 8 Facility development	272
Appendix D	
D.1 Eight-stage ideal-type on evolution of American sport facility	387

CHAPTER 1

INTRODUCTION

Introduction

The names Lambeau Field, Yankee Stadium, and Fenway Park conjure up numerous emotions and sensations within the imagination of millions of people because of the many unique experiences each owns with these particular professional sport facilities. However, civic monuments, like these, produce few if any tangible benefits for their communities (Baade & Dye, 1988; Bess, 1999; Blickstein, 1995; Euchner, 1994; Noll & Zimbalist, 1997; Progressive Architecture, 1971).

Consequently, all sport facilities' value first resides in their ability to capture the attention of social beings with elements of marvel and astonishment. Within the sporting event, uncertainty of the outcome, representation of real life issues, overcoming of obstacles, and promotion of national or local pride produces dramatic and vivid episodes most forms of leisure or recreational activity simply cannot (Euchner, 1994; Keenan, 1973; Sheard, 2001; Worman, Levy, & Katz, 1972). In essence, professional sporting structures serve to regularly captivate an entire group of people in physical and virtual/remote attendance because the memorable events taking place inside provide moments of monumental euphoria and enormous disappointment

(Sheard, 2001). Ultimately, outdoor professional sport facilities, such as these, arguably act as one of the most significant structures of the modern world because they stand as tributes to the evolving and increasingly complex nature of human society.

Baker (1967) described American sport as an, “opiate for the masses,” and other scholars posit sport facilities hosting professional organizations offer much to their community because they present opportunities for individuals to come together to enhance community togetherness (Bale, 2001; Lomax, 2003; Sheard, 2001).

Interestingly, the sport facility probably exists as one of the few bastions where people can scream and yell without apprehension or fear of retaliation to encourage such togetherness. Thus, many Americans appropriately consume sport everyday in some manner about professional teams or individuals (Pope, 1998). Accordingly, both men and women increasingly find themselves intensifying their passive participation, as a spectator of sporting events or activities (Adelman, 1986; Pope, 1998; U.S. Department of Health and Human Services, 1996).

Obviously, the professional sport facility operates as a central landmark to communities, as a representative of its local athletic and competitive traditions. The idea professional sport facilities act as important symbols of cities and communities in this manner is not new. For instance, many scholars suggest the professional sporting structure represents cities and communities all over the country much like the railway, cathedral, or skyscraper did in America’s past (Bale, 2001; Bess, 1999; Euchner, 1994; Sheard, 2001). However, history shows us the professional sporting structure

also materialized to service the needs of those who occupy it. Essentially, sport facilities possess persist with a tremendous ability to generate large amounts of revenue for sport owners or organizations (Bess, 1999; Euchner, 1994; Noll & Zimbalist, 1997). Therefore, we see the professional sport facility transform from a place to play and showcase competition into a “tradium” which seeks to encourage and maximize the spending of all individuals in attendance (Bale, 2001). In effect, as Lowery (1986) contends, economic forces prompted professional sport facilities to evolve from temporary to permanent structures.

Ultimately, the existing frenetic pace, at which cities, colleges, and private investors build and renovate sport facilities, although remarkable, is not surprising. For example, Howard (1999) revealed between 1990 and 1999 over 120 sport venues were built or critically renovated in the United States for around sixteen billion dollars. Other reports also show the late 1990s supporting at least four to seven billion dollars worth of professional sport facility construction (Bernstein, 1998; U.S. News & World Report, 1996). The outcome produced by this recent construction period shows us more than half of Major League Baseball (MLB) and National Football League (NFL) organizations will compete in facilities built or completely renovated after 1989 (See Table 1.1 and 1.2).

However, as stated above, most new and renovated construction provides little real or observable tangible benefits to their surrounding communities, who will likely pay for their existence (Baade & Dye, 1988; Bess, 1999; Euchner, 1994; Noll & Zimbalist, 1997). Therefore, extreme and massive additional costs characterize many

of the newer sport facilities, like those in Houston (Minute Maid Park and Reilant Stadium), Phoenix (Bank One Ballpark), Milwaukee (Miller Park), and Seattle (Safeco Field), where retractable roofs contributed an estimated \$170 million in additional costs to the facility price tag along with annual maintenance expenditures of at least \$300,000 a year (Sharma, 1999). Bess (1999 pp. iii) suggests these outrageous costs and inconsequential paybacks occur for two reasons: 1) the unwillingness and inability of city administrators to devise appropriate limitations on sport team owners; and 2) poor architectural design which increases facility volume nearly 500 percent from previous building projects. Likely, this particular era of professional sport facility construction owes its current architectural designs towards a focus on accommodating all the needs of the owners, players, and spectators equally. Today's sport spectator expects more entertainment from their attendance at a sporting event but entertaining the invitees in a satisfactory manner and the demands of high paid athletes is not cheap. Resultantly, professional sport facilities will likely become important architectural structures for study in the 21st century like religious buildings, railway stations, and skyscrapers were in the past.

MLB (AMERICAN)	LOCATION	YEAR BUILT OR LAST RENOVATION
AMERIQUEST FIELD	ARLINGTON, TX	1994
ANGEL STADIUM	ANAHEIM, CA	1999
COMERICA PARK	DETROIT, MI	2000
FENWAY PARK	BOSTON, MA	1912
JACOBS FIELD	CLEVELAND, OH	1994
KAUFFMAN STADIUM	KANSAS CITY, MO	1973
H.H. HUMPHREY METRODOME	MINNEAPOLIS, MN	1982
NETWORK ASSOCIATES COLISEUM	OAKLAND, CA	1996
ORIOLE PARK	BALTIMORE, MD	1992
SAFECO FIELD	SEATTLE, WA	1999
TROPICANA FIELD	ST. PETERSBURG, FL	1990
U.S. CELLULAR FIELD	CHICAGO, IL	1991
YANKEE STADIUM	BRONX, NY	1976
MLB (NATIONAL)	LOCATION	YEAR BUILT OR LAST RENOVATION
BANK ONE BALLPARK	PHOENIX, AZ	1998
BUSCH STADIUM	ST. LOUIS, MO	1996
CITIZENS BANK PARK	PHILADELPHIA, PA	2004
COORS FIELD	DENVER, CO	1995
DODGER STADIUM	LOS ANGELES, CA	1962
GREAT AMERICAN BALLPARK	CINCINNATI, OH	2003
MILLER PARK	MILWAUKEE, WI	2001
MINUTE MAID PARK	HOUSTON, TX	2000
PETCO PARK	SAN DIEGO, CA	2004
PNC PARK	PITTSBURGH, PA	2001
JOE ROBBIE STADIUM	MIAMI, FL	1987
SBC PARK	SAN FRANCISCO, CA	2000
SHEA STADIUM	FLUSHING, NY	1964
TURNER FIELD	ATLANTA, GA	1997
WRIGLEY FIELD	CHICAGO, IL	1914

Table 1.1 (Current Major League Baseball Stadium List) shaded area recognizes those facilities built or renovated 1989 to present

NFL (NATIONAL)	LOCATION	YEAR BUILT OR LAST RENOVATION
BANK OF AMERICA STADIUM	CHARLOTTE, NC	1996
CANDLESTICK PARK	SAN FRANCISCO, CA	1969
EDWARD JONES DOME	ST. LOUIS, MO	1995
FED EX FIELD	WASHINGTON, D.C.	1997
FORD FIELD	DETROIT, MI	2002
GEORGIA DOME	ATLANTA, GA	1992
GIANTS STADIUM	EAST RUTHERFORD, NJ	1976
LAMBEAU FIELD	GREEN BAY, WI	2003
LINCOLN FINANCIAL FIELD	PHILADELPHIA, PA	2003
H.H. HUMPHREY METRODOME	MINNEAPOLIS, MN	1982
RAYMOND JAMES STADIUM	TAMPA BAY, FL	1998
QWEST FIELD	SEATTLE, WA	2002
SOLDIER FIELD	CHICAGO, IL	2002
SUN DEVIL STADIUM	TEMPE, AZ	1958
LOUISIANA SUPERDOME	NEW ORLEANS, LA	1975
TEXAS STADIUM	IRVING, TX	1971
NFL (AMERICAN)	LOCATION	YEAR BUILT OR LAST RENOVATION
ALLTEL STADIUM	JACKSONVILLE, FL	1995
ARROWHEAD STADIUM	KANSAS CITY, MO	1972
CLEVELAND BROWNS STADIUM	CLEVELAND, OH	1999
GIANTS STADIUM	EAST RUTHERFORD, NJ	1976
GILLETTE STADIUM	FOXBORO, MA	2002
HEINZ FIELD	PITTSBURGH, PA	2001
INVESCO FIELD	DENVER, CO	2001
M&T BANK STADIUM	BALTIMORE, MD	1998
NETWORK ASSOCIATES COLISEUM	OAKLAND, CA	1996
PAUL BROWN STADIUM	CINCINNATI, OH	2000
JOE ROBBIE STADIUM	MIAMI, FL	1987
QUALCOMM STADIUM	SAN DIEGO, CA	1997
RCA DOME	INDIANAPOLIS, IN	1983
RALPH WILSON STADIUM	BUFFALO, NY	1999
RELIANT STADIUM	HOUSTON, TX	2002
THE COLISEUM	NASHVILLE, TN	1999

Table 1.2 (Current NFL Stadium List) shaded area recognizes those facilities built or renovated 1989 to present

Purpose of the Study

The purpose of this study is to analyze the physical layout of the American baseball and football professional sport facility from 1850 to present and design an ideal type appropriate for its evolution. Specifically, this study hopes to establish a logical expansion and adaptation of Bale's Four-Stage Ideal-type on the Evolution of the Modern English Soccer Stadium that is appropriate for the history of professional baseball and football and that predicts future changes in American sport facilities. In essence, it is my intention to provide a more coherent and comprehensive account of the evolving professional baseball and football sport facility and where it appears to be headed.

The conceptual foundation for most of the study's substance stems from the ideas of a number of social and cultural geographers and sport historians who possess immanent knowledge about sport history, modernization, urbanization, and territoriality. These individuals commonly possess a fondness for distinct places and their environments and therefore, their writings will be passionate, thorough, and overall quite helpful in this study. For example, in exceptional occasions, I found cultural geographers, like Robert Sack (1986), relating sport to their thoughts and conclusions on human territoriality.

The introductory study of modern stadium evolution begins with the work of John Bale (2001) in *Sport, Space, and the City*. In this book, John Bale offers a serious perspective on the evolution of sport facility construction. Specifically, he creates a broad overview of the layout of English soccer stadiums and establishes how

and why these facilities evolved. Therefore, in what can best be described as an ideal-type, Bale (2001) proposes the modern stadium evolved from open space to enclosed grounds. The ideal-type concept, which will be more fully described in Chapter two along with Bale's ideal-type, basically simplifies real world happenings into flexible stages in order to aid understanding about facility change. In contrast to theoretical models, the ideal-type appears more appropriate because it relaxes its borders between stages and seeks to mirror a society who is equally malleable (Burger, 1987; Coser, 1977; Prandy, 2002; Shiner, 1975; Weber, 1949; Von Mises, 1996). Accordingly, the various chapters in this piece will show overlapping themes regularly occurring throughout America's professional baseball and football sporting history.

I intend to expand and modify Bale's ideal-type to fit American sport facilities as Bale (2001) suggests is possible. Consequently, this examination, will demonstrate the changing layout or shape of American sport facilities shifted from unorganized open space to enclosed highly technical facilities. While various problems exist with comparing English and American society and their sports, each of their sporting traditions evolved similarly because the English influenced so much of the development of American sport (Bale, 2001; Rader, 2004; Struna, 1995; Voigt, 1983). Adelman (1986 p. 93) supports this conclusion by stating, "almost all the major sports being played at that time [in 19th century America] were English in origin or at least had been brought to this country via England." A great example of this comes in the form of baseball and football as sport historians overwhelmingly demonstrate baseball evolved from the English game of Rounders and American football from Rugby

(Adelman, 1986; Rader, 2004). Therefore, it is somewhat logical American sport facilities should demonstrate some degrees of parallel to those of produced in England. Thus, Bale's four-stage ideal-type offers a legitimate perspective on early beginnings of the American professional sport facility.

I also propose English and American sport facilities evolved similarly because modernization, enhanced by England, established the path for sport to develop or modernize in the United States. More specifically, by analyzing the changing structure of sporting practices, supported by modernization, one can better conclude English sport facilities and American facilities evolved somewhat similarly, at least initially. For instance, during the early developmental time of any sport, it is widely accepted contests in England and the United States were almost certainly held informally, with little written or common rules to guide play (Adelman, 1986; Bak, 1998; Bale, 2001; Hardy, 1997; Sack, 1986). Obviously, one cannot assume pre-modern societies will attempt to utilize territory to shape game play and social behaviors because pre-modern societies exist as less than complex in the sense of labor and specialization for example (Sack, 1986). Thus, as Sack's (1986) effort implies, few citizens in the United States enjoyed territorialized sport before the 1850s because they owned access to large amounts of unused land which provided adequate space for casual play.

However, expanding modernization in the 19th century forced a number of communities in England and the United States to organize and manage their land in order to accommodate the citizenship's growing demands (Bale, 2001; Sack, 1986). Consequently, sporting activities moved away from the center of town or received

municipally allocated time within the city limits inside regularly maintained and partitioned places (Harshorne, 1939; Sack, 1986). Organized baseball and football appeared in the United States as rule-bound activities where an official collection of sport specific laws regulated proper actions for the field and the appropriate spatial and temporal space of the competition grounds.

Rule standardization surfaced as the norm through regular competition because it appealed not only to the desire to utilize space efficiently but also to facilitate competitive contests as sporting events took place over expanding regional boundaries. Sheard (2001) posits standardizing the rules of an activity produced increased meaningfulness associated with the activity because people started to naturally search for the best or to separate those higher skilled performers from the lower skilled. Eventually, sports like baseball, football, and soccer became less spontaneous and more localized with common rules for competition. Furthermore, as modernization continued, these rules of sport passed beyond local boundaries and shaped similar activities into the same game such as the New England and New York versions of baseball.

Appropriately, the standardization and codification of competition sites and rules would follow on a more national scale across the United States and England as sport became a more mature industry such as agriculture or medicine (Hardy, 1997). Interestingly, the modernization of sport likely could not have occurred without strong economic and leisure influence. For example, a variety of authors argue the average work week decreased and salaries increased with the rise of modernization (Bak,

1998; Douglas, 1930; Lomax, 2003; Sack, 1986; Story, 1995; Voigt, 1983; Worman, Levy, & Katz, 1972). Clearly, these factors indicate groups and individuals owned more free time and discretionary income than previously to participate in watching and playing sports. Resultantly, modernization forces sport to adapt to the changing circumstances impose upon it but ultimately, lead to less frequent rule changes and more institutionalized or professional practices as people again sought to separated those skilled individuals from the highest skilled competitors.

Sport entrepreneurs surface once they are convinced a sport appears able to supply them with a consistent supply of resources or revenues and economic conditions appear favorable enough to motivate them to invest their capital (Sack, 1986). Consequently, sport entrepreneurs in the United States and in England wanted to professionalize sport until they were satisfied it could entertain spectator interests and increase their wallet size (Bak, 1998; Hardy, 1997; Lomax, 2003). Resultantly, organized sport facilities saw themselves born during the 19th century in England and the United States as sources for a new commercial product.

A great representation of this process and the English influence would be to compare cricket to baseball since the former became the model for the latter. Cricket was more mature and advanced than other ballgames in America so ultimately; baseball's desire to achieve comparable status followed the practices of cricket. While contested informally at first, baseball (Story, 1995), like cricket, eventually evolved from a localized activity into a highly skilled, organized, and competitive activity with the emergence of a noticeable professional class brought about by modernization

(Adelman, 1986). Additionally, standardized rules for competition and various governing bodies also evolved to be part of the sport (Adelman, 1986). Consequently, baseball developed into a modern sport for the United States much like cricket was in England with numerous competitive clubs and specialized facilities.

Ultimately, based on this logic, Bale's (2001) ideal type should be quite valuable toward the development of an American sport facility ideal type. Therefore, this work aims to identify those instances and conditions influencing major change in sport facility development and requires much of this paper to devote itself to analyzing the physical layout of major outdoor sport facilities and its relationship to human civilization. This work holds the architectural design/physical layout of professional sport facilities evolve as technology and cultural beliefs/practices of human interaction change over time. Special characteristics of facility development or layout change like magnitude, duration, frequency, and direction are addressed throughout the manuscript as they influence the meaning of the professional sport facility's transformation. Developing such an evaluative method is necessary because these characteristics serve to impact normative decisions on sport facilities.

Magnitude refers to physical changes in the professional sport facility. Variance will be represented through a variety of comparisons like the examination of field dimensions and the impact various changes in sporting tradition or strategy imposes on the sports of baseball and football. Duration applies to the length of time it takes one generation of sport facilities to replace another. In order to ascertain this information, one must identify the birth and death of a set of stadiums, as another

replaces them. Identifying these occurrences is not an exact science so independent and regulative rules will define duration. For example, changes in rule making and technology bring about transformations in facilities. Frequency relates to number of times facilities alter their shape and considers the maturity of the sport. Logically, one can anticipate a more mature sport facility will evolve its shape to coincide with the changing social and physical demands of all its participants. Similarly, one should expect sport in its early stage as an organized appear such as baseball and football in the 19th century, to support players with lower skill levels, possess fewer rules for play, and offer sport facilities more simple in nature. Examining the direction of change allows us to demonstrate the evolution of the professional sport facility progressed predictably or in a linear fashion and did not change or evolve randomly. Therefore, improvements in technology, construction material, and changing social thought will be discussed to establish the direction of change professional sport facilities incur experienced over the past 150 plus years.

Finally, I plan to expand upon Bale's Four-stage ideal-type by positing the effect extensibility and increasing interactions between consumers and sport will have on sport facility development. Extensibility combines sensory information and other knowledge acquired by individuals and relates them to people as social actors (Thrift, 1986). Furthermore, extensibility proposes advancements in transportation and communication technology reduce the amount of time required for people to interact with distant places. Consequently, time and space unite and it is posited the results of time space convergence will produce cost-space convergence (Abler, Janelle,

Philbrick, & Sommer, 1975; Brunn & Leinbach, 1991). Therefore, extensibility speculates as separated relationships become easier to create and maintain, patterns of human social interaction in home, work, and leisure centers will likely impact the spatial configuration of these places (Harvey, 1985; Hepworth, 1986; Moss, 1987; Smith, 1993). Hence, my central position with extensibility is that in the future enclosed spaces of major outdoor sporting activities will change and express modernizing tendencies, which improve conditions for those in physical and virtual/remote attendance to meet their changing desires and expectations.

Research Questions

This study attempts to answer these following questions:

1. What were the key events, opportunities, and constraints that influenced the changing shape of professional baseball and football facility in America during the 19th through the 21st centuries?
2. How can Bale's Four-Stage Ideal-Type of the Evolution of the Modern Stadium be expanded and adapted for professional baseball and football sport facilities of the United States?
3. What expectations can we make about the future shape and purpose of professional baseball and football sport facilities in America based on recent trends/events?

Addressing these questions allows the researcher to demonstrate the significance of the study and examine the relationship between outdoor sport facilities and human culture in the United States.

Outline of Chapters

The forthcoming chapters mainly addresses the changes in sport facility layouts over the past century and a half and is directed to those readers in the sport management field who may not possess a full understanding about the developmental history of baseball and football and their facilities. It respects the notion sport in the United States transformed from simple games to extravagant entertainment spectacles along with changes in population and technological innovations. Appropriately, chapters three through seven discuss technological, population, and sporting league histories/changes prior to the start of each in order to inform those in sport management. Chapter two describes the research design utilized for the completion of this study. Specifically, this chapter includes a discussion on the types of resources used, the conducting of the historical criticism, and the strategies used for data collection and analysis. Finally, Bale's (2001) ideal-type and the ideal-type concept are more fully explained in this chapter.

By conducting a study on the history of the layout of the American outdoor sport facility, I found it necessary to take a chronological approach. Therefore, each chapter following Chapter Two focuses on a major time period of change or innovation. I chose to limit each time period based on numerous writings provided by a variety of scholars. For instance, most writers on sport facilities recognize three major time periods (1909-1952, 1953-1991, and 1992 to present) of American sport facility construction (Bess, 1986, 1999; Quirk & Fort, 1992; Ritzer & Stillman, 2001; Smith, 2003).

Chapter three examines the development of the major outdoor professional baseball and football sport facility during the 19th century up until the construction of Harvard Stadium in 1903. This particular chapter concentrates mainly on the temporary nature of professional baseball and football and their sport facilities in order to demonstrate how these sports, as maturing entities, prompted the specific characteristics found in the American professional baseball and football sport facility. A short discussion on the modernization of sport also appears in chapter three to aid the possibly uninformed sport management reader.

Chapter Four investigates the years between 1903 and 1952 and starts with the construction of Harvard Stadium. The American Architect (1904), Blickstein (1995), and Serby (1930) identify Harvard Stadium as the first large permanent (concrete and steel) sport facility built in the United States, thus, it was selected as the beginning point of the chapter. Many scholars, such as Bess (1986) and Quirk and Fort (1992), acknowledge permanent professional baseball facilities appear in 1909 with the introduction of Shibe Park (Philadelphia) and Forbes Field (Pittsburgh) but Serby (1930) suggests Harvard Stadium pioneered the permanent sport facility a few years earlier and thus led the way for professional baseball to construct its own permanent facilities. Chapter Four also identifies the major factors which prompted the change in construction ideology from temporary to permanent and relays how this impacted the layout of the sport facility. Specifically, topics like the major technological breakthroughs, changing economic conditions, site locations, game strategy changes, and crowd control materialize as the major themes impacting the evolution of the

professional sport facility during this era. College stadiums are frequently discussed in this chapter because they influenced future professional sport facility development and often hosted professional sporting events (i.e. football) throughout their histories.

Chapter Five starts with the completion of Milwaukee County Stadium in 1953 and ends with U.S. Cellular Field (Chicago) in 1991. A variety of researchers claim Milwaukee County Stadium starts the third phase of professional sport facility construction because it surfaced as the first municipally funded building specifically for professional baseball or football (Quirk & Fort, 1992; Sullivan, 1987, 2001). Thus, it imposed new characteristics on to the professional sport facility like rationalization which will be discussed in the chapter. However, other topics exist which impacted the physical layout of the professional sport facility during this period. Thus, this chapter also illustrates how the changing demographics of the United States, the relocation of urban populations to the suburbs, further technological innovations, and the rise of football popularity impacted the physical layout to create the symmetrical multi-purpose superstadium.

Baltimore's Oriole Park at Camden Yards commences the start of the current era of professional sport facility construction (Quirk & Fort, 1992; Richmond, 2001; Ritzer & Stillman). Therefore, chapter six analyzes those years from the early 1990s up until present and how consumer demand prompted changes in the current crop of professional sport facilities. To comprehend this influence, I need to discuss the increasing commercialism of professional sport facilities in regard to premium seating options, concession accommodation, and comfort. Furthermore, this chapter reveals

how improvements in technology also impacted the design of sport facilities as well as legislation, site constraints, and advertisement/sponsor demands. This chapter also discusses professional sport facilities changed once again into single purpose facilities from the preceding multi-purpose era.

In the final chapter, I elaborate on the impending future of the major outdoor sport facility and briefly summarize the results discovered during this study. This chapter summarizes a new ideal-type concerning the evolution of the professional baseball and football facility in America and makes a prediction future professional sport facilities will change to accommodate increasing spectator demands for interaction and ecologically sound structures.

Rationale for Subject Selection

In this study, I analyze the development of American baseball and football sport facilities from 1850 to present. I chose to focus this study on the changing characteristics of American baseball and football facilities because they truly dominated the attention of the United States' sporting culture in 19th and 20th centuries by regularly hosting the largest crowds of modern American society. Baseball and football each took less than fifty years to change from folk-games played in public spaces to highly organized activities controlled in confined specialized competition areas. Obviously, other spectator sports existed before baseball and football contests became popular but in contrast to other outdoor spectator sports like cricket and various forms of horse racing, baseball and football organizations built sport facilities within nearby locations for their community members. Additionally,

baseball and football did not suffer from taking too long to play or the high production costs generally associated with horse racing (Adelman, 1986; Bak, 1998; Voigt, 1983; Ward & Burns, 1994). Consequently, high attendance marks at baseball and football contests were easy to obtain and more useful in growing the patronage of each sport.

It is necessary and logical to focus discussion on America's major outdoor sport facility construction to professional baseball and football because these receive the most attention from local and national media sources as well as scholarly actors. Additionally, Serby (1931) suggests the two major types of sport facilities produced by the United States support football and baseball organizations. I feel professional baseball and football facilities should be examined simultaneously since they overwhelmingly shared facilities until the last quarter century. For instance, Gershman (1993) argues at least half of the NFL teams between 1961 and 1993 shared sport facilities with MLB teams. Furthermore, results from this work show us over sixty sport facilities shared professional baseball and football over the past 150 years.

Overall, the popularity of baseball increasingly produced larger and larger crowds. Therefore, by the end of the 1850s and start of the 1860s, baseball occasionally drew huge crowds of 6,000 to 20,000 for some events (Adelman, 1986; Rader, 2002; Voigt, 1983). Rader (2002, p.21) speculates around this time, "The 'enclosure movement' as the drive to build fences around the grounds and charge admissions was called, had far-reaching implications for the baseball fraternity." I also posit the 'enclosure movement' inflicted similar consequences on the sport of football because it too was very popular.

The work of numerous scholars assertively concludes American football was born in the 1870s and most Americans knew what football was by the 1880s and 1890s (Bernstein, 2001; Jable, 1979; Oriard, 2001; Watterson, 2000). For example, Bernstein (2001, p. 41) estimates by 1890, “5,000 games involving 110,000 participants were occurring on Thanksgiving Day.” Adelman (1986) and Oriard (2001) both presume football emerged as a truly popular spectator sport to produce numbers such as these from the seclusion of college institutions by 1900 because the visual nature of the game, being highly dramatic and competitive, matched well with spectator interests. Resultantly, college football produced a stadium-building boom, like baseball, as seventy-four major stadiums were in place by 1930, fifty-five of which appeared between 1920 and 1930 (Oriard, 2001). Overall, Steiner (1933) points out around sixty percent of college football attendance transpired in forty of these super structures.

Oriard (2001, p.2) claims much of football’s approval or appeal occurred because “sensationalized coverage” by various media outlets attracted people’s curiosity to the football event. Oriard (2001) found newspaper coverage (column inches) on high school football grew in the *New York Times* from 200 at the beginning of the century to 3,200 by 1926. Eventually, the amazing reports, spectacular pageantry, and prerequisite football had for spectators to “participate” in the event made it somewhat of a spectacle and therefore highly popular to produce in a professional context within American society.

Football and baseball likely emerged as America's favorite sports because their contests can be played virtually anywhere open space exists and with very little financial cost to participants (Leventhal, 2000; Ward & Burns, 1994). In baseball, bats can be furnished from sticks, of any kind, bases can be spontaneously generated from t-shirts, book bags, or paper plates and baseballs can be made of tape and paper or improvised from other sporting equipment, like tennis balls. Additionally, boundaries for football and baseball games can easily be created using existing physical structures like tree lines, property fences, embankments, or buildings. Consequently, Leventhal (2000, p. 8) believes, "The flexibility and variety offered by these makeshift playing areas adds to the excitement and variations of the games," but more importantly to their popularity.

Some scholars also suggest baseball and football captured the attention of Americans because various events of the late 19th and early 20th centuries increasingly sponsored the benefits of team sports (O'Hanlon, 1982; Story, 1995). Additionally, the preparedness for war (O'Hanlon, 1982; Oriard, 2001), installation of character-building values (Adelman, 1986; Lucas & Smith, 1978; Oriard, 2001; Rader, 2004; Story, 1995), promotion of a healthful environment (Adelman, 1986; Lucas & Smith, 1978), connection to industrial work behaviors (Adelman, 1986; Gorn & Goldstein, 1993; Rader, 2002), and the relaxation of Sabbath contests (Adelman, 1986; Jable, 1974; Reiss, 1973) are also mentioned as possible contributors to the success of sporting activities across the United States.

Definition of Terms

(Major Outdoor Sport Facility)

The major outdoor sport facility was defined as those 19th, 20th, and 21st century stadiums or ballparks regularly hosting major league professional baseball and/or football. By regularly hosting, I mean to exclude Sunday and neutral site facilities because frustratingly, little information exists which could contribute to this work. The term “major league” is not randomly assigned to professional baseball and football facilities but transferred based on the amalgamation of numerous primary and secondary sources which identify the various major leagues that existed for professional baseball and football (Lowery, 1986, 1990; Professional Football Researcher’s Association, 2003; Sports Business Journal, 2000; Wright, 1996).

Specifically, this study considers football facilities utilized by the National Football League (NFL 1920-present), various American Football Leagues (AFL 1926, 1936-1937, 1940-1941, 1960-1969), All-America Football Conference (AAFC 1946-1949), Western Pennsylvania (1890s), World Football League (WFL 1974-1975), and the United States Football League (USFL 1983-1985). For baseball, this research examines facilities operated in the National Association (NA 1871-1875), National League (NL 1876-present), American Association (AA 1882-1891), Union Association (UA 1884), Players League (PL 1890), American League (AL 1901-present), and the Federal League (FL 1914-1915).

Organized baseball and football identifies most of these professional leagues as “major,” however, this work also recognizes facilities from the earliest professional

leagues (National Association and Western Pennsylvania) because of their historical significance. Wright (1996) argues history should hold the NA as a major league brand because it produced the highest level of baseball by virtually all of that era's greatest players. Furthermore, most of the NA's players participated in the NL when it formed in 1876 (Wright, 1996). Additionally, each of these major leagues conducted and followed some regular season and playoff schedule. For example, each baseball league typically held contests from April to October while football contained its season between the months of September and January (Lowery, 1986; Professional Football Researcher's Association, 2003).

Noticeably, this list does not include the various Negro Leagues because these organizations rarely possessed much money, utilized small home ball fields in their communities, and regularly barnstormed or played their higher profile games in facilities utilized by other major leagues (Lomax, 2003; Lowry, 1986). Furthermore, the study excludes ballparks utilized by the Negro Leagues because poor and little primary documentation (i.e. newspaper coverage or photographs) exist about their facilities (Lowery, 1986). Consequently, this study feels including Negro League facilities would be difficult and confusing. Lowery (1986) further points out, confusion persisted even in Negro Leagues themselves as barnstorming contests might or might not count for league records. Additionally, the Negro Leagues failed to complete records for some seasons like the Negro National League of 1920, Eastern Colored League of 1928, and the Negro American League of 1937 (Lowery, 1986).

(Major Renovation)

A major renovation is not recognized by this work as a fresh coat of paint or normal maintenance but as a situation where hundreds of thousands or millions of dollars are used to substantially alter the physical layout of the building in some manner. Examples of major renovations commonly recognized in this work include: large seating additions (1,000), luxury accommodations construction, building enclosures, office or administration buildings, and technological constructions (i.e. lights, video boards, and score boards). An example of such a renovation occurred in 1995 as the City of San Diego committed nearly \$60 million to fix-up San Diego Stadium in order to host the Super Bowl XXXII (Acello, 1995). As part of the renovation, San Diego included additional regular and luxury seating, a club lounge, two color video boards, and 20,000 square foot office space.

In contrast, the \$295 million renovation of Lambeau Field is listed in this work as new construction because it exceeds the average renovation by an extremely high amount and recent new facility price tags such as Petco Park's (San Diego) \$285 million price tag and Heinz Field's (Pittsburgh) \$230 million expense. Finally, Lambeau Field's renovation is listed as new construction within this work because the physical layout of the facility dramatically altered the shape and size of the facility from its original 18.6 acres to 38.92 acres.

(Pre-modern Sport Facilities)

Pre-modern sport facilities are recognized in this manuscript as those facilities existing in temporary forms before the usage of concrete and steel. Additionally, this

study identifies pre-modern sport facilities as those venues which lack an adequate amount of important characteristics other modern sporting structures possess. For example, many pre-modern sport facilities lack restrooms, press boxes, electronic scoreboards, luxury accommodations, parking areas, disabled seating, and concession areas. Finally, this report recognizes facilities existing before the construction of Harvard Stadium in 1903 as pre-modern sport facilities.

(Early Modern Sport Facilities)

Early modern sport facilities materialize as those venues constructed between 1903 and 1952. Also labeled as “jewel boxes” by Leventhal (2000), early modern sport facilities surfaced as the first permanent professional sporting structures because their unique enclosures utilized permanent building materials to create irregular or distinctive shapes.

(Late Modern Sport Facilities)

The late modern sport facility starts with the assembly of Milwaukee County Stadium in 1953 and ends with the formation of U.S. Cellular Field (Chicago) in 1991. This particular era of professional sport facility has also been known as the “cookie-cutter” era or multi-purpose period because an extraordinary level of rationalization persisted to produce structures highly similar and symmetrical to each other. In essence, playing or sitting in one structure built during this time feels the same as playing or sitting in another venue completed during this period.

(Post Modern Sport Facilities)

Post modern sport facilities started with the construction of Oriole Park at Camden Yards (Baltimore) in 1992 and continue till today. This particular wave of professional sport facilities demonstrate a turn toward single-purpose facilities and exhibit extreme sizes associated with the numerous extravagances each facility contains. For example, post modern sport facilities typically exhibit restaurants, bars, and/or lounges, large retail shopping and concession areas, massive vertical circulation structures and parking complexes, and numerous luxury and technological accommodations or structures.

(Superstadium/superblock)

The term superstadium/superblock will follow Bess' (1999, p.22) definition as "a massive parcel of land undivided by through streets into smaller blocks," (Bess, 1999, p.22). Basically, the superstadium rests on a superblock because it cannot find a large enough urban location/street grid to accommodate its expanded automobile, seating, technological, and entertainment options. Consequently, most superstadiums materialize in suburban locations; however some urban superstadiums, like U.S. Cellular Field, do survive in urban locations and surfaced to wipe out existing neighborhoods and structures during their construction.

Significance of the Study

American outdoor sport facilities of professional baseball and football provide a useful snapshot of U.S. history because they attract huge audiences whom choose to distribute their discretionary time and money for the viewing of athletic and other

events, like rock concerts, political rallies, and religious assemblies. Resultantly, the venues created to serve the wants and desires of these audiences are important to study. Recently, the study of sport facilities, as an academic field, showcases a large variety of research topics but virtually none of that literature has addressed the changing physical shape or layout of sport facilities (Bale, 2001; Sheard, 2001). This is not to say sport historians or sport managers overlooked this area of sport facilities, as many useful and significant histories on sport facilities exist. Yet the numerous scholarly compositions available, addressing the history of outdoor sport facilities, provide only journalistic or engineering like accounts of sport, sport organizations, and their facilities. Consequently, this work's primary objective to develop an ideal-type appropriate for the evolution of the professional baseball and football sport facility appears significant because it ties together the architectural and human side of sport within the context of the historically important professional sport facility.

This work argues no fully formed notion of the American professional baseball and football sport facility exists currently for the record. Thus, this research demonstrates promise because it utilizes the ideal-type concept which explicitly shows, more clearly than other methods, the demands spectators and sport franchise owners forced upon professional sport facilities in order to meet their demands for more comfort, entertainment, and desire for more revenue. Additionally, this dissertation demonstrates the position of some scholars such as Gershman (1993) who propose the shape of the sport facility influenced baseball strategy since Alexander

Cartwright and the rest of the Knickerbocker Base Ball Club started the “New York” version in 1845.

Hardy (1997) and Jones (1992) insinuate the sport industry is a special industry like agriculture or medicine of which much of the work completed by sport historians is a form of social history where long-term practices directed the development of sport. Appropriately, Boyle and Haynes (2000) and Jones (1992) assert sport historians are beginning to look within larger social, political, and economical areas of study such as labor markets, capital investments, and social or political relations because they provide interesting examples which can be connected to sport studies. Therefore, studying and addressing history in this study’s design helps those engaged in this type of work better understand how sport developed into its’ contemporary form. The building of sport facilities adequately supports this type of research because sport facilities extend into many aspects of culture including art/architecture, politics, communications, and human geography (Lowry, 1986). Additionally, professional sport facilities hold certain characteristics emblematic of the society and times in which they were built and can provide another framework in which the modernization of the United States can be assessed. Therefore, this work contributes beyond the scholarship of sport management and history to include academic disciplines ranging from architecture to human geography.

Public awareness makes this discussion about sport facility construction important and interesting as well. For instance, this particular dissertation demonstrates value as a device to show how much current and future sport facility

planners must consider before construction. For example, this study examines seat widths, site sizes, concession opportunities, technological devices, and usable restrooms as valuable facility elements. Clearly, sport management, as a discipline should appreciate how this works study design demonstrates the need to anticipate future changes to better accommodate all those participating in sporting contests.

Stadium related publications addressing these areas also remain largely unavailable to the general public as I discovered and many university library systems fail to provide their students access to these materials because of their great cost. For example, *Revenues From Sports Venues: Pro Edition*, a book offered by Media Ventures, costs \$345.00 while a similar college edition costs the same. Additionally, other publications like the *Sports Business Journal*, which also provides website access to archives on professional sport facility characteristics, also impose great expenses with subscription rates nearly \$300.00 a year. Obviously, these costs greatly exceed those the general population typically would willingly pay for sport facility information.

Another major argument found within this dissertation is based on the anticipation future spectators, city leaders, and sport administrators prefer to be civic-minded guardians of our cities' emotional, physical and economic well-being. Consequently, if community officials better understood those events, which impacted the history of sport facility construction, it is likely they could reduce costs and plan to provide more community benefits in the process. For instance, new sport facilities obviously introduce and include the newest technologies available to the market but to

provide themselves with additional revenue sources. The music systems, scoreboards and concession opportunities provide spectators the chance to experience a wide array of emotions based on their various senses of sight, sound, taste, and touch to provide such additional revenue.

Likely the next wave of sport facilities will continue to incorporate the newest technologies which produce revenue into its design. However, Bess (1999) and Pastier (1989) suggest the major outdoor stadiums of today do not look toward the long-term benefits of their communities. Instead, they are limited as part of an “entertainment” zone primarily for the benefit of organizations and institutions. This study on the evolution of the professional sport facility demonstrates this point quite convincingly and thus benefits those proponents who favor community benefits in return for their shared financial burden in building or renovating professional sport facilities (Bess, 1999).

Bess (1999 p. 2) implies all new construction or renovation, from 1960 to the time of his publication, is linked to “suburban character” and that this is true even for those facilities located in a city’s urban areas because team owners continue to benefit economically. Bess (1999) and Pastier (1989) posit this is problematic for the economic and aesthetic values of urban communities and its sports because issues of aesthetics, economics, and design are not individually evaluated and incorporated into sport facility for the best possible build. Logically, one cannot predict how much longer the public will continue to financially support sport organizations without more remuneration of tangible and economic rewards. Therefore, this work seeks to

encourage future sport facility planners to respect and consider the development of neighboring sections of land because the sport facility cannot be counted on to create such beneficial development. Appropriately, this paper should also provide additional benefits to larger debate about the planning of towns and cities.

A large number of professional baseball and football teams moved or threatened to move over the past couple of decades. For example, Euchner (1994) describes cities like Chicago, Baltimore, San Francisco, and Oakland suffering under such threats. Consequently, serious offers from competing cities prompted monumental competition for professional sport organizations because the failure to respond to sport franchise requests likely meant the loss of the team and perhaps the city's major league image within the national scope. The results of this work support this assumption and identify sport facilities evolved as one weapon to help winning cities meet the sport organization's desire to produce more revenue. Overall, this study identifies the significant history regarding the amount of new or renovated competition areas utilized for major league professional baseball and football and benefits scholars to demonstrate the expense and frequency of major sport facility construction along with the power sport organizations hold over their surrounding communities.

As stated previously, it is necessary and logical to focus discussion on major outdoor sport facility construction to professional baseball and football because these receive the most attention from local and national media sources as well as scholarly actors. The results of this work show us professional baseball and football evolved into two very distinct games requiring significantly different spatial configurations.

Blickstein (1995) and Story (1995) promote baseball and football drama take place in two totally different locations as the action of football occurs between two poles or end zones and baseball appears in a circular pattern as players attempt to touch each base from home to home. Yet, each sporting activity shared their home with the other in numerous locales for long periods of time throughout U.S. history. Recently, dramatic cost overruns concerning professional sport facilities like those seen in Cincinnati received harsh criticism from community members which call into question the worth of single-purpose professional sport facilities (Klepal, 2000). However, this work presents value to those promoters of separate professional sport facilities because it highlights football's need to support its growth, baseball's desire to reestablish spectator intimacy with its game, and how each sport and spectator suffered when sharing a sport facility with the other.

Finally, examining the cultural and social changes within American society and how they affected the layout of sport facilities indirectly broadens our understanding of American football and baseball in the 19th and 20th centuries. For instance, scholars examined the early developmental stages of baseball such as the start of professional baseball in the 1870's, much less than those following the beginning of the 20th century (Adelman, 1986; Daley, 1950; Lieb, 1950). Consequently, the works of several writers produce questionable results on the pre-modern period because these pieces depend upon unreliable information (Adelman, 1986; Leitner, 1972). Furthermore, Adelman (1986) suggests prior analysis of pre-

modern baseball lacks understanding of the social and sporting atmosphere common of the period.

In the grand scheme of communities, sport facilities are considerable places of significance because they mirror the values of society by imposing behavior patterns necessary for the achievement of those standards. Positively, sport facilities demonstrate a great ability to improve health, personal fulfillment, enjoyment, and community integration (Wankel & Berger, 1990). Negatively, sport facilities exploit the hosting of excessive celebrations of competitiveness and violence and require heavy public investment through tax abatements and increases, land donations, infrastructure improvements, and relocation expenses (Bess, 1999; Brohm, 1978; Ogilvie & Tutko, 1971). Butt (1982) shows it is essential to study the development of sport facilities because of the shared communal experience that occurs. Unquestionably, current developments in sport facility production are somewhat based upon the history of other sport facilities therefore, in order to better understand contemporary and improve future developments, it is vital we understand the past upon which these facilities evolved.

Limitations

The research contained within this manuscript will rely upon the pictures, observations, insights, and memories from individuals who may not supply a true account of the facts because historical research often depends on information collected and recorded after the fact. The most visible of the subcultures contributing to the works utilized in this piece include players, spectators, owners, promoters, and

officials. With their participation, Butt (1982) suggests each group brings along unique attitudes, ideologies, and experiences which one can conclude shapes the sporting environment that embrace them. Therefore, much of this work could possibly involve radical conservative and liberal viewpoints about specific stages in sport facility development. Hardman (1999) suggests developing an ethnocentric viewpoint is acceptable in this case to avoid stereotypical views so that radical and conservative perspectives cannot overwhelm each other.

Gandhi (2002) would categorize sport facility construction as a dependent activity because it relies upon other forces for origins and final realization. The underlying forces of the “city” as a place for sport facility developments are especially powerful and truly highlighted within the large city. Therefore, most scholarly work about professional sport facilities comes from large urban areas like New York, Boston, Chicago, Detroit, and Philadelphia (Bess, 2001; Freedman, 1978; Hardy, 1982; Lowery, 1986; Mrozek, 1982; Riess, 1989; Rozenzweig, 1983; Sheard, 2001). Consequently, this study is limited to research literature on sport facility construction associated with major cities in the United States.

I also limited the facility discussion and tables, included within, to those venues, which regularly hosted professional baseball and football crowds of the major leagues. Consequently, minor league facilities as well as Sunday or Sabbath Day and neutral site major league games were removed from this work primarily due to the difficulties on retrieving adequate data about these venue although as Riess (1999) points out teams like Cincinnati (1886-1888) drew crowd nearly three times typical

weekday crowds. Resultantly, based on my operational definition of major outdoor sport facilities and the limited time and money available to me to more finely examine sport facility data, it is possible I may have overrepresented or underrepresented a facility to bias the findings.

Finally, I encountered many challenges trying to collect data on pre-modern and early modern professional sport facilities. Primarily, sport entrepreneurs and often their own players erected forgettable wooden or earthen structures which left little physical remnants and even fewer bits of information following their abandonment or destruction. Thus, little complete information exists about the costs of these facilities, the dimensions and amenities they possessed, and the actual size of land they consumed to gain the truest picture possible. Additionally, the media frequently remarked little about these professional sport facilities and therefore, information about their formal names, cost, capacity, and physical dimensions exist or survive today. Lowery (1986) argues discovering this sort of information about any professional sport facility prior to 1921 should be expected because of a lack of documentation and the significant temporary nature of sport facility usage.

CHAPTER 2

METHODOLOGY

Introduction

Historical research allows us to concentrate on acquiring an active analytical mind because it demands the researcher handle and evaluate various types of sources. Moreover, historical research is relevant because it possesses many similarities to other types of normative and interpretive approaches to research (Travers, 1969). For example, the review of literature conducted in all other types of research fundamentally acts as a historical research procedure because scholars often reconstruct the past work of others to complete, build, or provide a foundation for their own work. Also, like other forms of research, historical study is useful because likely seeks objectivity and expects to describe relevant features of a specific phenomenon (Gray, 1964; McDowell, 2002; Travers, 1969).

Studying sport through using historical sources benefits the sport management profession because an overwhelming, “number of historians maintain the study of history necessitates certain intellectual orientation not encountered by science,” (Park, 1983, p. 95). Although it is impossible to completely recreate the past, historical perspectives enable us to identify those events, previously not celebrated, as important

(McDowell, 2002). Traditionally, sport studies support this statement because sport, as stated beforehand, “has been caste within a very narrow scope,” (Park, 1983, p. 95). Consequently, the historical research within this work focuses on uncovering the subtle and unknown, identifying the relationship between past events and current conditions, and advancing our comprehension of human culture through examining the evolution of the American professional baseball and football sport facility.

A quarter century ago, Mandelbaum (1977, p. 11-12) defined general historical study as the “tracing of various aspects of culture as they arise or change society or as they cross the boundaries separating societies.” Park (1983) further explains historical research as general and special within narrative and analytical forms. The narrative approach promotes the sequential understanding of events while the analytical method advances thematic positions. However, one should acknowledge both analytical and narrative methods involve explanation and include some procedure of the other. Furthermore, Park (1983) offered historical study to embrace the cultural products, which people create like architecture, art, and literature. Overall, this work believes historical research can be best defined as the attempt to systematically establish conclusions, trends, and facts about valuable past human social environments based on evidence collected and interpreted from valid or authentic sources. (Ary, Jacobs, & Razavieh, 1996; Berg, 1963; Best, 1970; Johnson & Christensen, 2000).

The appreciation about the changing nature of past and current sport facilities should be aided through historical sources because human culture does not comprise solely of a group of facts but consists of interconnecting human behaviors and actions throughout a historical pattern. In essence, the nature of historical research provides

the researcher the opportunity to expose the imagination, proficiency, and drive human culture forced upon the evolving sport facility. As a result, using historical sources provide an opportunity toward a more complete understanding of past social culture and how the future may be altered. Specifically, this research design helps construct the ideal-type necessary for showcasing the evolution of the professional baseball and football sport facility.

Finally, this chapter will discuss, in more specific detail, the research design and methodology used for completion of the study. A discussion of primary and secondary sources utilized throughout the studies various chapters will follow. Next, the author describes historical criticism to demonstrate an understanding on how to adequately produce and measure valid and reliable findings within the historical method. This chapter will also include a section addressing the data collection and analysis procedures used. Then, to finish, this chapter explores the meaning of the ‘ideal-type’ concept and more accurately describes Bale’s (2001) four-stage ideal-type for the evolution of the modern soccer stadium.

Research Design and Methodology

In order to adequately use historical sources, one should become familiar with research techniques so findings and conclusions are not found illegitimate. The historian operates under different handicaps than those of other types of research because information enduring the passage of time controls what historical researchers find to some extent (Ary, et al., 1996; McDowell, 2002). Consequently, I followed the suggestions below by various scholars on utilizing historical sources (Bender, 1986; Best, 1970; Gray, 1964; Hockett, 1955; McDowell, 2002; Park, 1983).

First, I narrowed my topic, asked what value it adds to my profession, and whether or not the work was original. Best (1970) suggests this step is important because historians tend to define their studies too broadly. Accordingly, narrowing my topic to professional baseball and football facilities from the mid-19th century to present should add value to the sport management profession.

Next, the various scholars, recognized in this work, suggest pursuing those documents and artifacts needed to complete the study. In order to construct the product of this work, it was necessary to thoroughly select and examine the best information or sources available. Within reasonable limits, I analyzed a wide range of primary sources like newspaper articles, pictures, interviews, and architectural plans. In addition to these original and reprinted works, I carefully examined a variety of secondary sources such as scholarly books, journal articles, and sport facility specific websites. The primary and secondary sources used will be more fully explained later in this chapter.

Overall, this process shows using historical sources intends not to intimidate other forms of research but generally involves, follows, and respects other types of methodology (Kaestle, 1997). Other works completed by Berg (1998) and Kaestle (1992) reiterate this point by saying historical research methodology lacks consensus for an agreed upon system or approach for tackling research. Therefore, historical research methodology invades other fields for techniques and analysis to gain better insight for the purposes of its objectives. Primarily, the density of historical research embraces works completed in sociology, anthropology, psychology, and statistics (Kaestle, 1997; Kaestle, 1992). Therefore, one can conclude no one specific

methodology exists and the only agreement about historical research methodology or those who participate is that no consensus exists.

Primary and Secondary Sources

Individual scholarship produces many different types of composition. The best historical research uses a number of primary sources to present the most accurate information but as Thompson (1967, p. 29) points out the most beneficial forms of historical work take, “the form neither of erudite articles nor of composite collective works, but by good books by individual scholars.” As a result, I conducted this research with scholarly primary and secondary resources. Additionally, I chose to use primary and secondary sources because as Struna (2001, p. 209) described in the ‘Rule of Free-editing,’ most records or accounts do not form complete scenes and therefore, a need exists to use more than one source to view any event.

Primary sources of information typically produce original work from actual participants directly involved with events or those who experienced events in some other fashion (Berg, 1998; Hill & Kerber, 1967). Accordingly, primary sources appear in a variety of forms. Unpublished documents like company minutes, government and university reports, and memorandums aid researchers because they provide reasoning for decisions by individuals and/or organizations (McDowell, 2002). Personal diaries, letters, memoirs, autobiographies, and oral evidence provide important personal testimony for historical events. Furthermore, relics, manuscripts, laws, files, official publications, maps, dialogues, films, newspapers, paintings, and pictures fall in as primary sources to aid in our understanding of human culture (Hill & Kerber, 1967; McDowell, 2002). Within this work, the author utilizes such primary sources as

newspaper and journal articles, pictures and paintings, architectural renderings, and officially published professional baseball and football rules for play.

To demonstrate American outdoor sport facilities changed their shape over time, I found it necessary to examine the biographical information of the various sport facilities provided by internet sources, scholarly books and journals, and newspaper articles. Resultantly, I found www.ballparks.com to be the most helpful of the websites on sport facilities as this address surfaced above all others in providing all the changing ballpark dimensions from the birth of the facility to its present condition as active or deceased. The works of Benson (1989), Gershman (1993), Lowery (1986, 1990), and numerous others also supplied helpful information regarding the biographical status of professional baseball and football facilities. Pictures and architectural drawings were also employed from these sources and others to help support these biographical accounts about the evolution of the American outdoor sport facility. Ultimately, I needed to hunt and sift through numerous and quite different primary sources to aid this research.

Secondary sources differ from primary ones in that they are generally manufactured from primary sources and other secondary sources. Although secondary sources are not original, they add value to research findings because they make efforts more convincing. Examples of secondary sources contain data represented from quoted materials, textbooks, encyclopedias, history books, articles, and reviews of research (Ary et. al, 1996). Berg (1998) suggests the best secondary sources are those produced by scholars utilizing primary sources. Therefore, I did not hesitate to utilize them since they provide excellent information and ideas about related topic areas.

This work promotes the help of journalistic and popular literature (i.e. secondary sources) because they provide special information about sport facility development. Journalistic and popular literature included in this work utilizes special books and articles on specific sport organizations and their facilities. Many of the scholars involved with these secondary sources hold an exceptional connection to these facilities and the communities in which they sit. Consequently, many of these popular and journalistic literature records promote the facility and community in an extremely positive light while adding convincing and substantial information to the reader. A great example of this type of source comes from Bak's (1998) book called *A Place for Summer: A Narrative History of Tiger Stadium* and Weiner's (2001) *Stadium Games*. Essentially, I found value in these books and similar secondary sources because they respectfully and accurately portray professional sport facilities while simultaneously demonstrating the sense of pride individuals and communities possess for their sport facilities and franchises.

The danger of using easy to find secondary sources is a something a historical researcher must recognize but it should be noted some primary sources are subject to debate because journalists are not always impartial observers. Adelman (1986, p. 369) noted in his work about sport journals and daily newspapers from 1820-1870 that, "Their [journalists] reports were colored by their reliance on the good will of sports promoters, their occasional vested interest in sports, either directly or indirectly, and because they shared the class and ethnic prejudices of their period." Therefore, the ability to locate useful primary and secondary sources requires skillful practice.

As a result, I followed McDowell's (2002) suggestion that investigators begin their inquiry by reading multiple scholarly secondary sources in order to learn vital background information about the given subject area. I benefited from using multiple primary and secondary sources through viewing how other historians approached similar topics (McDowell, 2002). Specifically, I was able to identify and better understand how important concepts like modernization and territoriality affected the evolution of the professional baseball and football sport facility. Finally, reviewing multiple sources, in this manner, permitted me to compare and contrast findings in order to check for convincing accuracy. I found, as I collected data, I indirectly tested the reliability of my sources by comparing observations and findings to each other. In essence, I performed a historical criticism.

Historical Criticism

Historical criticism is necessary for this topic because it requires the specific evaluation of 'all' historical records. Historical criticism certifies the authenticity of primary and secondary source evidences so research questions can be tested and accurate conclusions can be prepared. Performing historical criticism is important because the those using historical records may not, "selectively and uncritically use some evidence to favor some hypothesis," (Park, 1983, p. 96). Accordingly, historical criticism aids this research by providing a solid foundation for interpreting hypotheses and demonstrating the credibility of sources both internally and externally. Typically, historians engage in internal and external examinations to make certain declarations, conclusions, and accounts reflect the meanings expressed by those involved with the

event because quite often the incorrect interpretation of some words, terms, and phrases produce problems (Berg, 1998; Kaestle, 1997).

Internally, the information used for this manuscript was evaluated by asking whether or not each source provided accurate or trustworthy information (Wineberg, 2001; Ary et al, 1996). Also known as the 'Rule of Perspective,' internal criticism checks for accuracy or trustworthiness by asking pertinent questions about each source like whom created the source, how are they related to the event, and how was the information collected (Struna, 2001). Thus, my internal criticism basically raises questions about the accuracy of the data enclosed within the source. Historical researchers are also recommended to look for 'holes' in provided explanations and statistics during internal criticism (Gray, 1964). Consequently, I needed to consider the authors' intended audience and the author's reputation as an expert or non-expert (Gray, 1964). Therefore, I interpreted all of the collected information based on the 'real' or intentional meaning of the sources.

Externally, a historical researcher needs to look at the objectives of the research; "ask if the documentation includes valid techniques, and if the source in question has been falsified in any way," (Ary et al, 1996; Berg, 1998 p. 350). Essentially, I commit to external criticism of my sources to establish validity and reliability. Historical study checks for authenticity by examining the author's signatures, the date of work, age of the paper, and the temporal arrangement of events (McDowell, 2002; Berg, 1998). I found this especially helpful when checking photographs or old drawings and biographical information on sport facilities like ballpark dimensions or construction costs. McDowell (2002) indicates reliability also

depends on the time span between the event, which occurred and the documented account of the event. For this historical research, the documentation found closer or during the event was deemed to be more reliable than that completed well after the fact. Therefore, I sought out information closer in timing to the event like pictures, newspaper and journal articles, and some books.

External criticism, also known as the ‘Rule of Context,’ establishes the need for researchers to understand the terms and phrases of their evidence in relation to current and other understandings of those same terms and phrases (Struna 2001, p. 209). For example, ambiguity and presentism assume positions for some terms and phrases during the interpretation and reading of primary and secondary sources (Gray, 1964; Kaestle, 1988; Kaestle, 1997). This problem arises because current associations with certain terms and phrases conflict with their original meanings. By acknowledging the distinctions and connections between the intent and consequence of the written word I avoided further misinterpretation and confusion between correlations and causations of events, which could affect the conclusions of the study (Kaestle, 1988; Kaestle, 1997). Ultimately, I tried not to limit the understanding of terms and phrases to contemporary usage. As Kaestle (1997) maintains, I assumed nothing when dealing with historical sources.

Completing a historical criticism also includes examining the accuracy of the information and the relative importance for using this information in relationship between the event and a larger theme (Thompson, 1967). The prevention of poor logical analysis through over simplification and generalization is an important point to recognize because they can cause failure in interpretation of words and expressions

from their intended meaning (Best, 1970). Normally, generalizations develop to support some understanding about past events in historical research because, “historical generalizations are the result of an interaction between fragmentary evidence, values, and experiences of the historian,” (Kaestle, 1988, p. 59). Thus, generalizations are not necessarily focused on theory development as much as they are on searching for comprehension about past events. Therefore, when I made generalizations, I recognized and understood how others might have viewed events differently from those of us in contemporary society (McDowell, 2002). This is not an easy task because diverse and unorganized information needs to be utilized together to support research hypotheses within a historical method. Consequently, these circumstances place monumental significance on assessing the authenticity of gathered data because historical research methodology frequently lacks control over treatments, measurement of findings, sampling, and replication.

The ultimate goal of historical research, in general, is to reach consensus beyond a reasonable doubt that the conclusions or hypotheses reached correctly connect to the events that took place (Bender, 1986; Hockett, 1955; McDowell, 2002). Ultimately, this historical study is limited by some of its content because it is possible this information may be categorized as true or untrue. Consequently, I took the advice of historical research literature and marked or noted information as more or less plausible. Obviously, this effects the arrangement of information within a research paper and its concluding discoveries or claims. As a result, I found myself searching through time-consuming or lengthy records and documents much more so than the empirical researcher (Hill & Kerber, 1967).

Overall, evaluating and checking the legitimacy of my sources became important because all resources can be shaped by a variety of conditions. The author's partiality or slant influenced by local social, economic, and political conditions may prejudice a manuscript to distort findings and conclusions (Von Mises, 1996). Additionally, Berg (1998) suggests religious background may tamper with research reports and furthermore, an excessive veneration for past or contemporary events may occur within some writings. I recognized this could be potentially problematic with this study because of sport facilities' position as a special space. Therefore, I acknowledged and searched for these expressions of personal bias because the personality of the researcher is more of a challenge in historical writing than in other types of research (Hill & Kerber, 1967).

Finally, I recognize a plain or uninteresting reporting style limits the ability of the historian to convey his or her understanding of the events and I understand an overzealous reporting style might bias an audience toward a favored position. Therefore, I tried to control my own language and biases during the interpretation and report of my findings. I worked to accomplish this feat by using peer and expert reviewers to look for bias in my work.

Data Collection/Analysis

The preparatory stage of most research methods expects the collecting or gathering of information prior to the start of the study. Frequently, this information is concise and well written for the pragmatic investigator as most sources used for research arrive as written documents (Hockett, 1955). Historians, like other types of researchers, gather appropriate documents and extract conclusions in their pursuit to

increase understanding about present and past conditions so we can make more intelligent choices in the future. Also like other disciplines, selected hypotheses, generalizations, and theories are also included and subject to reevaluation in historical research (Hill & Kerber, 1967). Consequently, the fundamental development of historical research manuscripts is not much different from other research methodologies because each method of conducting research and writing summons the logical analysis of records and the synthesis of bits of information in a highly imaginative manner.

Some general rules guided my historical research. The essential formula for writing well in historical method includes the gathering of information, the criticism of that information, the interpretation of that information, the drawing of conclusions based on that information, and the presentation of those conclusions in an understandable construct (Berg, 1998; Gray, 1964; Hockett, 1955, p. 345). During the data gathering process, I utilized the university library system to learn more about the different components of sport facilities. For example, both primary and secondary sources were available in order to examine topics like architecture, sport history, and human territoriality. In addition to the university library system, I utilized the advice of sport historians on where to collect data.

In order to complete my historical research as thoroughly as possible, I prepared a detailed outline to identify, organize, and criticize the various themes of my topic. The outline entitled me access to view the overall framework of the research topic and granted me the ability to shape the paper into a logical series of interconnecting themes. Additionally, the outline provided me with the opportunity to

determine which compositions and information would be useful for the completion of the research project and guided my pace of inquiry to advance a more thoughtful examination of the sources collected.

To accurately facilitate conclusions on this topic, Hill and Kerber (1967) suggest examining the events that take place and specifically, they recommend looking for the types of activities and people involved. Consequently, my outline is tailored around an analytical chronologic approach, as I address one time period after another. However, I found and address certain themes which also occur during each of these time periods. Interestingly, I found some themes overlap time periods.

To establish the various waves of baseball and football sport facility construction from the mid-19th century to present, I attempted to identify sport facilities from a variety of sources. The facility names and date of construction or renovation came from internet websites (ballparks.com and worldstadiums.com), scholarly books and journals, newspaper articles, and dated pictures. Unfortunately, some of the sources list the various sport facilities under different names. For example, Tiger Stadium was also known as Navin Field and Briggs Stadium during various times of its existence. Additionally, there were a number of sport facilities carrying the same name. For instance, I discovered a number of Memorial Stadiums exist. In order to eliminate as much error as possible, I compared the various sources to each other to the best of my ability. If only one facility name was listed during the entire period of study then I assumed it was the only facility with that name in that particular town or city. Another problem was identifying all the various names sport facilities are called in the United States besides those generally known to us like stadium, ballpark, or

field. Therefore, I addressed this issue using Lowery's (1986) work which comprehensively identifies other outdoor sport facility names (See Table 2.1).

This process of examining trends of sport facility construction allowed me to also involve quantitative methodology. I feel quantitative data is highly valuable to this study because it propels me into the realities of sport facility construction. For example, comprising demographic data about construction booms as well as the changing layout, in regard to seating capacity and dimensions for example, allowed me to interpret and draw conclusions, like other scientific studies. I found this behavior to be responsible because other authors argue it is not unreasonable to connect information from different methods of research during historical inquiry (Ary, Jacobs, & Razavieh, 1996; Berg, 1963; Best, 1970; Johnson & Christensen, 2000; McDowell, 2002). This method of mixing different methodologies is also better known as triangulation (Jick, 1979).

Within historical or social study, researchers believe it is necessary to examine social phenomenon from a variety of viewpoints rather than from one perspective (Denzin, 1978; Neuman, 2000; Tashakkori & Teddlie, 1998). These authors and others (Brewer & Hunter, 1989; Glense & Peshkin, 1992; Jick, 1979) would define this type of research as triangulation. Denzin (1978, p.302) states, "The rationale for this strategy is that the flaws of one method are often the strength of another and by combining methods, observers can achieve the best of each while overcoming their unique deficiencies." Triangulation benefits this work because valuable and important causal inferences can be more regularly made through this method (Brewer & Hunter, 1989). Denzin (1978) also supports this claim as he demonstrates the worth of

combining numerical data and written information. Therefore, these authors' suggestions that mixing differing methodologies supplements strengths and weaknesses is logical and valuable because the findings overall validity strength is augmented. Within this work, I found great value in practicing triangulation not only to establish a conclusion that professional baseball and football facilities evolved from simple temporary structures to highly technical and complex permanent structures but also to develop an accurate quantitative/biographical picture of each sport facility throughout its own history.

Data analysis will also be based on theories and concepts others own although resistance occurs by some historians to make use of others' research methods (Berhofer, 1969; Gardener, 1952). I believe good history, like science needs a meaningful paradigm or framework similar to other disciplines (Struna, 2001; Kaestle, 1992). Therefore, the main objective of this historical inquiry seeks to conceive of a schema adequate to our propagating knowledge about human society (Bender, 1986) and specifically the professional sport facility. In the case of this research study, I chose to use the ideal-type to express my understanding about the evolution of the American professional baseball and football sport facility.

ALTERNATE FACILITY NAMES	EXAMPLES
PARK	FENWAY PARK
STADIUM	BEAVER STADIUM
FIELD	OWEN FIELD
GROUNDS	POLO GROUNDS
DOME	GEORGIA DOME
FAIRGROUNDS	AGRICULTURE SOCIETY FAIRGROUNDS (ROCKFORD, IL)
BOWL	YALE BOWL
CRICKET GROUNDS	ST. GEORGE CRICKET GROUNDS
LOT	BELAIR LOT (BALTIMORE, MD)
TRACK	ATLANTIC PARK DOG TRACK (ATLANTIC CITY, NJ)
PALACE	PALACE OF FANS
PASTURE	WALTE'S PASTURE (KEOKUK, IO)
COLISEUM	MEMORIAL COLISEUM (LOS ANGELES)
COMMONS	CASE COMMONS (CLEVELAND, OH)
VILLA	CANISIUS VILLA (BUFFALO, NY)
OVAL	DYCKMAN OVAL (NEW YORK CITY)
DELL	SULPHUR DELL (NASHVILLE, TN)

Table 2.1 (Alternate Sport Facility Names and Examples)

Ideal-Type

The records of scholarly work clearly show us sound methodological principles are necessary to carry out legitimate work. Studying historical and social realities impart unique difficulties because of the subjective nature of studying human behavior (Coser, 1977). Coser (1977) and Prandy (2002) propose the complex nature

of socially occurring phenomena makes the use of ideal-types attractive to cultural researchers because as Von Mises (1996) and Oakes (1977) tell us, history is created by a collection of unique thoughts and actions by humans.

History, as a field of research, comprehends these inimitable events and attempts to convey meaning, which is derived through the researchers' attempts to place him/herself as an unobtrusive and indifferent observer (Burger, 1987; Von Mises, 1996). The areas of interest cultural researchers tackle deviate from those natural scientists study because cultural research requires scholars to analyze "rich" environments, which are typical of social phenomenon (Lindbekk, 1992; Van Mises, 1996). Swingewood (2000) opposes any study of historical or cultural contexts that does not accompany the subjective thoughts and values of the important social actors but because man writes its' own history, their own biases and interpretations will always influence or alter the meanings derived from their experiences. Therefore, historical scholars need to pay attention to even the smallest of details and distinctive qualities in order for their work to be valid.

The ideal-type works to help secure valid results. It possesses a fair and balanced view of nature as individuals attempt to understand the world surrounding them. Obviously, scholars found it necessary to derive meaning of social phenomenon through some kind of heuristic device in order to make statements as valid as possible. The ideal-type is such a heuristic device (Shiner, 1975). Ultimately, determining the action of others is quite difficult because as Latour (2000) explains, objects of a social phenomenon necessarily require some social function or social factor. Therefore, a gap exists between the interpretation and actual behavior. Currently a gap exists

concerning how professional sport facilities evolved. Using the ideal-type for this investigation should help us close this distance and not widen it further with each passing day.

Obviously, we might attempt to produce valid results about a topic of inquiry by rational reasoning but as Lindbekk (1992) and Shiner (1975) point out ideal-types are more useful because they condense a variety of situations or actions into one representation of reality. In essence, ideal-types work to reduce error in the "interpretative gap." Ideal-types perform this function by comparing, limiting, and scrutinizing real social phenomenon for meaningful elements (Weber, 1949; Von Mises, 1996).

Every act of knowing within historical study depends and is conditioned upon the findings of other sciences. Shiner (1975, p. 250) declares, "any attempt to amend them [ideal-types] so as to better fit the data is wrong in principle." Shiner (1975) holds there are two different classifications of ideal-types. The historical ideal-type is one valued in this research because it is determined by combining social phenomena to some imprecisely described topic like sport facility evolution. The historical ideal-type explicates relevant and significant features and synthesizes them into credible impressions of historical facts. Burger (1987) indicates the ideal-type is particular to specific cultures and concerned with demonstrating representation of that culture. Consequently, I believe the ideal-type is appropriate for this study because it is focused on American culture and it will demonstrate how outdoor sport facilities represent the American expression of human culture.

Coser (1977) suggests scholars first attempt ideal-types by studying their area of interest in the numerous cultures and historical eras in which it found.

Consequently, this led me to examine the works of John Bale (2001). I found the main product to this type of conceptualization is the designing of a model to relate research observations together (Burger, 1987; Lindbekk, 1992; Middendorp, 1991). Bale's (2001) Four-stage ideal-type is such a model.

Bale's (2001) Four-stage ideal-type of the evolution of the modern soccer stadium represents four malleable but distinct stages of stadium development found in England (See Figure 2.1). The model is based on a simplification of developmental changes found in sport and the larger society. Bale (2001) posits each stage of the model, in effect, intersects or overlaps another. Thus, Bale's ideal-type represents hypothetical norms and not rigid stages of stadium development. Middendorp (1991, p. 237) found the comparison between an ideal-type and conceptual model appropriate because both are "systematically built-up" through "essential characteristics of a particular construct." The main differences between an ideal-type and conceptual model reveal ideal-types possess flexible stages where some characteristics of one stage can exist in another to mirror societal conditions (Bale, 2001). However, the process of designing such a conceptual model involves both induction and deduction. Induction involves the systematic gathering of facts belonging to the topic of interest and deduction adopts the information collected during the induction in order to make some considerable conclusion (Guttman, 1981). Clearly, Bale's (2001) ideal-type reflects these characteristics.

A few main concepts can be ascertained from the examining the ideal-type. First, the shape of English soccer stadiums facilities changed from open to enclosed grounds. Second, spectators became more spatially confined or segregated from the competition area and competitors through the years. Finally, soccer evolved into a spectacle which forced certain changes on the stadium like safety improvements and restricting its location for specialized land use.

Bale (2001) points out early sport was highly unorganized forms of play with little or no standard rules. Typically, these folk-type games occurred in commons areas and large or small fields for the purposes of extracting fun and recreation for individuals. Consequently, Stage one or the phase of “Permeable Boundaries” required no spatial limits existed for the sport facility and often playing areas appeared uneven and rough. Obviously, the sites utilized for stage one demonstrate no specialized sites were needed as most games simply sprung up randomly. Additionally, these locations often supported other activities such as agriculture and town businesses simultaneously appeared while play occurred. Resultantly, these games and conditions encouraged interaction between spectators and competitors so it was difficult to determine who was playing and who was not. In essence, no fixed territory or standardized rule subsisted which would normally spatially separate spectators from players.

Stage two of stadium development brought about limited enclosure of the competition area as society at large faced greater confinement through the early stages of industrialization (Bale, 2001). In essence, we see the beginnings of a growing consciousness regarding space as areas to hold specific activities during specific times.

This stage delivers territoriality as important concept because space materialized as a place to control and exhibit social power through the restraining of free spatial organization typical of stage one (Sack, 1986). This means spectators were separated from those engaged in competition and boundaries were established limiting the size of the competition area. Often ropes or earthen structures served as boundaries to separate the players from the spectators and the rules of competition varied still from place to place in stage two so no standardized site or sport could be established. Consequently, we see inconsistent set-ups for sporting matches during this stage. However, at least the formal introduction of straight lines into sporting contests appears in stage two to help transform sporting areas from irregular shapes to fixed spaces. Finally, Stage two continued to not involve specialized land use for sport participation in Bale's model. Individuals and communities continued to use the land primarily, for something else other than sport like agriculture or town business.

Stage three produced the partitioning of the sport facility through the construction of embankments, terraces, and grandstands to help socially segregate the growing numbers attending sporting contests. Associated with increasing capitalism, sport facilities were now enclosed places to be filled and emptied in a growing time conscious society (Bale, 2001). Additionally, the full segregation of spectators from the competition area occurs at this point in time as sport materialized as something to pay to see. Bale (2001) suggests clever landowners or entrepreneurs desired specialized areas to provide them revenue as sport evolved into a spectacle much like the theatre. Consequently, landowners appear anxious in stage three to create specialized land just for sport which invariably produced revenues through those who

paid to attend the sporting event. Standardize rules also appear during stage three to help appease desires individuals possessed to find out who was the more skilled competitor. Therefore, stage three basically places the skilled on the field and the unskilled in the stands.

Stage four emerges as technological innovations and increased commercialization of sport totally enclose the sport facility from the outside world. At this point, the sport participants are fully segregated from the competitors by permanent impermeable boundaries and fully isolated from the outside world through commercial and entertainment structures designed to produce more revenue from the facility. Typically, the technological innovations surrounding a sport facility to help determine its shape are the floodlights and air conditioning units, moveable/adjustable seating sections, roof shape (dome or open), and electronic/video boards (Bale, 2001). Additionally, Bale (2001) briefly mentions a limited number of English soccer stadiums also incorporate private boxes and restaurants to enclose the facility. Furthermore, stage four also shows us this technology can help separate us from the outside world from distracting us through musical and sound systems placed around the facility. At last, in Stage four, the facility itself becomes diversified again through computer aided designs and technological innovations (artificial turf and moveable stands) to host other functions, besides sport, like concerts, political rallies, and expositions. In essence, stage four facilities in Bale's (2001) model appear as multi-purpose facilities.

The terms of this scholarly engagement followed the work on ideal-type methodology by Albrow (1990); Collins & Makowsky, (1998); Freund (1998); Patton,

(1990); Swingewood (2000); Turner, Beegley, & Powers (1998); and Weber (1949).

This model should be designed so any scholar could utilize available information in order to gain a sense on the nature of American outdoor sport facility evolution.

Interestingly, Coser (1977) remarks the theory of evolution influenced the work of many sociologists who utilize ideal-types.

This work argues no full empirical embodiment of the professional baseball and football facility exists for the record. Primarily, this conclusion appears because those existing works on professional baseball and football sport facility evolution simply acknowledge the temporary or permanent nature of the structure and time period in which they subsist. Therefore, the implications of this research are important because they demonstrate sport facility evolution shows rapid and continual demands forced by a variety of individuals and conditions pushed sport facilities out of existence or to change to meet spectator and ownerships' desire for more revenue.

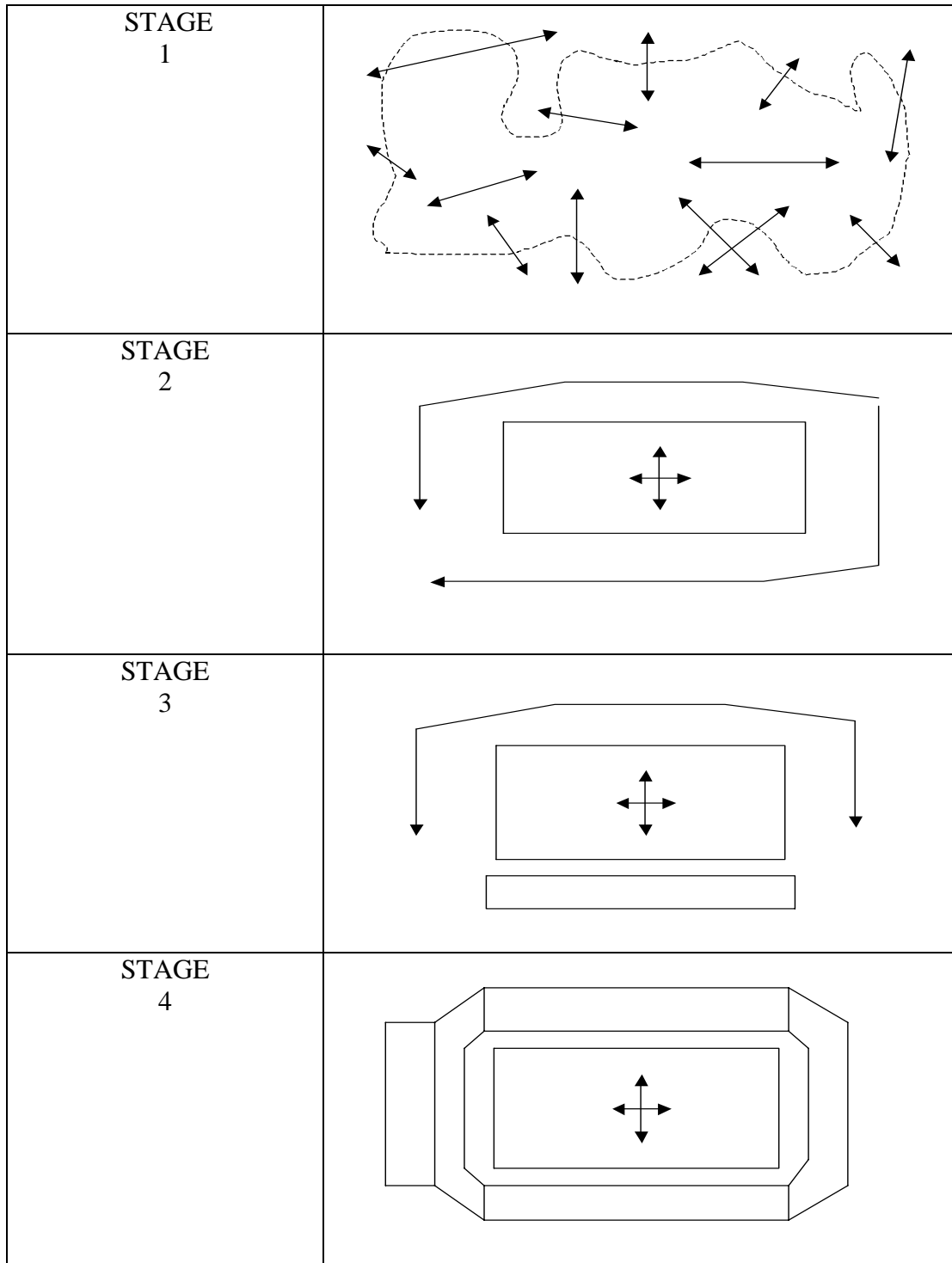


Figure 2.1: (Bale Model of Evolution of Modern Stadium) lines with arrows refer to spectator and player ability to move

CHAPTER 3

TEMPORARY BASEBALL AND FOOTBALL SPORT FACILITIES

Introduction

The world witnessed the United States become a growing industrial power during the 19th century primarily through rising population numbers and vast land acquisitions (Sack, 1986; Smith, 2003). For instance, John and Sheard (2000) indicate the United States increased its territory over two-million square miles during this century while its population grew from 5,308,483 in 1800 to 75,695,297 by the dawn of the 20th century (U.S. Census, 2004). However, this significant population increase occurred mainly in the last forty years of the century (1860-1900) as the number of Americans swelled nearly forty-four million (Golenbock, 2000; Worman, Levy, & Katz, 1972). Therefore, the population of the United States started out dispersed with roughly eighty percent of the populace living in rural or pastoral areas until the start of 1860. Yet, the distribution of the population radically changed during the second half of the century as nearly one-half of Americans lived within all city limits (Oriard, 1976; Worman, Levy, & Katz, 1972).

Immigrants appear to emerge as the main source for the U.S. population increase, primarily because of their desire to take advantage of America's fertile natural resources and improving economy. Remarkably, around 500,000 immigrants landed on Ellis Island annually to gain access to the United States during the 19th century (Gershman, 1993). New York City resultantly materialized with America's largest population and source for industrial capital as four out of five New Yorkers were immigrants (Ward & Burns, 1994). Sack (1986) suggests laws forcefully regulating banking, credit, and currency provided these individuals and organizations the opportunity and the necessary motivation to buy and sell the land surrounding them as well as produce the numerous products and services to continue the strengthening of the industrial economy.

Likely, as the above figures indicate, land and population changes altered the development and dynamics of the American city. The regions of New York City and New England illustrate this point best as two out of every three New Yorkers and four of every five people in Massachusetts were city folk by 1890 (Lucas & Smith, 1978). Consequently, cities, in these locations and others, enlarged in geographic size but simultaneously suffered under escalating geographic confinement because city expansion efforts did not match the demands forced upon them by the population explosion. For example, by 1900, Lower Manhattan contained nearly 1,000 people per acre in filled tenements and one city block in New York regularly contained around 2,800 individuals (Smith, 2003).

Douglas (1930) shows us the average manufacturing employee spent over sixty hours a week working around 1870 in industrial America while earning a paltry salary estimated at around \$427 a year. Riess (1999) suggests \$500 a year was the poverty line during this time. Resultantly, this combination of low pay, high work hours, and less than preferable conditions, typical of the industrial environment, prompted the media to call for individuals and communities to help establish park space, not ballpark space, in the highly industrial and dirty environment because they believed natural spaces helped individuals become healthier and more productive workers (Meyer, 1981; Pittsburgh Post, 1909d). For example, New York's Central Park remains to this day as the greatest representative of park space established by the industrial city.

Improvements in railroad transportation emerged as a great contributor to the development of the American city and likely the expansion of sport (Kuklick, 1991). For instance, Lucas and Smith (1978) show by 1860, the railroad tied together the northern industrial cities of America and by 1880; over 90,000 miles of railroads covered the nation. Communication innovations naturally accompanied transportation advancements, which required greater organization of people and industries. The literature shows the invention of the telegraph, telephone, film/photography, and cheaper printable paper most notably contributed to the communication developments of American city in the 19th century (Betts, 1953; Kuklick, 1991; Rader, 1990). Sport benefited immensely from these developments.

Still, the print media promoted and advanced sport the best, mainly by increasing the literacy and knowledge about current events to everyone from the rich industrial leader to the average person on the street. Within the New York area, Henry Chadwick's guide to baseball sold 50,000 copies, William Trotter Porter's *Spirit of the Times*, started in 1831, had 40,000 subscribers by 1856, and *The New York Clipper*, started in 1853, all acted to legitimize daily sport reporting the dissemination of sport information by the 1880s (Adelman, 1986; Gershman, 1993; Rader, 1990, 1994). Clearly, this literature shows sporting publications were important for the development of sport because they enhanced its popularity through providing information about individual and team statistics, game strategy, and training techniques people wanted to know. Obviously, baseball clearly benefited from these innovations to help establish a higher understanding of the game while simultaneously standardizing the rules.

These particular results of industrialization imposed changes upon city layouts and the functioning of space consciousness to inspire geographic confinement of individuals and their activities (Bale, 2001). Therefore, modernization and spatial restrictions within all aspects of American life prompted beliefs time and places should exist specifically for work and recreation. Adelman (1986) suggests these conditions helped spur the growth of ball playing and other activities for boys and men toward the middle of the 19th century. Betts (1953) suggests urbanization in this manner also impacted the professional sport facility because more and more people flocked to sporting contests to escape the realities of work and return to pastoral conditions (Betts, 1953). Primarily, these events triggered an increasingly interested

participant population who eventually created higher values on formally organizing sport than ever before. Originally, the sport facility existed as an undefined and often spontaneous structure used to support unorganized and simple contests. However, the increasing maturity of sport and the resulting higher demand on organized athletic participation led to the organization of sporting clubs, associations, leagues, and regional and national competitions in the 19th century following a standardization of rules which govern those sporting activities.

One specific consequence of competition was the desire to find out who was the best at each particular sporting activity whether it is horse racing, baseball, football, or boxing. However, this was problematic in the early 19th century because not everyone possessed the financial means or discretionary time necessary to support competitive sport. Additionally, no central spectator friendly sport facility existed during this time which could host a competitive event like baseball or football. Therefore, support for competitive sport does not really occur on a national scale until the late 1800s. Douglas (1930) and Voigt (1983) support this conclusion as each promote the American worker did not see dramatic decreases in their average work week or improved pay until the latter part of the 19th century. Voigt (1983) remarks a combination of increased discretionary income and free time clearly impacted the growth of sport along and likely the maturity of the sport facility during the end of the 19th century.

Eventually, sport facilities begin to reflect characteristics of professionalism and their maturing sports in order to meet the demands of consumers and owners.

Therefore, sport and the sport facility are forever changed from simple unorganized contests and temporary structures into campaigns of grand significance and complicated semi-permanent buildings. This chapter on baseball and football sport facilities discusses the first four stages of this work's ideal-type to demonstrate this point. Consequently, the chapter attempts to first demonstrate baseball and football sport facilities started out as simple open fields with little or no standardized territories to host unsophisticated and spontaneous ball games (stage one). Next, the chapter illustrates dissimilar and limited rules of play prompted baseball and football sport facilities to evolve into small hastily constructed but temporary open competition areas in order distinguish those participating in play from those watching (stage two). Subsequently, this section adds baseball and football facilities changed into to complex temporary enclosed structures for improved spectator experiences and to maximize team revenues (stage three and four) but concludes the temporary nature of the sport facility failed to match the ever increasing maturity of baseball, football, and its growing fan base.

The Earliest Areas of Play

Bale (2001) suggests stage one (See Figure 3.1) represents a time prior to the start of the 20th century when sporting activities served as isolated and spontaneous events to break up the monotony or harshness of industrialized society. In other words, baseball, football, and most other sporting activities likely occurred for fun on commons areas and open unmanicured fields with no fixed territories and few rules if any to regulate play. Absolutely no spatial separation existed between the competitors

and the observers of the activities. Therefore, the field of play was difficult to determine and confusion readily appears when attempting to separate the competitors from the spectators. Spectators often figured into the matches within stage one sport facilities because no rules or marked territories acted to limit their access. For, example, Bale (2001) explains stage one territories also served as hosts to other activities and can do so simultaneously as sporting activities occur. Thus, a baseball ground could exist as a marketplace and a football field could see time as a place for agriculture. Consequently, it is easy to see how spectators got involved with sporting activities in stage one sport facilities and why the physical condition of those grounds was less than ideal for competitive play.

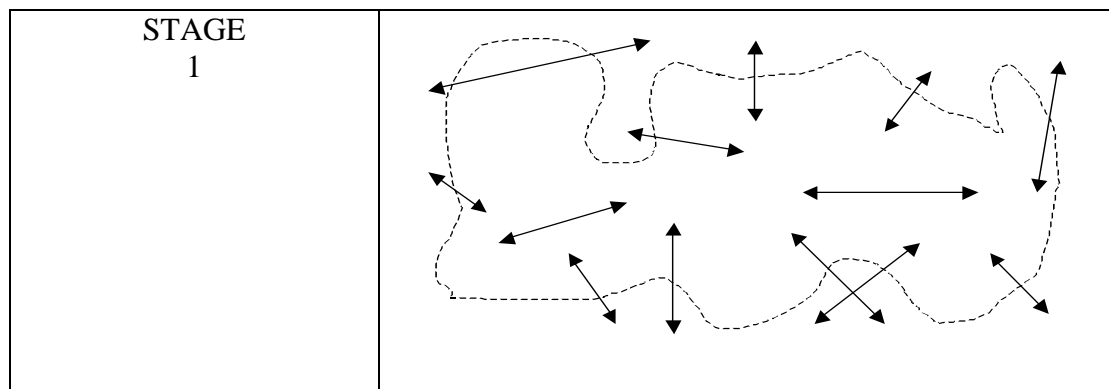


Figure 3.1: Stage One of Bale's (2001) Model of Evolution of Modern Stadium (lines with arrows refer to spectator and player ability to move)

Within the United States, a number of authors reveal American sport facilities started similarly to this stage (Bale, 2001; Gershman, 1993; Leventhal, 2000; Smith,

2003; Ward & Burns, 1994). For example, Ward and Burns (1994, p.4) illustrate men participated in some early version of baseball by 1842, “on a vacant lot at the corner of Madison Avenue and 27th Street in a spacious clearing at the foot of Murray Hill.” Additionally, Smith (2003) suggests the earliest sport facilities contained no bleachers or any unnatural (i.e. man made) enclosures. Furthermore, baseball, which evolved from a child’s game called ‘Rounders,’ typically resembled the pastures and fields it was played upon, in that, it offered few consistent expectations for play from one time to the next (Gershman, 1993).

Leventhal (2000) describes the earliest fields of baseball as if designed by a child because the rules of play were often determined by the shape of the surrounding environment and its available resources. Moreover, makeshift equipment often accompanied these spontaneous contests. Therefore, a cantaloupe and space between two trees might serve as a football and its end zone on one juncture but each serve as sideline markers for another occasion. Elements like who competes, available resources/equipment, and what time of the day the game occurs affect this decision-making or design process. Ultimately, the earliest American sport facilities acted much like those offered in Bale’s (2001) ideal-type because no standardized rules governed the play and limited the territory of an activity. Thus, few if anyone could distinguish participants from spectators even if they were holding a cantaloupe. Furthermore, the lack of organization or preparation for contests signifies stage one baseball and football sport facilities were undeveloped products of immature activities and their participant’s skill levels.

Massachusetts Town Ball and the New York Area's Elysian Fields

Baseball and football each took less than fifty years to materialize as popular sporting activities in the United States primarily because each game embraced standardized rules. Consequently, as Adelman (1986) claims, baseball evolved into a highly legitimate and mature game adults could play and watch without an overwhelming fear of shame by the middle of the 19th century. Football followed shortly after as a more evolved game by the 1880s. The sport facilities baseball and football appeared in also matured or changed simultaneously with the increasingly complex nature of baseball and football play which accompanied their participants evolving from children into adults.

Strikingly, this work's ideal-type (See Figure 3.2) proposes stage two of sport facility construction introduces the first separation between spectators and participants through the marking of the competition grounds or segmentation of space (e.g. infield from outfield and out-of-play versus in-play). Basically, the introduction of straight lines transforms the competition area from an irregular shape to a fixed space for the first time. The Massachusetts and New York versions of standardized baseball overwhelmingly emerged throughout the United States during baseball's early history to illustrate this point.

Story (1995) labels the Massachusetts style of baseball as "Town Ball," while others present this version of baseball as the "New England" game (Bak, 1998). The Massachusetts version obviously appeared primarily in the New England area but other regions of the country also participated in this style of ball because

industrialization and population increases prompted individuals to settle new areas of America. For example, Bak (1998) presents large numbers of New England residents moved to Detroit during its 19th century industrial boom and brought with them the Massachusetts style of baseball as early as August 15, 1857 (Detroit Free Press, 1857).

In the Massachusetts version of baseball, a square infield rests with bases standing sixty-feet apart. Each base finds itself labeled first, second, third, or fourth base. The batter stands inside a small four foot square located in between first and fourth base and fittingly, a pitcher throws the baseball from the middle of the square infield. The box-shaped set-up of the Massachusetts game provides no foul territory and thus finds itself resembling a large cricket-like field because the outfield totally surrounds the infield. Smith (2003) suggests few fences existed for this early game and if they did they survived 600 feet or further from the playing field.

Infielders typically stood on top of their respective bases to play an infield position but the size of the outfield impelled numerous individuals to secure various outfield locations. Resultantly, the Massachusetts game typically required teams over ten and preferred teams with close to twenty players in order to manage the spacious outfield. Clearly, the Massachusetts game appears somewhat similar to stage one in that spectators still remain part of the field of play. For instance, spectators must sit or stand in the limitless outfield which completely surrounds the infield. Thus, with no fixed markers to separate the outfielders from the spectators, the Massachusetts version of baseball fails to prevent spectator intervention into the game. Therefore, spectators can still involve themselves with the play of the game while sitting in the

spacious outfield. Bess (1986) and Riess (1999) point out the few spectators sitting in fair territory often influenced the outcome of games as balls usually perceived to be homeruns became singles, doubles, or triples. Basically, the only difference between the Massachusetts game and stage one appears with the limiting of the infield which changed baseball from an uneven territory into a fixed territory.

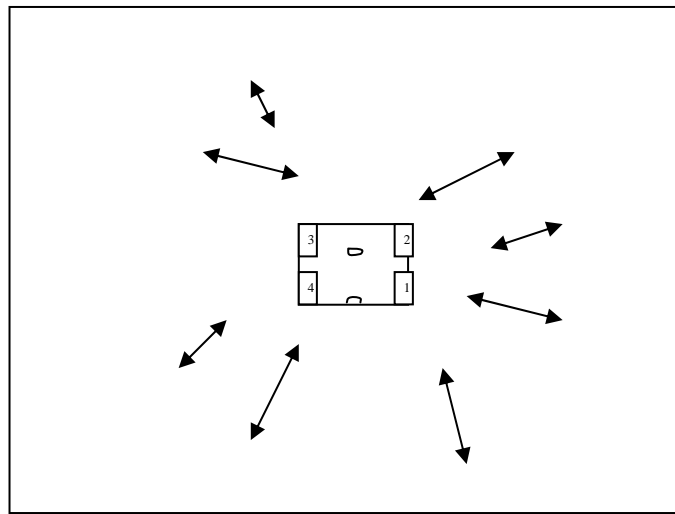


Figure 3.2: Massachusetts version of baseball. Notice bases numbered one through four and location of pitcher to batter box (Arrows demonstrate spectator movement)

The New York version of baseball supports the features we see in today's baseball facilities because again, New York emerged as the media and industrial capital of the United States and promulgated this version of baseball through various improvements in communication and transportation technology. Clearly, as Rader (2002) mentions, it is possible the New York style emerged over the Massachusetts game because it better accommodated spectator interests through the incorporation of

foul lines into its design, which helped spectators enjoy a closer view of the action (See Figure 3.3). However, most individuals preferred the New York version because the foul lines better regulated the competition area to keep spectators off the playing field and limited the number of players participating on it.

Originally created by Alexander Cartwright of the New York Knickerbocker Club in September of 1845, the New York version of baseball incorporated a diamond-shaped infield with a base on each corner (Bess, 1983, 1986; Gershman, 1993; Leventhal, 2000; Rader, 2002; Ward & Burns, 1994; Wright, 1996). Each of the four bases stood ninety feet apart and surrounded a pitcher's box approximately forty-five feet from home/forth base (See Figure 3.3) to which the pitcher would throw the ball to the batter (Wright, 1996). The diamond shape appears as a truly remarkable point in the evolution of the sport facility because Cartwright's version of baseball concentrated game actions within a diamond and its extending baselines, thus separating foul from fair territory. By limiting the game action inside the diamond, Cartwright improved the spectator's experience through forcing them to focus on a smaller area to view the game and therefore, see all the action. The foul lines extending out from the first and third bases of the diamond instantly provided choice viewing locations behind home and along those baselines. Additionally, limiting the playing field in this manner also reduced the number of players needed to nine so not as many people were required to complete a team and match. Thus, the New York version could be more readily played than the Massachusetts style of baseball.

Rader (2002) reiterates early baseball players of the New York version played standing directly on top of their respected base much like the Massachusetts game. Thus, the first baseman stood on top of first base and so on. No shortstop position existed in the earliest versions of baseball and the catcher often stood several feet behind home plate because, like the other players, he owned no glove and wore no protective gear. The shortstop position did not occur until Doc Adams created a harder and more durable baseball in the late 1800s which was able to travel farther and faster than the previous generation of baseballs (Wright, 1996). Interestingly, players in the Massachusetts and New York versions could become out after catching the first bounce of a fly ball. Therefore, most players in the earliest versions of these two games probably tried to play somewhat deep in the spacious outfield so they could move up to catch a ball after the first bounce. The anticipation of this outfield position also seems logical because the earliest versions of baseball encouraged pitchers to help batters hit the ball by tossing it underhanded and to a location where the batter wanted the ball. Overhand pitching did not become legal until 1884 (Bak, 1998).

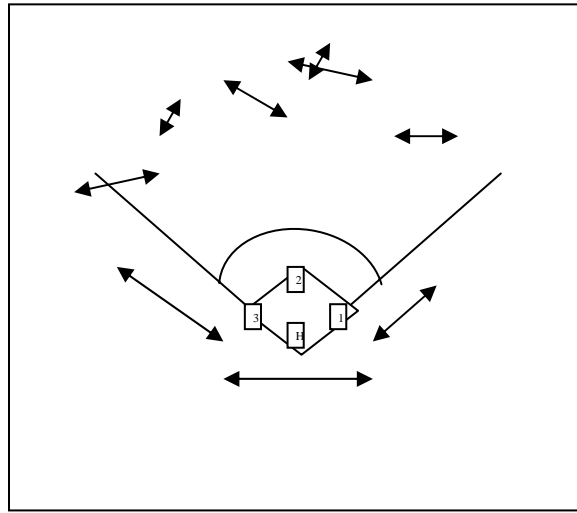


Figure 3.3: New York version of baseball. Notice foul lines extending from first and third base create nature spectator locations. (Arrows represent spectator movement)

The New York Knickerbocker Club included men from a variety of work disciplines which provided them necessary time and money to compete. For instance, Cartwright, an engineer and draftsman by trade, participated with other members who held positions as a U.S. Marshall, portrait photographer, physician, and cigar dealer. Additionally, other members of the Knickerbocker club pursued livelihoods as merchants, Wall Street brokers, and insurance salesmen (Ward & Burns, 1994). Overall, this potpourri of individuals joined together to share in an activity which would improve their physical and mental health but within an interesting format similar to that they played when they were children (Ward & Burns, 1994). Consequently, the Knickerbockers selected and developed baseball to meet these interests.

The Knickerbockers searched for a more fitting location to host their baseball contests because urban pressures consistently moved them further and further away from their residences. In essence, they searched for a location upon which they could transform regular space into a special area for a specific activity which would not be imposed by city travel limitations. The Knickerbockers found such a place outside the city's periphery in Hoboken, New Jersey on a "grassy picnic grove called Elysian Fields," (Ward & Burns, 1994 p.5). On June 19, 1846, the New York Knickerbocker Club held its first of many matches at the Elysian Fields to create the first recurrent baseball grounds (Leventhal, 2000; Ward & Burns, 1994). Rader (2002) and Bess (1983, 1986) present the Elysian Fields as a very beautiful and lovely recreational area in a limitless pastoral setting. Bess (1983b, 1986) further describes the Elysian Fields as a place children might play their first game because no restrictions or obstacles existed which might limit the playing field's size. Obviously, only the rules created by Cartwright limited the playing grounds.

Bess (1986) contends all early regular playing fields of this era were essentially identical or similar to the Elysian Fields. No spectator amenities, scoreboards, press boxes, or even dugouts existed around or within the facility (Smith, 2000). In fact, very few of the earliest ballparks possessed seating or bleacher areas for spectators (Gershman, 1993; Smith, 2003). Smith (2000) agrees baseball facilities of 19th century existed as simple structures as little more than open fields with few hastily erected wooden stands. Typically, a rope or earthen embankment separated the spectators from the field of play (Bale, 2001; Gershman, 1993). Outfield fences did

exist in some locations but again, Smith (2003) points out, if they did exist, they typically existed six-hundred feet or further from home plate. Gershman (1993) suggests people sometimes attempted to sit on the hastily constructed fences or rope structures along the first and third base lines but the Elysian Fields and stage two facilities lacked any consistent location from one date to the next to establish any permanent seating structure. Overall, the primary reason seating accommodations failed to find a home in early sport facilities resulted from a narrow focus on sport as a participant event and not as an entertainment vehicle for the masses (Gershman, 1993).

Perhaps the strategies utilized by most players of this era illustrate the lack of fences incorporated by the sport facility best because most batters attempted to place their hit balls in between fielders and to not over their heads. Therefore, the establishment of outfield fences was not necessary. Ward and Burns (1994) reveal early baseball players also found it difficult to hit the original baseball very far or throw it farther than 200 feet because early manufacturers made the baseball from lightweight materials. Consequently, early baseball players found the original baseball easy to damage and many games were finished soon after they started. Ultimately, the immaturity of baseball, its players, and equipment prompted little efforts to make baseball facilities transform from temporary places into permanent locations.

The Introduction of Football

Organized football developed a little later than baseball as it was not until 1869 when a group of students at Rutgers and Princeton agreed to participate in a series of

matches (Bernstein, 2001). Like the early baseball games, this particular football game produced the first fixed demarcation of territory to help identify where the playing field stopped and where it began. In essence, the fixed boundaries established by this contest attempted to separate those playing from those watching. Additionally, like baseball, few spectators roamed the sidelines during the early days of football. For example, approximately, 100 people attended the first contest between Rutgers and Princeton by taking a seat on the surrounding grass lawn or upon a fence partially encompassing the field (Bernstein, 2001). No bleacher or grandstands existed for the first football game.

Again, like stage one, this contest possessed very few rules to limit the playing area. Basically, the original playing fields of football depended on the number of participants and because this number generally fluctuated on the high end, playing field of early football required much more space than those today. Yale's Hamilton Field illustrates this statement beautifully as it was situated on a plot of land 400 feet long and 250 feet wide (Bernstein, 2001). This would make Hamilton Field significantly longer and wider than today's fields. The contest between Rutgers and Princeton included fifty players, four judges, and two referees all simultaneously on the field of play (Bernstein, 2001). Obviously, a large area was needed to host such an activity.

Eventually, the colleges, led by Princeton, Yale, and Harvard met and formally organized to create the first formal rules for football in 1871. However, different versions of football persisted around the country after this meeting. Harvard's version

of football emerged, much like New York's version of baseball, as the more popular style by 1873 (Blanchard, 1923). The Harvard version resembled rugby but was still much closer to the football currently played today than that offered by the Princeton or Yale soccer-oriented style (Bernstein, 2001). The Harvard version reduced the dimensions of the football field to 140 yards long by 70 yards wide and number of active players from over twenty to fifteen (Bernstein, 2001). Eventually, this number would drop to eleven by 1880, when Yale's Walter Camp promoted to reduce the number of active players to eleven. Fifteen players on each team were perceived to be too many by leaders of football at this time because it provided the opportunity for too many violent collisions on the football gridiron (Bernstein, 2001; Gorn & Goldstein, 1993).

Camp also helped establish the first line of scrimmage at this time and instituted a set of downs which forever changed the nature of the football contest for those playing and watching. Originally, no set of downs existed during a football contest so teams held the ball until they scored or turned it over. Essentially, football acted much like its influential rugby and soccer roots because it provided continuous non-stop action but typically encouraged teams and individuals to hold the ball. However, possessing the ball in this manner is problematic because it promotes tied scores as an acceptable outcome and likely produces a rather boring non-distinct product to those individuals not directly involved in the game action. Therefore, the incorporation of three downs to obtain five yards served as a major innovation for football sport facilities because it encouraged teams to move the ball down the field

and not settle on holding the ball to reach a tied outcome. The line of scrimmage appropriately accompanied the set of downs to provide teams the avenue on which to develop strategy to in order to move the ball down the field. Overall, the line of scrimmage and set of downs created the ideal circumstances for the activities of a football game to materialize regularly in the middle of the football field rather than occur randomly throughout like rugby or soccer action would produce.

Serby's (1931) effort helps make this a logical conclusion as he describes the line of scrimmage generally stays in the middle of the field (i.e. between the 30 yard lines). To demonstrate this point, Serby (1931) illustrated how the line of scrimmage moved mainly in the middle of the field during a 1930 college football game between the University of Southern California and Notre Dame. Additional works completed by Hadden (1930) and the Athletic Journal (1925) also support this conclusion.

Hadden (1930, p.140) claimed, "anyone concerned with the sale of football seats generally know the closest to the 50-yard line are most preferred." Hadden (1930) drew this conclusion from examining Yale home football games in 1928 and how fans will sacrifice a closer seating location on the corners of the football field to sit farther above the field but closer to the 50-yard line. Upon examining the rush to take unreserved seating at a variety of football fields, the Athletic Journal (1925) also made a similar conclusion as they discovered most people want to sit in the middle of the field versus corner or end zone locations because that is where most of the football action occurs.

Conclusion for Stage Two

Bale (1996, 2001) offers little separation between spectators and participants occurred before the middle of the 19th century because few constraints limited random play and fewer standardized rules persisted to govern sporting activities. Therefore, a lack of rule standardization clearly affected the shape of all major sport facilities early in baseball and football sporting histories. Consequently, early baseball and football sport facilities surfaced as unfixed temporary structures within multi-purpose environments.

Baseball and football sport facility development entered stage two when they redefined the competition area as society at large faced greater confinement through the early stages of industrialization. Primarily, this happened because no rules existed which defined the territory upon which baseball and football contests were to be played. Additionally, each sport matured enough that men were not afraid to play them openly in public anymore. However, neither football nor baseball matured enough to secure permanent facilities because the temporary and still random nature of their equipment and fellowship inherently prevented regular occurrence which would increase the popularity of each game.

The Massachusetts version of baseball was one of the initial attempts to proscribe competition grounds and it took the shape of a square with no foul lines or fixed playing positions (Ward & Burns, 1994). In essence, no true perspective or orientation existed for the spectator to focus their attention on during a Massachusetts baseball contest. Consequently, a sport facility with fixed seats would be problematic

for the Massachusetts version because it would drastically alter the play of this game. Therefore, the Massachusetts game produced few spectators who could make the Massachusetts facility into a permanent structure. This version of baseball, however, was successful in segmenting infield space from outfield space or separating the rigid zone, established by infield lines, from the free zone of the spacious outfield (Bale, 1996; Bess, 1983b).

Cartwright's innovation established foul lines for baseball facilities and natural spectator areas behind home and along the first and third baselines unlike the random positioning spectators secured in the New England game (Story, 1995). This was an important step in the evolution of the sport facility as spectators now took positions inside controlled areas outside of the playing field. In essence, this innovation was important because as Sack (1986) suggests, it controlled where spectators positioned themselves.

Football also existed in many forms but the institution of the line of scrimmage and set of downs into the Harvard game created spectacular advancements for football facility development (See Figure 3.4). Initially, spectators secured locations and often moved with the ball along the sidelines during football's soccer or rugby like continuous play. The creation of the line of scrimmage and set of downs helped stop and start play to assist the football field in providing new permanent locations for people to watch the game in the middle of the field primarily because this is where most of the football action occurred. In essence, the rule changes of football and

baseball created specialized territory outside of the playing field as meaningful to those watching as those playing.

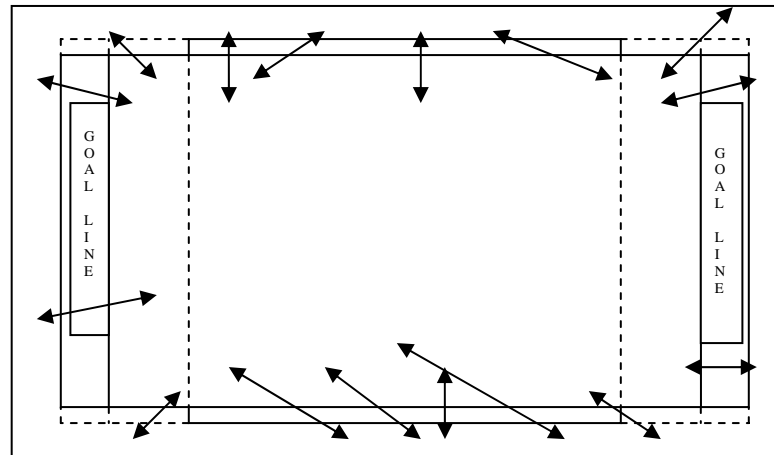


Figure 3.4: Stage 2 football facility with Harvard University and Walter Camp influence. Notice most spectators centered near the middle of the field. (Arrows represent spectator movement)

Overall, we see the beginnings of a growing consciousness regarding space as limited or restricted for specific activities during specific times of the day. Again, these examples demonstrate stage two regards territoriality as important concept because spectator and competition space surfaces as a place to control and exhibit social power through the use of structural or written obstacles (i.e. rules). Ultimately, stage two shows us spectators were separated from those engaged in competition through the establishment of a fixed competition area. Often ropes or earthen structures served as boundaries to separate the players from the spectators but the

standardization of rules provided the biggest reason for the separation between participant and spectator.

Early Enclosures and Union Baseball Grounds

Leventhal (2000) and Lowery (1986) claim the popularity of baseball prompted many to organize clubs and create temporary makeshift playing grounds all around the country. For example, *The New York Times* approximates nearly 2,000 baseball teams existed in New England during the 1860s (Gershman, 1993). Occasionally, the more important contests (i.e. professional) impelled the teams involved to produce temporary benches or bleachers for spectators (Leventhal, 2000). However, when facilities failed to offer enough seats, those unable to secure a seat location, often stood or sat in their own chairs along the foul lines or behind ropes established deep in the outfield (Leventhal, 2000).

Light (1997) mentions the first somewhat professional baseball contests appear by the end of the 1850s and most of these materialized in New York City or its surrounding areas. For instance, Gershman (1993) and Riess (1999) reveal nearly 1,500 spectators completed baseball's first charged admissions by paying a fifty-cent fee in July of 1858 to see an All-Star Game at Long Island's Fashion Race Course. The Brooklyn Excelsiors capitalized first on producing a professional product and formed the first partially funded team secretly by 1860, as winners were often found to produce a higher gate (Bak, 1998). Kirsch (1987) shows newsmen reported as early as 1860 baseball crowds approaching 10,000 and some near 20,000 for popular rivalries and special baseball events like the 1865 match-up between the Brooklyn Atlantics

and New York Mutuals or Cincinnati's ball club versus Philadelphia's. Clearly, these were not amateur contests. Overall, roughly sixty areas hosted some type of professional baseball in New York City through the early 1860s to demonstrate the increased popularity and maturity baseball achieved (Light, 1997).

Typically, these ballparks remained open to the public and utilized by others for numerous activities because the parks movement prompted natural areas for the industrial city. Again, natural spaces were created by communities to improve the mental and physical health within the industrialized citizen and not specifically for their participation in baseball. Consequently, baseball occupied a variety of locations like parks, cricket grounds, race and bicycle tracks, polo fields, cow pastures, and agricultural, county, or expositional fairgrounds (Lowery, 1986). These facilities acted as temporary homes situating wooden grandstands behind home and occasionally along the first and third baseline. Furthermore, few clubhouses and virtually no dugouts or scoreboards existed to meet the needs of the players and spectators (Benson, 1989; Bess, 1983, 1986).

Smith (2003, p.5) describes these modified sport facilities as embracing "insects, cow dung, pot-holed infields... and a vast outfield terrain." Thus, outfield fences existed in most locations but those fences usually sat 500 or more feet from home plate (Bess, 1983, 1986; Smith, 2003). Therefore, aside from the stands being deep, hastily constructed, and small, one can legitimately argue these grounds were similar to the open fields resembling stages one and two because many spectators still

sat in the outfield or inside foul territory along the baselines with only a rope to separate them from the athletes.

The earliest baseball facilities were multi-purpose facilities and generally not owned by a baseball club or management group. Furthermore, the earliest professional teams resembled nomads as they likely changed grounds routinely throughout this era for the best financial and competitive results possible. In essence, the earliest forms of organized baseball failed to instill the confidence necessary to create permanent baseball-only facilities. However, the production and increasing popularity of professional baseball encouraged some clever entrepreneurs, like William H. Cammeyer, enough to modify and enclose their structures for their own personal gain.

Individual entrepreneurs built and owned most ballparks during the early history of professional baseball so they could make money (Bess, 1986). Brooklyn entrepreneur, William H. Cammeyer, created Union Baseball Grounds, the first enclosed baseball facility, in Brooklyn's eastern district at Marcy Avenue and Rutledge Street for this purpose in 1862 (Adelman, 1986; Bak, 1998; Brooklyn Eagle, 1862; Gershman, 1993; Leventhal, 2000; Rader, 2002; Riess, 1999; Smith, 2003). Originally, Union Grounds provided space for people to ice skate during the winter. However, seeking to maximize the usage of this facility, following failed attempts to persuade people to partake in boating and horse riding activities outside winter time, Cammeyer leveled the surface and enclosed Union Grounds for roughly \$1,200 (Gershman, 1993; Riess, 1999). Ice skating would not suffer from the modifications as it continued to split duties during the year with bicycle racing and baseball.

Enclosing the structure presented a new step in the evolution of the sport facility because individuals previously faced little resistance when attempting to watch sporting activities. As demonstrated above, spectators normally chose their own seating location and typically were only limited by the foul lines and rigid zones created by standardized rules of play. Earlier facilities, utilized by sporting activities, charged admissions for seats created at the grounds but often failed to charge admission into a facility because much of structure remained open and unsecured. Thus, Cammeyer's enclosure of Union Grounds made the baseball ground into a professional facility because it increased his financial standing through separating those willing to pay from the inquisitive observer.

Cammeyer enclosed Union Grounds using a variety of structures. Grandstand wooden seating for approximately 1,500 spectators appeared appropriately in a horseshoe-shape around the infield (Brooklyn Eagle, 1862). Six-foot high fences surrounded the outfield and stood more than 500 feet away but an earthen embankment, typical of stage two facilities, also surrounded most of the structure allowing another 5,000 spectators to overlook any baseball events (Brooklyn Eagle, 1862; Gershman, 1993). Interestingly, Cammeyer also acknowledged women as important attendees for his sport facility and erected special areas to accommodate their needs (Brooklyn Eagle, 1862; Leventhal, 2000). Rader (2002) furthermore, provides Cammeyer built a saloon for thirsty patrons and a clubhouse for the competing teams at the enclosure.

Gambling, a popular activity of any early sporting contest, also found itself assisted by the facility through distinctive structures surrounding the field of play for spectators to place bets (Brooklyn Eagle, 1862; Leventhal, 2000; Rader, 2002; Ward & Burns, 1994). Gambling likely made the professional sport facilities following Union Grounds focus more on crowd control because so much money changed hands during many contests. Pietrusza (1991) offers professional baseball gambling pools often reached \$20,000 to \$70,000 as early as the 1870's.

Although more complicated than previous baseball facilities, Union Grounds was a simple structure costing roughly \$23,460 if it was built in 2005. Bak (1998) suggests Brooklyn's Union Grounds acted as an exemplary model for other cities and entrepreneurs to follow. For example, the Capitoline Grounds surfaced in the western district of Brooklyn during 1864 due to the financial success Union Grounds produced (Adelman, 1986; Smith, 2003). Additional sport facilities and their entrepreneurs probably recognized the benefits of Cammeyer's model and installed beer gardens or saloons within their sport facilities (Golenbock, 2000; Pietrusza, 1991; Smith 2003). Specifically, Pietrusza (1991) discovered Cincinnati collected nearly \$3,000 a year in beer sales during the 1870s and 1880s while Golenbock (2000) mentions beer garden sales likely produced enough revenue to allowed baseball to continue in St. Louis past the 1870s.

The Cincinnati Red Stockings, Sport Entrepreneurs, and America's First Professional Leagues

Obviously, clever entrepreneurs like Cammeyer recognized professional baseball could help them gain small fortunes by providing the best team possible to their audiences. Therefore, entrepreneurs started to pay players to accomplish this task. Ultimately, many partially professional franchises existed throughout the country but not until 1869 did the first all-professionally salaried baseball club touch the diamond. The Cincinnati Red Stockings officially formed America's first all-professional baseball team with the backing of attorney Aaron Champion because he anticipated a winning baseball club would likely provide him with monetary success.

Interestingly, as expressed earlier, the Red Stockings were not the first team to utilize professional talent because artificial amateurism previously acted the norm (Guschoy, 1998). For instance, Seymour (1960) and Guschoy (1998) point out, professional players frequently received fulltime jobs which required little or no actual work. A great example offered by Seymour (1960) describes Washington Nationals shortstop, George Wright's occupation as a government clerk and his work address existing on 238 Pennsylvania Avenue Washington, D.C. This particular location is interesting because it actually was better known as the public park or White Lot next to the White House upon which President Abraham Lincoln occasionally took in a ballgame. Voigt (1983) also offers another such instance surfaced with the New York Mutuals, as owner William Tweed routinely assigned his players to simple but decent paying jobs within city's coroner's office.

Champion selected Harry Wright, a well-known New York baseball participant, to lead his Red Stockings' organization. Eventually, Wright produced a ball club that would go undefeated in 1869 with an astonishing record of 56 wins and only one tie (Guschoy, 1998; Seymour, 1960). During this record winning streak, the Red Stockings traveled nearly 12,000 miles because of improvements in transportation and communication technology. Professional baseball and professional sport in general became legitimate and popular spectator practices in the eyes of the public following the success of the Red Stockings (Guschoy, 1998).

Bale (2001, p.17) suggests the moment sporting activities, like the Red Stockings tour, appear popular enough to attract spectators as “an integral part of the activity, these activities moved toward spectacle where spectators increasingly become necessary and important.” Thus, a variety of entrepreneurs, besides Champion, capitalized on the growing popularity professional ball provided them by the beginning of the 1870s and created their own facilities to host sporting events (Pietrusza, 1991; Rader, 2002). For example, Chris Von der Ahe's \$5,000 investment into the St. Louis Browns baseball club and facility quickly became a \$25,000 profit by 1881 (Pietrusza, 1991). Additionally, the Boston Red Stockings net worth improved from \$767.93 in 1873 to \$4,003.95 in 1882 (Rockerbie, 2004). This is an average growth rate of 20.1 percent and over a 500 percent return on the initial worth of the franchise (Rockerbie, 2004). Commercial baseball thus, expanded and formed numerous professional teams and leagues during the latter part of the 19th century. Furthermore, commercial baseball set-up enclosed cheaply built sport facilities in

mostly inexpensive locations in order to attract and accommodate the average individual who saw dramatic increases in their yearly wages along with a reduced work week (Butsch, 1990; Gershman, 1993; Kuklick, 1991, Voigt, 1983). Specifically, according to Vincent (1981), over 850 professional baseball franchises began between 1869 and 1900 but most died out.

The first major professional league recognized in this work starts with the establishment of the National Association (NA) in 1871. The first ballgame of the NA took place on May 4th, 1871 when Fort Wayne (IN) met Cleveland on Fort Wayne's Hamilton Field (Lowery, 1986). Gershman (1993) discovered entrepreneurs built all nine baseball grounds of the National Association on top of cheap locations. For instance Fairgrounds Park (Rockford, IL) sat a top a modified fairgrounds but still resembled a pastoral game with its rough terrain and collection of trees partially surrounding third base (Gershman, 1993). Additionally, Union Base-Ball Grounds (Chicago) surfaced upon one of Chicago's numerous dump sites (Gershman, 1993).

Many of the stage three sport facilities found themselves situated on the outskirts of town because sport entrepreneurs sought to produce a higher return on their investment through the use of cheap land and even cheaper building materials (Rader, 2002; Voigt, 1983). Baseball clubs, who often failed to own the facilities they played in, accommodated sport entrepreneurs as they also acted to reduce costs and maximize profits by seeking to find the lowest rental cost available (Benson, 1989). Therefore, early ballparks arose where ever a wood fence could set foot on cheap land

and often these facilities appeared so quickly it took only the length of a road trip to erect a new facility over some other temporary structure or open field (Benson, 1989).

Resultantly, many early enclosed sport facilities hosted professional baseball and football teams on poorly maintained grounds upon which nature often imposed its will. Trees influenced the play in such grounds as Oriole Park (Baltimore), Boundary Park (Washington, D.C.), and Cleveland's National Park (Smith, 2003) but this work found Fairgrounds Park (Rockford, IL) and Bennett Park (Detroit) accommodated unique tree problems. Specifically, Fairgrounds Park hosted trees behind and around third base which often obstructed the views of balls hit in that direction and deterred direct throws to home from left field (Pietrusza, 1991). Bennett Park actually incorporated several massive trees into its outfield which influenced a number of plays (Bak, 1998). Assuredly, these obstacles encouraged cheating by some whom "magically" caught and fielded balls through, around, and over the trees on the field. Bak (1998, p.55) suggests trees on the field were commonplace and "barely deserved a mention" by local fans or the media during the 19th century however, flooding within a ballpark garnered a lot of attention.

The Pittsburgh Press and Post (1909) focused some coverage on the drainage ability of Forbes Field after they described Exposition Park and its predecessors as failing to adequately host baseball and football contests along with other events because of regular flooding. Pittsburgh's Exposition Park and its professional baseball and football teams suffered mightily because the juncture between the Allegheny and Monongahela Rivers routinely flooded about six times a year (Lancaster, 1986; Smith,

2003). Additionally, the water table typically remained high enough during the baseball season that Pittsburgh played most of their games on a damp field or shallow pond (Lancaster, 1986). Ultimately, the flooding destroyed the quality of the field and ruined many choice seats located throughout the facility for football and baseball contests. Therefore, professional baseball and football teams received very few practice opportunities at Exposition Park because practices would only make the field more unplayable. Additionally, the clubs failed to maximize their revenues because people could not simply make it to their seats or the event.

Pittsburgh's situation was not unique. Perry Park (Keokuk, Iowa) included two lakes in the outfield in which players of the 1875 National Association Westerns often chased balls through (Smith, 2003). Bak (1999, p.48) described Recreation Park's (Detroit) drainage problem as so poor that "even a moderate rainfall flooded the diamond with ankle-deep water." Eventually, problems persisted so much at Recreation Park, Detroit was forced to move to a new location. The plot of land they picked produced Bennett Park and then Tiger Stadium.

These poorly maintained facilities, along with a lack of cash, prompted many professional baseball organizations and their leagues to fold before the start of the 20th century. For instance, as mentioned previously, over 850 professional baseball franchises began between 1869 and 1900 but only fifty survived six years or more because most entrepreneurs lost money during these early investments (Pietrusza, 1991; Vincent, 1981). Sport franchise owners did not maintain regular schedules in the earliest versions of professional baseball and within many of the professional leagues

because the search for profits meant regularly abandoning one location for another and often barnstorming to make up for losses imposed upon the club during league play (Kuklick, 1991). Thus, the sport organization and participant exhibited a lack of loyalty because they had so little invested in their current location. Therefore, teams moved more easily while searching for profits or folded and sport facilities appeared, disappeared, and reappeared at the drop of a hat (Benson, 1989; Kuklick, 1991).

American Association teams like the Washington Nationals and Richmond Virginians or Union Association teams like the Altoona Unions, St. Paul White Caps, and Wilmington Quicksteps of 1884 represent teams failing to finish their schedule and folding. Rockerbie (2004) point out this failure rate, although high, is not dissimilar to small business success rates common of the 19th century. Appropriately, professional baseball, at this time can be labeled as a small business venture because robber barons like Mellon or Carnegie did not own baseball teams. Middle-class businessmen acted as entrepreneurs to encourage and promote the selling of baseball and other sporting activities (Adelman, 1986).

Obviously, the failure rate displayed by such UA teams as Altoona (Pennsylvania), Chicago, and Cincinnati presents professional baseball was a risky investment. For instance, these franchises all demonstrated deficits over \$12,000 in 1884 (Pietrusza, 1991). However, other professional leagues supported tremendous profits for their member organizations. The significant financial gains produced by several professional baseball franchises support the overwhelming number professional teams and sport facilities which attempted to surface during the late 19th

century. First, Seymour (1989) found the top professional baseball clubs divided gate receipts totaling over \$100,000 around 1868. This demonstrates roughly 300,000 people attended games as most entry fees were twenty-five to fifty cents a piece. Pietrusza's (1991) work demonstrates several NA franchises produced adequate profits during the league's five year existence between 1871 and 1875. For example, the NA's Chicago and Philadelphia franchises made profits in 1871. Specifically, the Philadelphia A's made a \$200.00 profit during the 1871 season (Pietrusza, 1991). Furthermore, the 1875 Boston Red Stockings franchise recorded better profits than the two previous seasons with a take of \$2,962.57. Profits in 1874 were \$833.13 while 1873 earned Boston \$767.93 (Pietrusza, 1991).

Baseball's American Association (AA) and Union Association also turned heads in the 1880's as many teams made substantial profits or at least broke even. For example, in 1884, AA franchises like Philadelphia cleared \$75,000 while St. Louis (\$50,000), Cincinnati (\$25,000), and Baltimore (\$10,000) also made handsome profits (Pietrusza, 1991). American Association franchises in Louisville (KY) and Columbus (OH) broke even. Even some Union Association franchises generated profits in 1884. Kansas City (\$6,000.00) and Washington, D.C. (estimated \$8,750.00) were especially sorry to see the end of the league in its only season.

Football Becomes Professional

The popularity of football continued to grow thus, as Oriard (1993) promotes, most Americans knew what football was by the 1880s and 1890s. However, college football clearly emerged as the dominant commercialized football activity by the

1890s. For example, the San Francisco Examiner (1892) tells us “winning is looked upon as the greatest possible advertisement, and advertising is now believed to be of the very life of the rival educational institutions of California.

Eventually, the popularity of football prompted professional sport facilities like the Polo Grounds III (New York), Eastern Park (New York), and Exposition Park (Pittsburgh) to host college and amateur football games. Consequently, attendance at the most popular games collected thousands and thousands of dollars for each school or athletic association. Interestingly, this occurred because the number of spectators greatly exceeded the actual number of people involved running the athletic association or the student body size most institutions of higher education supported. For instance, The Professional Football Research Association (2003) points out numerous games hosted crowds in the thousands for amateur contests during the 1890s which provided higher pay for their coaches. Oriard (1993) points out Princeton versus Yale games of 1889 and 1893 brought in \$5,500 and \$30,000 respectively. At the Chicago Coliseum in 1896, Chicago versus Michigan brought in about \$10,812 (Weyand, 1961). Further evidence suggests Yale and Harvard made an astonishing profit before the construction of their permanent facilities (Yale Bowl and Harvard Stadium) in 1900 and 1901 as they split nearly \$288,000 over these two years (New York Times, 1916). Obviously, the potential benefits of this business attracted some to think about professionalizing football but before 20th century only the Northwest Pacific and Western Pennsylvania football associations (Allegheny Athletic Association and

Pittsburgh Athletic Club) produced any significant credit as professional leagues (PFRA, 2003).

The Northwest Pacific teams practicing professionalism appeared in locations such as San Francisco, Oakland, Los Angeles, Portland, Santa Barbara, and Butte primarily from 1894 to 1897 (PFRA, 2003). However, the Western Pennsylvania hosted the first outwardly professional players by 1893 starting with Pudge Heffelfinger's \$500 payment from the Allegheny Athletic Association in 1892. The Big Four, of the Western Pennsylvania football league, consisted of teams from Homestead, Duquesne, Latrobe, and Greensburg (Philadelphia Record, 1900). The Philadelphia Record (1900) reports games at Exposition Park (Pittsburgh) hosting professional football between Homestead and Duquesne secured a crowd of 9,000. Additionally, a professional facility in Homestead hosted a match between Latrobe and Greensburg in front of 7,000 spectators. The city of Philadelphia also reports its own professional teams appeared as early as 1901 with an event between Philadelphia and Conshohocken, a 6 to 0 Philadelphia triumph (Philadelphia Record, 1901a). In spite of this effort, these professional leagues primarily occurred in stage two or stage three type facilities as significantly small seating capacities and no scoreboards or public address systems appeared within their football-only facilities (Philadelphia Record, 1901a, 1901b).

Conclusion for Stage Three

Obviously, commercialization of the professional sport facility is not a recent phenomenon (Ritzer & Stillman, 2001) but it was a major step in its evolutionary

process. Ritzer and Stillman (2001) posit industrialization of the late 19th century prompted sport to become more commercial and sport facilities acted to accommodate these interests. By the mid-1860's Bess (1983 p. 118) suggests, "interested observers would gather at convenient points around the playing field," pushing us toward the enclosure movement. Initially, enclosure attempts occurred to regulate and control crowds wanting to watch professional sport (Bak, 1998; Benson, 1989; Light, 1997; Rader, 2002; Riess, 1999).

We know enclosing the sporting structure allowed facility and franchise owners to produce a new stream of revenue by segregating those willing to pay from those less desirable and inquisitive patrons. Gershman (1993) provides support for this conclusion with his discovery of an old 1876 Barb Fence Armor postcard picturing Boston's South End Grounds. On the postcard, N.F. Apolonio, president of the local Red Stockings, heralded the installation of the fence because it helped increase his gate receipts nearly \$100 dollars. Obviously, this publication clearly demonstrates baseball matured into a business and creating methods to increase team revenues became a priority. In this case, the facility helped generate more revenue because the presence of barbed-wire threatened non-paying customers with injury.

Riess (1999) also points out the enclosure movement occurred to provide better comfort for those middle and upper class attendees who wished to be segregated from lower class or paying customers. Hence, sport entrepreneurs provided women, gamblers, and drinkers their own special areas. Butsch's (1990) work suggests this became possible only in the late 19th century as improved wages and a reduced work

week provided the American worker the necessary time and money to support professional sport. Resultantly, Adelman (1986) claims the sports entrepreneur surfaced in America from middle-class businessmen trying to service their middle-class roots.

The establishment of a full professional team eventually surfaced and acted as an important “evolutionary” step in athletic participation. The inclusion of baseball and football as a public entertainment option filtered down to change the layout of sport facilities to be more of a revenue generating facility like a theatre or opera house. Benson (1989) and Gershman (1993) suggest this materialized because baseball’s participants increasingly shared the experiences of the game from a vicarious perspective rather than a physical one. Bale’s (2001) work argues this change of positions (i.e. participant to spectator) naturally accompanied industrialization and the limitation of space. Therefore, the better players participated physically in the professional sport facility while the rest preferred to watch because the space utilized by sport needed to pay for itself.

Rader (2002) argues the enclosed sport facility of the late 19th century assumed a temporary nature because each facility typically accompanied low cost materials in cheap locations which they typically shared with other activities. For example, Recreation Park (Detroit) sat on a site which held both baseball and cricket fields side by side in what can best be described as a “bathtub” shape (Bak, 1998). A three-quarter mile horse trotting track also encircled Recreation Park’s two fields which supported lacrosse, croquet, and balloon rides during the downtime between

baseball or cricket contests (Bak, 1998). The park also sponsored concerts and an archery range (Bak, 1998). Clearly, Recreation Park was the definition of a multi-use facility.

Evidently, the early enclosed sport facilities also showed signs of their pastoral heritage through shared activities. As expounded previously, trees and flooding often imposed their will upon sport facilities. Smith (2003) also points out the National League Indianapolis Hoosiers (1887) and American Association Blues (1884) played games in a cornfield named Seventh Street Parks I and II. Furthermore, Smith (2003, p.234) presents Milwaukee's Brewer Field (1887) hosted goats which regularly "grazed the outfield." Clearly, professional sport facilities were not mature structures during this stage of their evolutionary process (See Figure 3.5).

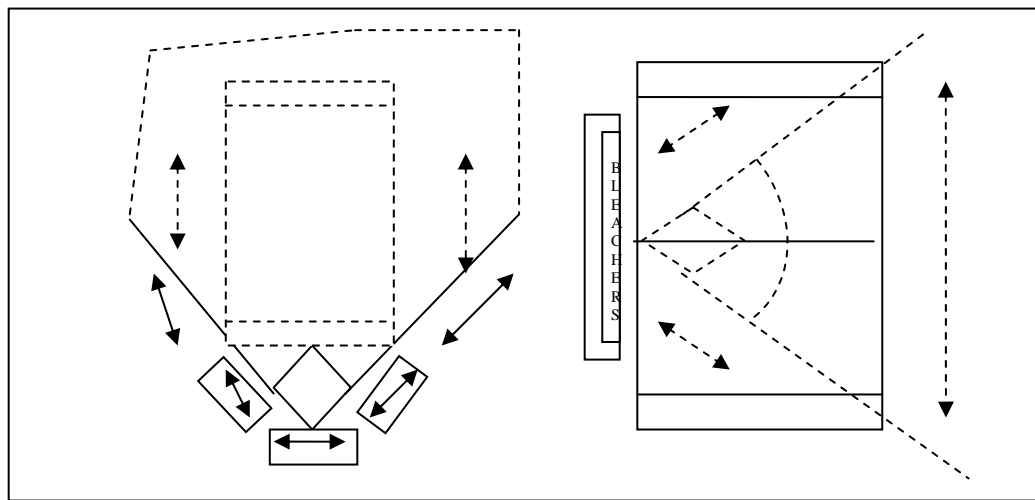


Figure 3.5: Stage 3 of professional baseball and football facility development. (Arrows demonstrate spectator movement)

With a diminished ability to last, many wood structures encouraged early professional teams to move and play in multiple competition areas as entrepreneurs invested small amounts of money in their facility's permanence. A great example of this would be that the Chicago White Sox moved six times between 1870 and 1893 (Rader, 2002; Riess, 1999). Resultantly, baseball entrepreneurs continued to produce rudimentary enclosures around their sport facilities with outfield fences great distances from home plate and few comforts which resembled those facilities of stages one and two. Ultimately, as Oriard's (1976) work shows, sport facilities typical of this stage allowed weather and nature to affect sporting contests and its spectators with brutal winds, excessive temperatures, and unpredictable climates.

Most of these sport facilities lacked dugouts, contained less than 15,000 seats, and frequently failed to possess scoreboards and/or press boxes (Smith, 2003). Furthermore, any existing press boxes probably appeared as simple elevated set of stands positioned far enough so the reporters would not suffer damage from foul balls (Bak, 1998; Gershman, 1993). Overall, these facilities remained small and cheap, as most facilities took only the length of a road trip to complete. For example, Smith (2003) discovered the 6,000 capacity Oriole Park I (Baltimore) was completed for only \$5,000 in 1882. In 2005 terms, this same sport facility would cost \$94,250. This work also found Buffalo's 5,000 seat Olympic Park I covered less than five acres of land and cost roughly \$6,000 in 1884. Again, using 2005 standards, this same facility would cost approximately \$113,000. Finally, the bathtub-shaped Recreation Park

(Detroit) controlled one wooden grandstand directly behind home plate which seated only 1,000 individuals (Bak, 1998).

Lowery (1986), Reidenbaugh (1983), and Riess (1999) demonstrate valuable support for pre-1903 ballpark size and shape as they suggest the largest and most elaborate parks of 1883 existed in New York (12,000), Chicago (10,000), and Philadelphia (8,700) (Lowery, 1986; Reiss, 1999). However, these scholars also propose overflow crowds attacked places like Philadelphia which supported crowds of 20,000 in 1887 for some contests. Reports from the Chicago Times (1895) demonstrate similar results as it claimed 27,489 showed up for a July 4th baseball contest. In 1881, Detroit (Wolverines) joined the National League and thus facility managers expanded their grandstand seating to seat an additional 5,000 people and provided press boxes to improve media images (Bak, 1998). Typical of this era, any additional seating forced by over capacity crowds usually occurred on a first come first served basis around the perimeter of the infield or far away in the expansive outfield. Remember, in this era, 400 feet was a long way away because of the condition of the baseball and popular strategy of the day.

By in large, sport facilities up until the 1890s and professional sporting activities grew larger and more popular than those offered a decade or two before but many of these sport facilities failed to accommodate the growing needs of spectators and participants (Benson, 1989). Leventhal (2000) suggests when the crowds got bigger for sporting events, the sport facility hosting resultantly evolved to become more complicated as building and therefore, just as important for drawing fans as the

game. This suggests sport entrepreneurs designed their next sport facilities towards the end of the 19th century like the South End Ground III (Boston) and Polo Grounds III (New York City) to be more permanent-like structures. However, the temporary nature of wood or low cost building materials the perceived expensive nature of utilizing permanent materials prevented most entrepreneurs from completing permanent structures able to resist fire, weather, and collapse (Bak, 1998; Gershman, 1993).

Increasing the Complexity: Expansion and Renovation Efforts

The literature shows us once professional baseball and football matured enough as sporting activities to convince fans they would not disappear or quickly fade into oblivion, sport facilities responded, evolving into more elaborate or permanent-like structures which attempted to better suit the needs of its owners, participants, and spectators. Consequently, numerous sport franchise owners expanded the seating capacity and amenities of their sport facility (Kuklick, 1991). For example, in 1900, Detroit had a population of roughly 286,000 making it the smallest market in the American League's debut season (Bak, 1998). However, Detroit made a \$35,000 profit in 1901 for the Tigers ownership because it addressed spectator concerns and provided a major park expansion which nearly doubled the capacity of Bennett Park I. Bennett Park II, although 3,500 seats bigger, only absorbed half the space its successor, Tiger Stadium, controlled when it was abandoned in 1999, but it still contained a manually-run scoreboard and supported grandstand seating from third base which wrapped around home plate towards first (Bak, 1998). Bleacher seating extended from those around home and stretched down the first base line to make 8,500

the total seating capacity. For the benefit of the players, a clubhouse materialized in the deepest part of center field which was about 490 feet from home (Bak, 1998). Finally, a special “ladies” section opened within the new facility (Bak, 1998).

Attempts to persuade female attendance at baseball contests generally remained strong in sport facilities during stage four of this ideal-type because they contributed toward larger gate revenues and helped curb rowdy or inappropriate behavior simultaneously occurring with the increasing popularity of baseball (Riess, 1999). Thus, the sport facility operator modernized the sporting venue to attract this segment of the audience. Therefore, some ballparks began to introduce restrooms and more comfortable grandstand or box seating as women would not sit in the lower class bleacher area (Atlanta Journal Constitution, 1895; New York Times, 1896; New York Tribune, 1916, Riess, 1980).

The small capacity and amount of storage space available inside Bennett Park II challenged the abilities of the participants because fans often sat along the infield foul lines with equipment like shovels, bats, and balls (Bak, 1998). Subsequently, combining these features with the great Detroit teams of the early 20th century, more than 436,000 fans to attend games during the 1908 season (Bak, 1998). Thus, in 1910, further ballpark expansion efforts occurred to bring the total seating capacity of Bennett Park to 13,000 (Bak, 1998). Again, profitability encouraged them to broaden the fan base by increasing the grounds because gate attendance was so heavily relied upon during the temporary era (Gershman, 1993). Similar situations such as the one in Detroit played out in other cities across the United States.

The New York Polo Grounds III of the late 19th century offers a wonderful example of a stage four facility bridging the gap between the temporary and permanent professional sporting structure because it evolved into a very sophisticated, albeit wooden structure (Goldblatt, 2003; Hynd, 1988). The Polo Grounds found a home back in 1890 when the upstart Players League decided to build a facility near Coogan's Bluff and the Harlem River. As part of a lot shared with the National League Giants' (Manhattan Park), Brotherhood Park took its place to help form the bathtub shape which existed between the parks and Coogan's Bluff (Smith, 2000). Overall, the two lots were bigger than two football fields in length (Ritter, 1992). Following the collapse of the Players League, Giants owner, John B. Day, took over the larger Brotherhood Park and summarily moved his team (Ritter, 1992; Smith, 2000). The lot was modified and a massive wooden double decked roofed sat about twenty feet past each base. Uncovered bleacher sections extended down most of the remaining distance to the foul poles. Ladies and gentlemen wishing to watch from their horse carriage could successfully accomplish this feat at the Polo Grounds in a special roped off section in deep center field, around 500 feet or more from home (Ritter, 1992). Overall the park held enough seats for 16,000.

Not all sport facilities of the late 19th and early 20th century sought to become permanent structures. Therefore, many still continued to resemble their older cousins from stages two and three and failed to accommodate their increasing fan base or owner's pockets. Columbia Park (Philadelphia) surfaced as an impulsively constructed wooden single-decked facility with a roof stretching from first to third base. Most of

the park's 9,500 seats materialized as uncovered bleacher seating extending to each foul pole (Kuklick, 1991; Ritter, 1992; Smith, 2003). No dugouts existed within the facility and players primarily took a seat on wooden benches located in foul territory. This would not represent a full stage four facility.

Although rare, overflow crowds, like the 25,187 on September 30, 1901 or the 28,000 in 1908, often dominated the capacity of the tiny facility (Kuklick, 1991; Smith, 2003). Overall, the facility was simple and provided few amenities or qualities associated with a modern ballpark. Additionally, with the rash of fires and collapses occurring in all sport facilities, the wooden Columbia Park was perceived to be one huge accident just waiting to happen (Kuklick, 1991). Consequently, as Kuklick (1991) suggests, Philadelphia sport entrepreneurs sought to update the comforts provided by their next sport facility because they competed with other forms of leisure entertainment like vaudeville and theatres for consumer dollars.

Fires and Collapses

As expressed earlier, sport entrepreneurs and some franchises hastily built most of their facilities on the outskirts of town to take advantage of low real estate prices offered by the city's periphery because urban space was at a premium and often too expensive for the middle-class ownership (Bess, 1986; Riess, 1999). Therefore, keeping in mind the limited financial status of most sport entrepreneurs, most if not virtually all sport facilities stood as wood structures before the start of the 20th century (Light, 1997). However, wood burns, breaks, and succumbs more easily to nature than steel and concrete so many ballparks of the temporary era burned and collapsed more

often than desirable. The increasing popularity of tobacco products mixing with the wooden structures often caused the damage most fires inflicted upon professional sport facilities during the 19th century (Baltimore Sun, 1895a, 1895b). Consequently, many sporting grounds typically lasted fewer than five or six years during this time (Benson, 1989).

The work of Ward and Burns (1994) expresses the tragedy of this point well as they show the Great Boston fire of 1894 not only destroyed the ballpark but also 170 neighboring buildings. Golenbock (2000) further describes St. Louis Browns owner, Chris Von der Ahe's personal life suffered tremendously following a fire to his ballpark in 1898. Specifically, Von der Ahe lost much of his possessions, his entire ballpark, and significant amounts of money to a number of the more than 100 people burned or trampled because of the fire. Ultimately, Von der Ahe died broke and divorced in 1913 because of the fire (Golenbock, 2000).

The Baltimore Sun (1895a, 1895b), Smith (2003), and Kuklick (1991) suggest most fires occurred at professional sport facilities during the 1880s and 1890s because earlier sport facilities usually fell apart or were completely abandoned before fire could end their day. Thus, stage four facilities were more permanent-like because they lasted longer but their massive size and likely cheap construction materials supplied them the fuel needed to make them a giant safety hazard. Overall, at least twenty-one ballparks caught fire during the 1890s (Smith, 2003). Furthermore, professional facilities in Boston (South End Grounds II), Chicago (South Side Park), Philadelphia (Philadelphia Baseball Grounds I), Baltimore (Oriole Park II), St. Louis (Robison

Field I), Louisville (Eclipse Park I), and Cincinnati (League Park I) highlight the mid-1890s as a particularly tragic time for professional sport facilities.

Sport facilities of the 19th century also earned the “temporary” distinction from this work because they often collapsed under normal and extreme conditions. For example, in 1903, the Philadelphia Baseball Grounds II hosted a baseball contest in which a large overhang collapsed killing twelve and injuring 282 (Kuklick, 1991; Lowery, 1986; Seymour, 1971; Westcott, 1996). Additionally, Eastern Park in New York experienced a collapse of its bleacher section during a football contest in the 1890s injuring several spectators (Goldstein, 1996). Cincinnati’s League Park I also suffered from a serious collapse in 1884 (Lowery, 1986). Pittsburgh’s Exposition Park suffered collapses in 1900 and 1901 when storms ripped off the roof facility (Lowery, 1986).

Gershman (1993, p.53) proposes examining “insurance maps of the period” assists our understanding for the level of concern sport franchises held toward fire and collapse because of all the fire-fighting and structural support equipment the insurance company listed sport facilities possessed. Therefore, stage four facilities obviously appear more complicated and different from the stage three sport facilities because they cost more and utilized various pieces of equipment to protect the structure. Kuklick (1991) posits these rash of fires and collapses, along with the growing popularity of professional sport prompted sport entrepreneurs and franchise owners to change their minds on using permanent materials for building bigger and better sport facilities. However, fires might not have surfaced as the most feared safety precaution

which could destroy a sport and its sporting structure. Perhaps, crowd control emerged as an important issue to prompt the evolution of the professional sport facility into a more magnificent and complicated piece of work.

Crowd Control

When the sports of baseball and football started to draw a larger and more socially diverse crowd, the need prompted by the spectators themselves to segregate from each other forced changes on the sport facility. Thus, crowd control evolved into an important issue for sport organizations. Kirsch (1989) presents crowd control became an important issue for organizations as early as the 1860s as topics like obstructed views, skinny aisles, overcrowding, and broken or damaged seats may have contributed to some poor behavior. However, this issue really did not emerge as important until the 1880s. Kirsch (1987) and Riess (1999) report crowds attending baseball games from 1855 to 1870 typically came from the upper and upper-middle classes because individuals played baseball during the day. Only white-collar workers, typical of the middle and upper classes, earned the higher incomes and achieved the lower work hours necessary for the enjoyment of baseball during the work week, which, keep in mind, also included Saturdays and daylight hours during the 19th century. Examining photographs and drawings taken during this time promotes this conclusion as Riess (1999, p.37) suggests the clothing overwhelmingly seen in these pictures supports the middle class attended games because most attendees wore “dark jackets, ties, and derby or straw hats.” Further evidence of middle and upper class crowds exists from articles in the New York Times (1890) and Boston Evening

Transcript (1887) as they describe the composition of professional baseball crowds in similar terms.

Gradually, professional sport started to attract a more diverse audience, especially when \$0.25 became the cost of admission. For instance, the St. Louis Post-Dispatch described its baseball audience as broad during the 1884 season (Riess, 1994, 1999; St. Louis Dispatch, 1883). Riess (1994, 1999) posits the various classes making up this broad crowd rarely intermingled because existing seat prices and structures segregated the seating arrangements. Open bleacher sections served as home to the lower class of professional sport patrons. Pavilions, grandstands, roofs, and rare luxury seating accommodated to protect middle and upper class spectators from the behavior of other viewers and extreme weather conditions such as excessive sun, wind, rain, or snow (Bale, 2001; Rader, 2000; Riess, 1999).

Bale (2001) supports grandstands and pavilions first introduced themselves to the sport facility to specifically help segregate higher paying customers in more luxurious accommodations from lower paying customers. Erecting the grandstand provided more comfort and probably evoked awe in some people to come see the sport facility thus, prompting more interest in the sport and more additions to the facility itself (Bale, 2001). The spires of the South End Grounds III (Boston) or the opera boxes of the Palace of Fans (Cincinnati) which provided waiter service to upper class customers act as such an example (Gershman, 1993). Leventhal (2000) and Rader (2000) also support wealthy patrons parked their horse-drawn carriages outside the likely playing area, like mentioned above at the Polo Grounds III, to watch the various

contests offered by the facility. Essentially, this demonstrates the professional sport facility further evolved into a commercial center like the drive-in movie theatre.

Gershman (1993) and Rader (2002) promote Lake Front Stadium (Chicago) incurred renovations in 1883 for approximately \$10,000 (\$131,900 for 2005) to accommodate roughly 10,000 spectators and wealthy patrons in what can be considered the first luxury boxes. Specifically, eighteen of these boxes sat atop a grandstand behind the third baseline. Each box featured chairs with armrests and “curtains to keep out the sun or gaze of unwelcome viewers,” (Rader, 2002, p.39, Smith, 2003). Albert Spalding, owner of the Chicago franchise even owned a telephone connection within his private box (Rader, 2002). The West Side Grounds (Chicago) also possessed its own type of luxury box seating (Smith, 2003) but as Gershman (1993) suggests, price of these renovations and ticket reservations was an awful lot for anyone in the 19th century. Therefore, they were extremely uncommon in the stage four sporting venue.

Initial efforts to fence in grounds around the 1870s typically utilized a simple rail or barbed-wire fence to surround the ballpark’s perimeter in order to prevent rowdy and boisterous spectators from crashing the playing surface or entering the facility without paying (Guschoy, 1998). Clever spectators often escaped paying admission fees by peering through fence holes and staking out territories on top of rooftops, trees, and whatever else they could find surrounding the park but erecting the “wildcat” stands appeared to be the most effective or embarrassing method for

individuals to catch a game (Bak, 1998; Golenbock, 2000; Philadelphia Inquirer, 1883; Rader, 2002).

Bak (1998 p.107) defines wildcat stands as “towering bleacher sections built outside a ballpark’s fences.” Wildcat bleachers often acted as eyesores to the park and the ownership’s wallet because they were often ugly structures where perhaps a few hundred people could gather to benefit another’s pocket. Bak (1998) presents the typical “wildcat” patron appeared as a lower-class, rude, and rowdy individual ready to fight or taunt at a moment’s notice. Chadwick (1890) proposes the media industry likely encouraged this sort of negative behavior because of the amount of attention they gave to this topic (Kirsch, 1987). To battle the free loaders, Detroit Tigers (MLB) owner George Vanderbeck contracted Walker & Company to construct a twelve-foot high fence around the perimeter of his park (Bak, 1998).

As expressed earlier, overflow paying crowds were generally permitted to sit along the foul lines and deep in the outfield on many occasions (Smith, 2003). Temporary bleachers made of raw pine typically surfaced when sport entrepreneurs anticipated larger than capacity crowds would pack the facility (Rader, 2002). Normally, these unfinished wooden bleachers would be positioned inside fences reducing the playing field of the competitors primarily near foul lines and outfield fences (Rader, 2002).

Overcrowding typically contributed to cheating and violence at professional sporting events as the 19th century spectator often earned its distinction as a rowdy and disagreeable individual (Smith, 2000; Voigt, 1983). Consequently, fans standing

on the field occasionally interfered with the play of contests and acted to intimidate officials or opposing team members. The literature discovered in this study overwhelming suggests professionalism likely created the circumstances for violence and cheating because more than a “good time” was on the line.

Voigt’s (1983) research expresses little study of baseball crowd behavior exists on the early history of professional baseball. However, many news reports do verify claims early sport spectators were not the best behaved and prone to commit cheating behaviors or violent acts. For instance, the *Cincinnati Commercial*, although possibly influenced by boosterism, determined fans partially decided the Reds’ contest with the Brooklyn Atlantics in 1870 by interfering with balls hit to the outfield, thus, ultimately ending their hugely popular winning streak (*Cincinnati Commercial*, 1870).

Additionally, Voigt (1983) explains news reports of a 1860s match-up between the Brooklyn Excelsiors and Atlantics show the estimated 16,000 fans acted so heinously the Excelsiors left forcing a no-decision.

Chadwick (1890) points out spectators often assaulted umpires to destroy baseball contests. Kirsch (1989) found ten outbreaks of spectators mobbing umpires in 1882. Voigt (1998) also discovered ten episodes of spectator umpire cruelty with additionally brutal outbreaks in Philadelphia (1884) and Cincinnati (1885). The *Sporting Life* (1884) reported Baltimore fans often acted so unruly, they forced their organization to install barbed wire to protect the umpires from spectators engaging them on the field. Bak (1998) discovered the *Detroit Evening News* also mentioned

eighteen or more fans threatened Home plate Umpire Ebright after a questionable call decided a game in favor of the road Indianapolis team.

Apparently, the fans swore at the umpire and threatened to lynch him. After the game finished, a losing Detroit player sucker punched Umpire Ebright in front of the Indianapolis bench and the bleachers cleared with fans and policemen battling on the field. Only the players of the Indianapolis team with their swinging bats could disperse the crowd enough to allow the police and Umpire Ebright to leave safely (Bak, 1998). Overall, the contentious behavior expressed by the rowdy and lower class patron sections led team owners to phase out the cheaper bleachers and overcrowded fields through facility expansion or renovation efforts. Consequently, the next wave of sport facilities like Ebbets Field (1,000) and the Polo Grounds IV (200) held very few \$0.25 seats during the next wave of professional sport facility construction (Riess, 1999).

Conclusion for Stage Four

Voigt (1983) proposes transportation improvements significantly helped boost the permanence movement because they allowed people easier access to sport and its sporting structures, thus convincing the local community their sporting franchises would not leave. Improving public transportation systems probably affected the location of ballparks and creation or renovation of sport facilities toward the end of the temporary era (late 19th/early 20th century) as much as any other factor because many sport franchise owners also invested in local transportation outfits like trolley lines and railroads. Therefore, as Riess (1999) proposes, entrepreneurs continually sought superior and permanent locations for their clubs close to the mass transit lines they

owned. For example, League Park (Cleveland) found a home with streetcar owner Frank DeHaas Robinson picking a spot near his trolley lines in 1891. Overall, Vincent (1981) estimates roughly one-sixth of baseball owners invested in public transportation and by the end of the 19th century. Additionally, seventy-eight cities and their baseball franchises found trolley companies involved in some manner with the baseball organizations (Gershman, 1993). However, this work discovered transportation alone did not force the evolution of the professional sport facility.

Bale (2001) proposes the geography of the sport facility mirrors the geography of its surrounding environment. Therefore, professional sport facilities of the late 19th and early 20th century, in general, continued to support the growing awareness for geographically defining space with and the rise of industrialism, capitalism, and time consciousness. Thus, stage four facilities, typical of this era, often surfaced or changed into special structures that only hosted sporting activities in which individuals paid to see others play (See Figure 3.6). These structures were significantly larger and more complex than its predecessors because professional baseball and football were clearly evolving into mature businesses with an audience imposing higher standards for their regular attendance (Sullivan, 1987).

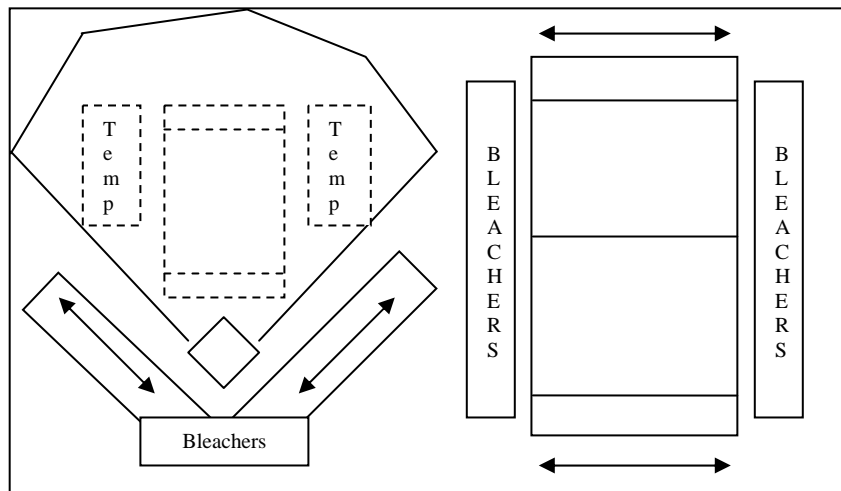


Figure 3.6: Stage 4 of professional sport facility development. (Arrows demonstrate spectator movement)

For example, this work discovered facilities developed between 1885 and 1902 were significantly larger in seating capacity than their predecessors (9,732 to 5,400) but smaller than its successors of the next century (See Appendix A Table 1). Typically, the stage four structures acted to accommodate the interests of fans and players and thus surfaced at an increased cost. Specifically, the stage four facility cost entrepreneurs on average \$57,607. Using an inflation calculator developed by the U.S. Department of Labor, this figure equals roughly \$1,139,475 in 2005 standards. The previous stages of professional sport facilities only average \$20,892 or \$416,796 today (See Appendix A Table 2). Edifices like manual scoreboards, clubhouses, betting areas, ladies sections, grandstand seating, and luxury accommodations surfaced regularly throughout the facility to help the semi-permanent stage four structures become even more enclosed than the previous stages offered. However, these

structures typically did not encroach on the field of play for the stage four sporting structure because outfield dimensions remain quite similar to those of the previous stages (See Appendix A Table 3). Despite these improvements, stage four professional facilities consistently failed to exhibit the trademarks associated with the permanent structure. Thus, the stage four sporting venue offered limited or no luxury or club suites, press boxes, permanent concession stands, or massive display/scoreboards.

Clearly, innovations with steel framing, elevators, electric lights, central heating, telephones, subways, and the internal combustion engine all developed before the end of the 19th century to help transform buildings all over the world from smaller simpler structures to large complex superstructures. However, the sport entrepreneurs of baseball and football were not the type of men willing to invest a lot into a sport facility until they were positive the sport could provide them adequate compensation. Gershman (1993) points out, the cost of concrete and steel parks seemed too great originally for most sport entrepreneurs to invest in early in the history of professional sport. Yet, the obvious maturity of baseball and football prompted sport entrepreneurs into investing into more permanent structures at the beginning of the 20th century (Sullivan, 1987).

CHAPTER 4

THE FIRST PERMANENT SPORT FACILITIES: 1903 TO 1952

Introduction

The initial fifty years of the 20th century showcase the first permanent stages of professional baseball and football sport facility construction this work's ideal-type. Noticeably, some conditions offered by industrialization in the previous chapter for stages one through four also prompted the growth or evolution of the professional sport facility into a permanent structure. For example, the population of the United States increased considerably between 1903 and 1952. Specifically, the number of people soared sixteen-million during the first decade of the 20th century (1900-75,693,734 and 1910-91,972,266) while steadily growing to 150,697,351 by 1950 (Gershman, 1993; U.S. Census Bureau, 2004).

Sullivan (2001) describes the various areas of Lower Manhattan packed citizens like sardines in a can with every deposit of immigrants made upon the shores on New York. Overall, Rosenwaike (1972) found New York City census data reveals the population grew from 3,437,202 in 1900 to 5,620,048 by 1920. Consequently, owning property or real estate in Manhattan became a highly profitable enterprise and often in order to maximize profits from real estate, landlords would build to the edge

of their property (Sullivan, 2001). Sullivan (2001, p.41) promotes this concept because every inch of land could be a potential “source of revenue.” However, this type of thinking produced dirty and dark places throughout cities because sunlight and air flow often failed to reach tenants. For example, Plunz (1990) discovered the 1920s created more housing units than any other time period in the history of New York City. Specifically, Plunz (1990) points out over 600,000 home or apartment spaces materialized during the 1920s in New York City. Obviously, space remained at a premium and necessitated activities to become more organized, safer and better at paying for its use.

The average pay and work week of the American worker also supported similar and significant progress during this time to help professional sporting structures pay for the space it occupied and become a more permanent structures. Riess (1999) discovered 1920 construction workers earned roughly \$2,404 a year while industrial workers made \$1,424, and unskilled laborers received \$1,014. In 2005 figures, the construction worker earned approximately \$24,497, the industrial worker collected \$14,511, and the unskilled laborer made \$10,333. Although these wages may be perceived as low for today’s worker they offered a radical improvement from wages given in the previous century. Remember, the average industrial worker made a poverty stricken \$427 a year in 1870 which inflation rates suggest equals to \$5,632 in 2005 terms (Riess, 1999).

Douglas (1930) and others point out Americans also worked considerably less in the 20th century than in the 19th century (Lucas & Smith, 1978; Rader, 1990). For instance, by 1920, seventy-five percent of U.S. workers spent less than fifty-four hours

a week at work (Lucas & Smith, 1978; Rader, 1990). Interestingly, this is a tremendous drop as only eight percent could claim this distinction ten years earlier (Lucas & Smith, 1978; Rader, 1990). Douglas' (1930) work also supports these figures as he found the average work week drastically reduced from roughly fifty-seven hours in 1899 to barely over fifty hours (50.4) by 1920. Obviously, these figures and safer work conditions indicate the American economy continued to grow stronger and safer into and during the first half of the 20th century. Additionally, each of these types of American workers acquired more discretionary time and money through which they could put towards attending the ever maturing football and baseball events.

Professional baseball firmly secured its position as America's national game first and continued to demonstrate support for this conclusion through displays of its popularity throughout the beginning of the 20th century. Examining game and average attendance totals for the various major leagues from the 1870s to 1950 support this conclusion (See Appendix B Table 1 and 2). The National League, starting in 1876, supported 257 games, a total attendance of 267,441, and an average attendance of 1,041. The subsequent American Association, Union Association, and Players League of the 1880s and 1890s demonstrate baseball's continued growth. These three leagues averaged 488 games, a total attendance at 941,362, and an average game attendance of 1,923 each year.

The 1900 National League season produced remarkable progression in all categories to help signify the growing strength and maturity of professional baseball as a viable product able to support permanent structures. Distinctively, the 1900 National League season supported 569 games, a total attendance of 1,829,490, and an average

attendance of 3,215. The years of 1910, 1920, 1930, 1940, and 1950 show additional growth in the total and average game attendance for National League baseball.

Specifically, National League baseball produced a total attendance figure of 8,320,616 and an average attendance at 13,464 by 1950.

The American League, started in 1901, exceeded the popularity of the National League throughout much of the first fifty years of its existence because it became a major rival instantly with the help of the New York Yankees. For example, in 1901, the American League season supported 549 games, earned 1,683,584 for total attendance, and gathered an average crowd of 3,067 per game. Like the National League, the American League years of 1910, 1920, 1930, 1940, and 1950 show additional growth in the total and average game attendance. Specifically, American League baseball produced a total attendance figure of 9,142,361 and an average attendance at 14,746 by 1950 (See Appendix B Table 3).

Football also established itself as a significant public spectacle popular enough to attract 450 colleges, 6,000 secondary schools, and roughly 15,000 other teams (recreational, professional, semi-professional) into participating across the United States (Betts, 1974). Obviously, as Oriard (2001) points out, football rose along with baseball to become America's favorite sports during the first half of the 20th century. Serby's (1931) work reveals a wonderful example of this conclusion as he found all varieties of football attracted fifteen million spectators in three months while baseball drew twenty-five million in six months of 1930.

Rockerbie (2004) and others suggest a professional football league did not appear nationally until the 1920s when George Halas, owner of the Chicago Bears,

and other owners willing to pay \$25.00 helped establish the American Professional Football Association (APFA) in 1920 (Peterson, 1997; Smith, 1988). The National Football League (NFL) surfaced in 1922 primarily from those teams located in large APFA cities who typically outdrew their smaller city rivals two or three to one (Rockerbie, 2004). Average game attendance for early NFL clubs was small but still as significant as the average crowd size professional baseball attracted in the early 1900s. For example, Rockerbie (2004) found the 1923-24 season drew anywhere from 3,600 to 5,000 people per game.

Oriard (2001) asserts professional football specifically sought to attract people with its more wide-open and offensive-minded style of play. Eventually, certain rule changes like these and professional football's relative success in America's largest cities prompted many professional baseball and college football structures to host professional football during the first half of the 20th century. Specifically, this investigation discovered nearly thirty professional baseball facilities and college/high school or municipal stadiums built during this era hosted professional football games throughout the history of the various professional football leagues (See Table 4.1 and 4.2). The cities of Philadelphia and Detroit adequately represent these findings. For example, Kuklick (1991) describes the Philadelphia Eagles (NFL) fielded its games both in Shibe Park (Philadelphia Athletics- American League) and Franklin Field II (University of Pennsylvania) during the team's history. The Detroit Lions (NFL) likewise fielded teams in college football and professional baseball facilities. Specifically, the Lions saw action at the University of Detroit Stadium and Tiger Stadium during their initial years in Detroit (Bak, 1998).

Overall, we see the American population and the popularity of professional sport increase, professional sport continuing to mature, and economic conditions steadily improving to push professional baseball and football to search for permanent homes from the beginning of the 20th century. Resultantly, this chapter on the evolution of the professional baseball and football sport facility discusses the first two permanent stages (five and six) of construction and the particular innovations the 20th century provided to shape them into permanent facilities. Consequently, this chapter will first examine how new building materials and technology provided the initial foundation for permanence and how the professional sport facility was shaped by its location or surrounding street grid. In general, these sections will demonstrate sport entrepreneurs completed larger sport facilities, offered by the previous era, and enclosed them from the outside environment through the use of permanent impermeable borders.

The discussion on stage six will shift to focus on how renovation and expansion efforts impacted the layout of the professional sport facility. Specifically, stage six sport facilities will demonstrate expanded or new seating locations and additional technological breakthroughs further enlarged the professional sport facility and transformed it into a place fully isolated from the outside world. This chapter will also feature a short discussion about the influence professional athletes and the strategies of baseball added to the development of the professional sport facility. By and large, this section will show stage five and six sport facilities express tendencies as specialized areas for the showcasing of sport because sport owners were anxious to maximize the potential financial rewards the sport spectacle could provide them.

Name	City
Sportsman's Park VI	St. Louis
Shibe Park I	Philadelphia
Swayne Field I	Toledo, OH
Comiskey Park I	Chicago
League Park II	Cleveland
Mack Field	Detroit
Tiger Stadium I	Detroit
Ebbets Field I	Brooklyn
Braves Field I	Boston
Federal Field	Buffalo
Armory Park	Toledo, OH
Griffith Stadium V	Washington, D.C.
Athletic Park II	Milwaukee
Offerman Stadium	Buffalo
Yankee Stadium I	New York City
Polo Grounds V	New York City
Muehlebach Field	Kansas City
Municipal Stadium II	Baltimore
Wrigley Field	Los Angeles
Forbes Field II	Pittsburgh
Wrigley Field IV	Chicago
Red Bird Stadium	Columbus, OH
Fenway Park II	Boston
War Memorial Stadium I	Buffalo
Nicollet Park II	Minneapolis
Mile High Stadium I	Denver
Memorial Stadium I	Baltimore

Table 4.1: List of professional baseball parks built during the early modern era who hosted professional football. Roman numeral next to name indicates a particular time during the history of a sport facility

Name	City
Harvard Stadium I	Cambridge, MA
Archbold Stadium I	Syracuse
Yale Bowl	New Haven, CT
Balboa Stadium I	San Diego
Husky Stadium I	Seattle
Franklin Field II	Philadelphia
Vanderbilt Stadium I	Nashville, TN
Titan Stadium	Detroit
Frankford Stadium	Philadelphia
Municipal Stadium I	Baltimore
Shaw Stadium	Cleveland
Memorial Stadium I	Champaign, IL
Los Angeles Memorial Coliseum I	Los Angeles
Cleveland Municipal Stadium	Cleveland
Memorial Stadium	Minneapolis
Nippert Stadium I	Cincinnati
Fawcett Stadium I	Canton, OH
Soldier Field I	Chicago
Pitt Stadium	Pittsburgh
Newark Schools Stadium	Newark, NJ
Gator Bowl I	Jacksonville, FL
Legion Field I	Birmingham, AL
Tulane Stadium I	New Orleans
Sesquicentennial Stadium	Philadelphia
Skelly Stadium I	Tulsa, OK
Cotton Bowl I	Dallas
Orange Bowl I	Miami
Dayton University Field	Dayton, OH
Rubber Bowl	Akron, OH
Jeppessen Stadium I	Houston
Memorial Stadium I	Clemson, SC
Byrd Stadium I	College Park, MD
Rice Stadium	Houston

Table 4.2: List of college/high school and municipal stadiums built during the early modern era utilized for professional football. Roman numeral next to name indicates a particular time during the history of a sport facility

Bigger and Bolder Sport Facilities: An Investment in Concrete and Steel

Rader (2002) compares the early modern sport facility to other great public buildings like skyscrapers, bridges, and railway terminals. This work accepts Rader's conclusion because professional sport facilities appeared to capitalize on many of the same new building materials and technologies for their birth during the 20th century. Permanent building materials, like stone and steel, were obviously available to sport entrepreneurs before the 1900s and featured in many public buildings (Daniels, 1991; Giedion, 1967; Riess, 1999) but as expressed earlier, sport entrepreneurs were reluctant to utilize these materials because their games had not matured enough to warrant such a great and costly investment. However, once baseball and football matured enough to prompt greater attendance figures, sport organizations responded by seeking to control their own larger facility. Initially, as the previous chapter shows, these surfaced as massive or ornate wooden facilities like Yale Field (New Haven, CT), Polo Grounds III, or South End Ground III. Still, as reflected in this work, these semi-permanent facilities served a limited number of customers, acted as unsafe fire hazards, and remained susceptible to Mother Nature (Blickstein, 1995; Leventhal, 2000; Smith, 2000).

Blickstein's (1995) description of Yale University's search for a permanent facility illustrates this point beautifully. For example, the Yale Bowl, constructed in 1914, primarily surfaced because Yale Field's wooden stands deteriorated due to poor weather conditions and age. Yale Field, constructed in 1896 to host 18,000 spectators, went through regular maintenance repairs and even expanded to accommodate 33,000 prior to 1914 football campaign in order to accommodate Yale's growing fan base.

However, its massive size and use of temporary materials (e.g. wood) caused it to exist as a dangerous eyesore and an expensive or costly facility to maintain.

Eventually, concrete and steel buildings, for purposes other than athletics, multiplied across the United States during the late 19th century. Riess (1999) and Giedion (1967) point out reduced costs were associated with these construction materials to help spur this new construction. Predictably, the success and popularity these structures invited encouraged sport entrepreneurs to also build their own facilities using the same materials (Ritter, 1992). Consequently, as Kuklick (1991) and others describe, the concrete and steel revelation concerning building technology appears as the greatest contribution to the permanent sport facility (Bess, 1986; Blickstein, 1996; Leventhal, 2000; Riess, 1999; Ritter, 1992; Smith, 2000, 2003).

Placing steel rods inside concrete forms produces reinforced concrete structures. Buildings utilizing this combination materialize as strong and durable products comparable to those previously made of steel and stone or rock but significantly less expensive to build and more flexible to fashion (Blickstein, 1995; Giedion, 1967; Kuklick, 1991; Serby, 1931). Reinforced concrete facilities emerge in this manner because people pour the lighter concrete to fit specific molds. Rigid stone structures appear unfavorable as they often suffered under their own natural limits which also required extra steel to support (Kuklick, 1991). Additionally, as revealed in the Yale example above and Kuklick (1991), reinforced concrete buildings surface as cheaper builds than large wooden structures because they do not require costly carpentry work. Typically, only the cheaper concrete mason is needed to fix the occasional break or fissure.

Sport facility planners also utilized design innovations the flexible reinforced concrete provided them in order to support their own multiple deck permanent facilities which wrapped around home plate (Smith, 2003; Smith, 2000). Serby (1931) adds this design flexibility afforded sport facility planners the opportunity to better accommodate their higher anticipated customer traffic move more efficiently within the building. This technology incorporated the use of steel trusses and steel girders to “transfer” the weight evenly over the whole structure. Consequently, the distinctive characteristic provided by the use of these design innovations provided the early modern sport facility a unique look, similar to skyscrapers and bridges, which ultimately afforded spectators a closer look at the action.

Harvard Stadium and the First Permanent Professional Sport Facilities

Interestingly, the first significant sport structure comprised fully of concrete and steel occurred in Cambridge, Massachusetts as Harvard University erected Harvard Stadium (Soldier’s Stadium) in 1903 (The American Architect, 1904; Blickstein, 1995; Serby, 1930, 1931; Smith, 1988). Harvard Stadium, like others before and after it, appeared primarily because fire damaged wooden bleachers located in one of Harvard University’s many temporary football facilities (Soldier’s Field). Furthermore, previous football facilities failed to support or encourage the continued financial success of the Harvard football team. Thus, supported by the efforts of previous alumni, Harvard Stadium materialized for the university and its customers.

Despite this recognition as a one of the most important sporting structures ever built, the local Boston and national media commented little about the facility and furthermore, failed to even print a picture of Harvard Stadium. Specifically, the *Boston*

Herald and *Boston Globe* devoted limited coverage about the new stadium with only the *Boston Herald* (1903b) publicizing the new stadium as scientifically appearing stronger, safer, and ultimately more cost effective than the traditional temporary stadium. Interestingly, each of their articles, during opening day, primarily addressed Harvard's inability to beat Dartmouth rather than point out the historical significance of the stadium (Boston Sunday Herald, 1903b, Trumpbour, 2001).

The only true acknowledgments about the importance of the facility, during the time of its creation, appear in the *Harvard Crimson* of 1903 and *American Architect* of 1904. However, the *Harvard Crimson*, Cambridge and Harvard's community newspaper, gives us a very elementary view of Harvard Stadium's layout from bits and pieces of stories covering games throughout Harvard's 1903 season. Basically, the *Harvard Crimson* acted much like the local Boston and national media which failed to recognize the facility as a landmark for permanence. The *Harvard Crimson* did feature the stadium in several front page articles in 1909 with multiple photographs (*Harvard Crimson* April 6, 1909, September 29, 1909, October 5, 1909, October 28, 1909, November 14, 1909, and November 16, 1909). Consequently, we learned much about Harvard Stadium yet, this attention likely occurred as a response to the popular consideration professional baseball obtained with its permanent facilities surfacing in Philadelphia (Shibe Park) and Pittsburgh (Forbes Field).

Specifically, from the *Harvard Crimson* and *American Architect* (1904) we learn the original Harvard Stadium was a basic steel and concrete horseshoe or U-shaped sport facility seating 23,000 with steel grandstand seating. Sitting in a six-acre area surrounded by a gymnasium and three city streets (The *American Architect*,

1923), the design of the facility featured long and narrow seating which provided its fans a closer look and more influence on the contest than the traditional stadium. Smith (1920b) posits this materializes because their seating position on top of the field provided them an opportunity to voice their concerns during the game. Better known as Soldier's Field at that time, Harvard University contracted Boston Bridge Works to manufacture and erect the structural steel. The American Architect (1904) argues architects and planners designed Harvard Stadium to resist fire and stand as an architecturally pleasing and permanent structure because the old wooden structure was inadequate, temporary, and aesthetically unpleasing to see. Overall, the structure took only four and a half months to complete and established a first row nearly eight-feet off the field so spectators in the front row could see over the player's heads.

Fascinatingly, the American Architect (1904) recommends others seeking to build large sport facilities consider using steel and concrete as the materials demonstrate durability, adapt well to rapid construction, and induce only moderate costs to the builders. Furthermore, as Professor A.W. French of the Worcester Polytechnic Institute points out, by using reinforced concrete in the sectional manner Harvard Stadium surfaced as a facility easily capable of meeting future demands to expand or enlarge (The American Architect, 1904). Ultimately, Harvard Stadium expanded to seat over 30,000.

However, following Harvard Stadium, one can only guess why sport entrepreneurs or organizations waited six years before completing the next permanent professional sport facility, the Philadelphia Athletics' Shibe Park. Perhaps the lack of adequate or free promotional media coverage discouraged professional sport owners

from building new facilities. Nevertheless, sport entrepreneurs eventually started to follow the trail blazed by Harvard and other colleges by privately funding their own structures to meet the needs of their own pockets and to accommodate the different mass of fans attending their events (Serby, 1931).

Philadelphia's Shibe Park and Pittsburgh's Forbes Field each opened in 1909 to establish the foundation for professional sport facility construction until 1952 possibly because they received great media attention and fanfare. Unlike the opening of Harvard Stadium, both Philadelphia and Pittsburgh promoted their new ballparks with front page news stories and large complimentary photos. Kuklick's (1991) work supports this conclusion as Shibe Park received full complementary press by the Philadelphia and national media because some of the Athletics minority ownership included Sam Jones, *Associated Press*, and Frank Hough, *Philadelphia Inquirer*. Obviously, these individuals actively promoted the success of the ball club and the attractiveness of the facility to help ensure their own financial success. The *Pittsburgh Post* provided local readers with two separate sections introducing the new ballpark. First, it developed a five picture collage for the front page of the paper and secondly, it included another article about opening day and the facility itself (Pittsburgh Post, 1909).

Similarly, new sport facility construction sprung up all over the United States duplicating the successful models established by Shibe Park and Forbes Field. Expectantly, Cleveland, Chicago, Cincinnati, and New York/Brooklyn quickly erected new structures in their locales between 1910 and 1914. Cleveland's League Park tore down its old wooden structure and replaced it with steel and concrete while Charles

Comiskey assembled his new park on a very large stretch of land in less than six months. New York overhauled the Polo Grounds following a fire to the structure in 1911 and Cincinnati developed Redland Field shortly thereafter. Detroit and Boston also included themselves into the construction activity as they respectively completed Navin Field (Tiger Stadium) and Fenway Park in 1912. Overall, during a period of six years (1909-1914), twelve urban locations established permanent sport facilities.

Location, Location, Location

City street grids provide the physical units upon which a city evolves. The city blocks, offered by the street grid system, supposedly work together to keep the city healthy and intimate. Richmond (1993) and others write the early modern professional sport facility seemed very urban in character because its architecture resembled its surrounding community and its shape often extended to the edge of city street grids (Leventhal, 2000; Ritter, 1992). Obviously, problems exist with placing large structures in city confines because most sport facilities of this era arose as dependent on other city buildings and street locations (Bess, 1983). Therefore, as Riess (1999) suggests, permanent sport facilities required careful planning between sport entrepreneurs and the surrounding community.

Distinctively, the site location of professional sport facilities often follows careful examination of a neighborhood's character, estimated real estate prices for land acquisition, nearby mass transportation developments, and anticipated future community or personal entrepreneurial efforts (Bess, 1983; Rader, 2002; Riess, 1999; Sullivan, 2001). Overall, these each impose certain design features on the physical layout of the professional sport facility and as Leventhal (2000) claims produced

unique or interesting dimensions. Ritter (1992) declares these unique features made the early modern sport facility provide one with a sense of home because the community essentially gives the venue its character so no two are alike (Bess, 1999). Bess (1986) and others illustrate the influence city streets and existing structures imposed on professional sport facilities most vividly with their description about the creation of Forbes Field (DeValleria & DeValleria, 1996; Lancaster, 1986; Pittsburgh Post 1909; Pittsburgh Press, 1909).

Pittsburgh emerged in the 19th and early 20th century as a highly progressive and technological city capable of many innovative and wonderful things. Built by steel and coal, Pittsburgh's economy became highly respected throughout the United States. Pittsburgh Pirates (National League) owner, Barney Dreyfuss recognized the growth of Pittsburgh and demonstrated the use of the preceding paragraph's analysis before building Forbes Field. Consequently, Dreyfuss anticipated the City of Pittsburgh would expand east to his Oakland location and secured land in this location knowing the real estate was cheap and would quickly increase in value (Lancaster, 1986).

Built three miles from the city, Forbes Field appeared because Pittsburgh, like other major metropolitan cities, experienced huge population increases from 1870 to 1910 which, when combined with inadequate grounds, prompted the need for a new sport facility. Specifically, during this time period, Pittsburgh's population increased from 132,256 to 533,905 (Still, 1974) while its previous sport facility, Exposition Park, suffered regularly from flooding (Pittsburgh Press, 1909; Pittsburgh Press, 1909).

Press coverage, although greater than that offered for Harvard Stadium, probably limited itself about Forbes Field because of the political games local citizens played to discourage the promotion of their team outside city limits. However, this did not prevent the Pittsburgh media from reporting other cities like Boston, Chicago, and St. Louis had ballpark plans in the work (Pittsburgh Post, 1908c). Resultantly, no mention about the park before groundbreaking even existed until a month before the first shovel of dirt was removed (Pittsburgh Post, 1908a). This interesting decision likely developed because promoting the success of the Pirates could invite a rival league to compete for profits. Therefore, more power would shift to local political leaders in controlling and implementing demands on the Pirates' franchise (Riess, 1980).

The Oakland location jumped out as desirable to Dreyfuss because of its large upper class population and adequate number of trolley lines (fifteen) existed within a mile and a half from the facility (Lancaster, 1986; Smith, 2000). The *Pittsburgh Post* (1908b) promotes this conclusion as acceptable because they referenced Dreyfuss saying the improved transportation opportunities provided by Pittsburgh's streetcar system helped him decide on the location for the new ballpark. Resultantly, travel to Forbes Field appeared less inconvenient to the average spectator (Leventhal, 2000). Obviously, Dreyfuss saw bringing a ballpark closer to the upper class also meant bringing their money closer to his own. Consequently, one can conclude the location of Forbes Field also acted as natural boundary to prevent many lower class citizens from attending Pirate games because of its large upper class population. The results

profoundly went Dreyfuss' way as some posit Forbes Field was a particularly "clean" place to play (DeValleria & DeValleria, 1996).

Interestingly, Forbes Field acted as a makeshift football facility for Carnegie Tech and the University of Pennsylvania on October 31, 1908 well before baseball appeared in 1909 (Benson, 1989). Overall, Forbes Field's took seven months to complete and sat as a seven-acre facility which bordered Schenley Park, a place it sought not to dominate with massive grandstand seating (Bess, 1986; Lancaster, 1986). However, Forbes Field seated 25,000, a number almost 10,000 greater than Exposition Park II. Original Forbes Field possessed a double-decked roof which extended roughly thirty feet past the first and third bases. Atop the grand stand roof was a third deck which supported a covered row of box seats (2,000) much like the luxury suite seen today (Ritter, 1992; Smith, 2000). The fences extending from third base to the left field line and to right center field remained small, contained no seating, and remained far away from home plate. Distinctively, the left field sat 360' while left-center, center field, and right-center stood 462', 422', and 416', respectively from home.

Obviously, the temporary era facility is represented well by the distances of these fences. Therefore, left field to right-center field appears barren and resembles the park bordering this side of the ballpark quite well. In contrast, right field hosted a grandstand and a significantly smaller distance to home plate (376') as the ballpark followed the city's grid system toward right-center field. Overflow crowds found homes on temporary bleachers often placed along right field line and in the outfield because of the park's huge dimensions (Ritter, 1992). The backstop area also

supported room for overflow crowds because it was so far from home (110 feet).

Sportcaster/historian Art Rust, Jr. supports this claim as he argued, “the catcher was practically a fourth outfielder” (Ritter, 1992, p.64).

Again, owners of professional baseball kept their eyes on the future in Boston, like Pittsburgh about the potential of their ballpark’s surrounding area. In the case of Boston, General Charles Taylor owned much of the land surrounding Fenway Park as a major stockholder of Fenway Realty (Shaughnessy, 1996). Consequently, he valued construction in Boston’s Fenway region because it would increase the value of the property he jointly controlled. Interestingly, Shaughnessy and Grossfeld (1999) point out the name “Fenway Park” in some ways truly became the first structure to incorporate a name into the facility with some financial gain in mind. For instance, the name “Fenway” not only advertised a section of Boston for possible future residential or commercial development but also the name of its local realty company (Trumbour, 2001). The local media paid greater attention to Fenway Park during its construction between 1911 and 1912 likely because of the success Shibe Park (Philadelphia), Forbes Field (Pittsburgh), and Comiskey Park (Chicago) all received from their own local media outlets (Trumbour, 2001). Therefore, as Trumbour (2001) points out, General Taylor also found the investment of a new ballpark good business for the *Boston Daily Globe* because he practically ran that media source.

Boston Braves (National League) owner, James Gaffney, also demonstrated insight about the benefits sport facility construction could add to his wallet as he also found profit from the land surrounding his ballpark. For example, Kaese (1948) describes Gaffney located Braves Field at its particular site near the Charles River in

order to help maximize the sale of the real estate space in front of the structure. Trolley lines along Commonwealth Avenue provided direct access into the park and the surrounding area to help Gaffney's pursuits (Ritter, 1992). Resultantly, Kaese (1948) claims Gaffney made tremendous profits from this subtle but smart move. The consequences of following such interests developed ballparks much more asymmetrical than those offered previously because of the limitations provided by the city block. Therefore, professional sport facilities took shape based on the city block in which they were located. Ultimately, this led to some interesting buildings appearing within the cityscape (Ritter, 1992).

The area selected to house Fenway Park primarily attracted Taylor because he saw new rail lines introduced to the region which added to the value of the property as a potential commercial and residential area. These rail lines along with the bordering Lansdowne Street are situated behind the left field helping give Fenway's its distinctive feature, Duffy's Cliff. The now famed "Green Monster" followed "Duffy's Cliff" in left field after a major renovation to Fenway in 1934. Duffy's Cliff, named after Boston outfielder Duffy Lewis' exceptional ability to field balls cleanly in that particular location, was an earthen mound nearly ten feet high designed to prevent non-paying fans the opportunity to snag a "free show" (Shaughnessy & Grossfeld, 1999; Stout, 2000). The original distance between Duffy's Cliff and home was 312 feet.

The "Green Monster" was mainly erected to protect windows of buildings on the Lansdowne Street from baseball flying in that direction (Ritter, 1992). Consequently, the short left field distance (315') prompted the fence that stands over

thirty feet above the playing surface. Other dimensions of the original Fenway support the location or street grid affecting the layout of the facility. For instance, Ipswich Street starts from the right field corner and extends away from home plate to meet Lansdowne Street which also points away from home. Therefore, Fenway Park's center field fence originally stood a cavernous 488' from home plate. Shaughnessy and Grossfeld (1999) point out the Red Sox's desire to include administrative buildings to the structure also prevented the field from being more symmetrical. Overall, Fenway Park's walls have seventeen facets imposed by the surrounding environment (Leventhal, 2000).

Ohio's own Redland Field (Cincinnati) and League Park II (Cleveland) also took their unique shaped from a variety of surrounding streets and local landmarks. For instance, an underground stream created an unusual four-foot incline approximately fifteen feet from the fence at Redland Field (Ritter, 1992). Better known as the Terrace, this part of the ballpark cause all sorts of problems for opposing teams because running up and down the Terrace frequently cause outfielders to trip and fall. Obviously, the incline made for some entertaining attempts to field balls hit in that area (Gershman, 1993; Ritter, 1992; Smith, 2000). Grandstand and bleacher seating provided roughly 20,000 seats to Redland Field to also give shape to the facility. However, business buildings hosting laundry service, paper, and neon sign companies surrounding the outfield dotted Redland's landscape not only with a variety of advertisements but with large outfield dimensions 360' down the lines and 420' up the middle (Lowery, 1986; Smith, 2000).

League Park II took its shape because two homeowners and one saloon owner would not sell their property (Gershman, 1993; Leventhal, 2000; Ritter, 1992; Smith, 2003). Consequently, League Park produced a product better known as “Wall Ball” when it was constructed in 1910 to replace the wooden League Park I (Smith, 2000). The twenty-foot concrete and twenty-foot wire fence right field sat at a very welcoming distance of 290 feet because Lexington Avenue ran across right field all the way to center field and its 460 foot edge (Lowery, 1986; Smith, 2000). Consequently, the right field wall created some interesting drama as one ball hitting the concrete could rebound past outfielders while another hitting the wire might die straight down or carom in another direction. Overall, League Park II held enough seating opportunities for over 21,000 spectators.

Also seeking to attract a better behaved patron, Shibe Park (Philadelphia) found a home on a large six-acre rectangular block located on the corners of West Somerset Street, North 21st Street, West Lehigh Avenue and North 20th Street (Gershman, 1993). This configuration originally produced a generous left field (360') and a mammoth centerfield dimension (515'). While the original Shibe Park held room for slightly over 20,000 spectators it also possessed an embankment throughout the outfield for overflow crowds (up to 10,000) who were willing to stand or sit during a contest (Kuklick, 1991; Ritter, 1992). Shibe Park, designed to maximize the number of seats between the foul poles, cover its seats to protect spectators during the hot afternoon sun (Kuklick, 1991). Kuklick (1991) mentions Shibe Park acquired this shape because it increasingly found commercial and residential buildings surrounding the property. Likely quicker transportation provided by newly completed asphalt and

concrete streets promoted easier access to the area and thus more commercial and residential development. Thus, Shibe Park incorporated structures like storefronts, a furniture warehouse, its own administrative offices, and a two-hundred car parking garage to help give the park its unique shape (Smith, 2000).

Conclusion for Stage Five

The professional sport facility typical of the early modern era gains recognition from this work as producing the first permanent baseball and football sporting venues. These facilities primarily took form based on technological innovations offered from the construction industry and site constraints presented by street grids and other existing buildings (See Figure 4.1). Consequently, no facilities of this era held the same dimensions (Bess, 1999) and as Blickstein (1995 p.15) argues, typically “came in all shapes and sizes.”

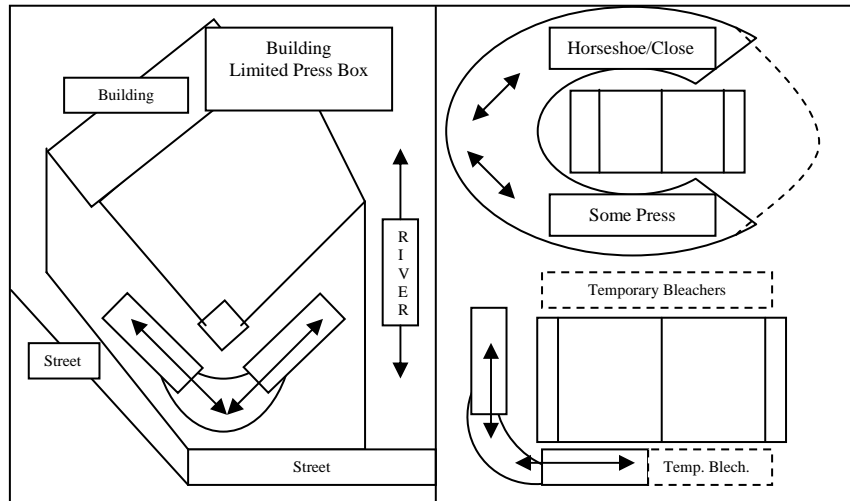


Figure 4.1: Stage 5 of professional baseball and football facility development (Arrows designate spectator movement)

The combination of the reinforced concrete and structural steel provided the necessary resources to accommodate the particular location each professional sport facility called home because they were highly adaptable, durable, and flexible materials. Resultantly, this investigation found the early modern professional sport facility was an oddly shaped unsymmetrical structure. Specifically, this study discovered the average new construction of the professional baseball and football facility possessed dimensions equaling 344.41' for left field, 395.8'to left-center, 437.66' up the middle, 392.93 in right-center, and 329.5 down the right field line (See Appendix B Table 4). Only Comiskey Park (Chicago) surfaced as a symmetrical facility during this period.

As expressed earlier, the decreased costs associated with steel and concrete facilities, along with the increasing popularity of professional sport, prompted the permanent sport facility. However, sport entrepreneurs still invested a great sum of money into the new building as the average baseball and football owner spent \$938,899 to complete their new structures. In 2005 terms, sport entrepreneurs invested roughly \$10,716,802 into the early modern professional sport facility (See Appendix B Table 5). Ultimately, as Rader (2002) and Riess (1980) posit, this significant investment likely prevented the relocation of teams or organizations to other sites because virtually all sport facilities of the early modern era were privately owned and maintained. Government funding of professional sport facilities generally did not occur during this era because individuals perceived it to be a handout to private individuals. Typically, the only type of government assistance came in the form of

claiming land under eminent domain. This allowed sport entrepreneurs to acquire land without suffering the assuredly increasing real estate costs associated with purchasing the land needed for a professional sport facility (Riess, 1980).

In order to keep construction costs low, sport entrepreneurs sought cheap locations outside of towns but in areas close enough to their growing fan base (Bess, 1999; Kuklick, 1991; Rader, 2002; Smith, 2000; Sullivan, 2001). Consequently, finding a location close to public transportation lines was necessary for the survival of any sport organization (Smith, 2000; Sullivan, 2001). Besides the examples given above, Rader (2002) and Sullivan (1986) provide Brooklyn's Ebbets Field as a typical example. For instance, Ebbets Field was erected on top a city dumping ground or junkyard but in close proximity to roughly a dozen streetcar and subway lines. Similarly, many other structures, like Comiskey Park or the Yale Bowl, surfaced on the outskirts of a town near public transportation lines (The American Architect, 1920a, 1923; Oriard, 2001; Ritter, 1992). Ironically, we could label these stage five facilities as suburban in character with their large outfield dimensions and initial non-urban location. However, as transportation helped more people moved into the areas surrounding the sport facility, the sporting venue became isolated within a downtown location thus, giving shape to the sporting structure (Sullivan, 2001).

Serby (1930, 1931) and others claim the best sport facilities provide seats close to and above the field of play (Bess, 1986, 1999; John & Sheard, 2000; Ritter, 1992). Serby (1930, 1931) and others also propose the objective of any professional sport facility should be to maximize the number of spectators where most of the action takes place (Bess, 1986, 1999; John & Sheard, 2000). Obviously, this lends support to the

location of seats being dependent upon the location of action. Consequently, football stadiums should provide more seating towards the fifty-yard line (John & Sheard, 2000; Sack, 1980) while baseball facilities should locate most of their seats around the infield because “ninty percent of baseball action takes place in the thirty-yard square infield,” (Ritter, 1992, p.1). Resultantly, most sport facilities, early in the permanent era surfaced, as single-purpose facilities with seats concentrated near or above those areas for maximum viewing pleasure.

Smith (2000) and Hilton (1974) describe professional baseball facilities typically double-decked and roofed seating areas behind home and from first to third base. This investigation found, past first and third, professional baseball facilities generally supported unroofed single-decked section which extended to the left and right field foul poles. Generally, as Hilton (1974) argues, this feature of the professional sport facility helped separate two distinctive sets of fans or social classes from each other. No stage five facilities positioned seats in the fair territory of the outfield. The seats available were normally located close to the field of play so little foul territory existed within the facility because the city street grid limited the size of the grounds. The original Ebbets Field existed as such a structure. For instance, no seats called the outfield home before the 1932 renovation. The original Ebbets Field supported double-decking along the entire first baseline and most of third (Ritter, 1992). Washington D.C.’s Griffith Stadium IV also existed as such a structure. Specifically, Griffith Stadium IV (1911-1920) provided a double-decked roofed grandstand from first the third base with a single-deck section extending to each foul pole.

Professional football facilities like Harvard Stadium and Philadelphia's Frankford Stadium typically positioned most seats along the sidelines because as Hadden (1930, p.140) claimed, "anyone concerned with the sale of football seats generally know the closest to the fifty-yard line are most preferred." Hadden (1930) and the Athletic Journal (1925) drew this conclusion from examining football games across the country and how fans preferred to sit closer to the fifty-yard line while rushing to take unreserved seating. Therefore, end zone seats appear as the least desirable location for football because they are the farthest from the action. Consequently, few early modern professional football facilities positioned seats behind both end zones.

Typically, venues built to hold football contests accommodated other sporting events. For example, most sport facility designers commonly needed to consider track and field along with baseball inside their football stadium's pitch (The American Architect, 1923). The University of Pennsylvania's Franklin Field and Chicago's Soldier Field acted as such venues because each accommodated track and field with a large 220-yard straightaway on each side of the football field (American Architect, 1920b, 1923; Architectural Forum, 1923, 1925). Obviously, football facilities like these needed open end zones to accommodate other events.

Other football structures enclosing each end zone did exist in the early modern era. For example, following Harvard's success, Yale constructed the Yale Bowl as an elliptical shape to force it into service as a football-only facility. The Yale Bowl materialized nearly twenty-five feet under ground level and consisted of a lower bowl made of concrete and a wooden upper rim (Smith, 1920a). The Yale Bowl primarily

surfaced with and elliptical shape because of its position in the ground. Additionally, the bowl took shape because the largest number of spectators wished to sit closest to the fifty-yard line and the bowl surrounding the field sat practically on top of all four end zone corners (Sack, 1980; Smith, 1920a). Overall, the \$750,000 construction fee of the Yale Bowl in 1914 would have cost approximately \$14,655,000 today.

The significant costs associated with stage five professional sport facilities likely result from using a large amount of permanent materials to produce a significantly larger venue than the wooden pre-modern era. For instance, the newly constructed early modern sport facility averaged a seating capacity of 24,249 while temporary era facilities completed between 1890 and 1902 averaged only a 10,285 seating capacity (See Appendix B Table 6). Therefore, the pre-modern professional (1890-1902) sport facility stood in dramatic contrast to the early modern professional sport facility as it only cost only \$58,813 or \$1,202,381 in the 2005 dollar (See Appendix A Table 2). The newly constructed early modern baseball and football facility exceeds this figure by nearly \$900,000 or \$9,000,000 in 2005 terms. Clearly, sport entrepreneurs suffered these incredible numbers because they believed their sporting venture would produce them with adequate amounts of revenue in return.

Gate receipts were still the primary source of revenue for stage five professional sport facilities (Bak, 1998; Bess, 1999). Consequently, these facilities offered little amenities much like their temporary predecessors. For example, in 1900 only 8,000 automobiles existed in the United States (Smith, 2003). However, despite this number growing to 500,000 by 1910 and 4,000,000 by 1914 most professional

facilities failed to accommodate those wishing to drive to game with a parking spot (Smith, 2003).

Grandstand seating separated those willing to pay a little extra for coverage from the elements but virtually no professional sport facilities offered luxury seating to further separate the haves from each other or permanent concession stands to increase the revenue produced by the facility. The start of the first permanent concession stand locations really does not surface until Chicago open Weeghman Park (Wrigley Field) in 1914. Gershman (1993) reports complaining fans influenced the construction of permanent concession stands at Wrigley Field because they felt the wandering vendors often blocked their view of the action on the field. Stage six professional sport facilities would add more permanent concession stand locations in the building but these would also exist in a limited number.

Restrooms also left a lot to be desired by stage five professional sport facilities. For example, the American Architect (1923) praised the designers of Franklin Field II because of the high number of restrooms within the facility and criticized most sport facility designers as they often fail to acknowledge the importance of including a high number of restrooms. The Yale Bowl, previously recognized as the standard for major sport facilities by The American Architect (1920b), owned few indoor restrooms for its patrons. Consequently, spectators at Yale Bowl events frequented open sheds outside of the facility to freshen up (The American Architect, 1923).

The lack of amenities and street location kept the size and time of construction down for the stage five sporting structure by today's standards. For instance, from the numbers available, this study found the average early modern professional sport

facility occupied 8.57 acres of land (See Appendix B Table 7). This figure is roughly three acres higher than the average temporary facility. However, with similar outfield dimensions and a seating capacity over twice that of the late pre-modern facility, the early modern sporting venue can be labeled as small because it did not need to a huge amount of land.

This work recognizes questions can be asked about how sport facility planners provided so much seating within such a limited space. Consequently, this dilemma forced most sport facility designers to incorporate a variety of structures into their plans. Again, because reinforced concrete and structural steel are so adaptable and flexible, sport facility planners could complete their designs within the structure. Shibe Park, Forbes Field, Franklin Field II, and Husky Stadium were found during this inquiry to possess excellent examples of spectator ramps within the facility (American Architect, 1923, 1951; Bak, 1998; Gershman, 1993; Leventhal, 2000; Smith, 2003).

The American Architect's (1951) piece was especially descriptive about its discussion on Husky Stadium's spectator ramps. Specifically, it presented how stadium architects discovered a problem when attempting to add another 15,000 seats. Apparently, the lakefront location of Husky Stadium prevented the sport facility planners from extending out so the upper deck and roof were placed almost directly on top of the stadium. Obviously, this posed a challenge to the stadium architects on how to get the people to their seats. Their solution embraced incorporating spiral ramps under the upper deck addition to get people to their seats (American Architect, 1951).

Other structures to help direct traffic flow also appear within the grounds of the stage five sport facilities. Gershman (1993) and others illustrate Forbes Field

possessed multiple elevators and escalators to help people climb its decks (Bak, 1998; Leventhal, 2000; Smith, 2000). Smith (2000) points out these were the first in all sport facilities. Descriptions from the *Pittsburgh Post* support these authors as the *Post* regularly updated the Pittsburgh community on the progress and innovations offered by the new ballpark. Other items like telephone lines, under ground parking and special ladies restrooms were also mentioned (Pittsburgh Post. February 23, 1909e, p. 12.; February 28, 1909f, Section 3, p. 1; March 7, 1909g, p.1; March 28, 1909h, Section 3, p.1; May 1, 1909i, p.10; May 9, 1909k, Section 3, p.1; June 11, 1909k, p.8; June 19, 1909l, p. 6; June 27, 1909m, p. 6.). Smith (1920b) claims crowd psychology studies demonstrate facilities better at relieving congestion using these structures help control their crowds better. Consequently, as the American Architect (1920a, 1923) argued sport facility designers needed to include these important structures within the sport facility to help people reach and leave their seats quickly and efficiently.

The space within the sport facility accommodated areas for other activities like rifle shooting and indoor track, but acted as dormitories, laboratories, and automobile repair, wood working, or machine shops (Serby, 1930). The University of Pennsylvania's Franklin Field II demonstrates many of these areas. For instance, editions of the American Architect (1923) and Architectural Forum (1923) both describe multiple rooms existing inside the six-acre Franklin Field II. Specifically, this facility accommodates team rooms, showers, training rooms, physician's office, an administrative room, two squash courts with a seating gallery, five regular squash courts, one rifle range, a dirt surface large enough to practice indoor track events like the pole vault and jumping (long jump, broad jump, triple jump), a ticket office, and a

storage area for temporary stands. Overall, early modern sport facilities maximized the use of their space under stands and within concourses or hallways (Serby, 1930).

Generally, one can conclude the lack of spectator amenities appeared in the stage five sport facilities because other activities often replaced them inside the structure. Resultantly, this feature allowed stage five sport facilities to occupy little space and material in a very short amount of time. For example, following the burning of American League Park, Washington, D.C. rebuilt a new ballpark (Griffith Stadium IV) in roughly three weeks (Ritter, 1992; Smith, 2000). Additionally, Comiskey Park and Tiger stadium took four to four and a half months to complete. In general, the newly constructed professional sport facility of the early modern era took less than a year to appear (See Appendix B Table 8). Overall, this work finds the striking unsatisfactory amount of amenities unusual for a society so rich in capitalism but then again the literature does point out sport entrepreneurs in the early modern era were more focused on gate receipts than on additional luxuries for their revenues. Consequently, the stage six professional sport facilities appear to accommodate growing interest in professional football and baseball mainly through expansion efforts and structural additions to the professional sport facility.

The Introduction of the Superstadium

Gershman (1993) and Sullivan's (2001) work propose the first "superstadium" appeared in America to demonstrate the growth of baseball and to symbolize the strength of America as an emerging superpower globally. Phelon (1908) predicted this would ultimately occur in the United States because he felt most current ballparks likely could not support the maturing sport of baseball as its fan base as it continued to

annually increase. Phelon (1908) further suggests America would quickly see it could potentially get as many as 60,000 people at a baseball game. In essence, Phelon's (1908) work shows us sport entrepreneurs appear to minimize the anticipated growth of their sport with the stage five professional sport facilities.

Perhaps Boston Braves owner James Gaffney read this article because Braves Field introduced the superstadium concept in 1914. Over twice the size of Ebbets Field and large enough to erase the Allston Country Club's entire eighteen-hole golf course, Braves Field materialized as the largest baseball facility ever built (Gershman, 1993; Leventhal, 2000). Seating 40,000, Braves Field required 750 tons of steel and 2,100 tons of cement to complete (Gershman, 1993). Finished in Boston as the second permanent home of the city, Braves Field established some mammoth dimensions on the corners of Commonwealth Avenue and Gaffney Street along the Charles River.

Braves Field served as a link to the previous temporary ballpark when baseball strategy encouraged a different style of play. For instance, thirty-eight homeruns occurred at Braves Field in post-dead ball era, 1921, but only four reached over the fences (Ritter, 1992; Smith, 2001). In fact, no baseball cleared the park's left-center field until Giants catcher Frank Snyder hit one in 1925, the eleventh season of Braves Field (Smith, 2000). Braves Field's original dimensions of 402 foot foul lines and a 550 foot center field encouraged the old "Dead Ball" era play because Boston Braves owner, James Gaffney, wanted a baseball facility large enough to favor the inside the park home run (Ritter, 1992).

Yankee Stadium and Cleveland Municipal Stadium followed Braves Field as natural superstadiums because they too were gargantuan structures seeking to

demonstrate they were more than just a facility (Leventhal, 2000; Sullivan, 2001). Each of these stadiums held seating for over 60,000 and each used an astounding amount of steel which spoke about the power of their surrounding communities. For instance, Cleveland Municipal Stadium utilized 5,100 tons of steel or over six times that used in Braves Field and covered an astonishing 13.22 acres (Architectural Record, 1932; Gershman, 1993).

Completed designs on the original Yankee Stadium show it twice the size of Braves Field with the country's first triple-deck grandstand (Leventhal, 2000; Sullivan, 2001). Interestingly, Sullivan (2001) argues Yankee Stadium's distinctive triple-deck design stopped just around the foul poles because facility planners worried enclosing the facility completely with three decks would excessively shade the grass and prevent it from growing. By and large, as the *New York Times* (1923, p.1) suggested, Yankee Stadium was "a skyscraper among baseball parks," as it opened on April 18, 1923 in front of more than 60,000 spectators, a major league baseball record at that time.

Phelon (1908) predicted entrepreneurs would need to follow his advice to increase the seating capacity of their facilities to host larger crowds. Ultimately, major league baseball teams would need to expand and renovate their sporting grounds just to compete with the Yankees following the completion of Yankee Stadium in 1923. Why? Because as Sullivan (2001) mentions, the other owners in major league baseball probably worried the massive seating capacity the Yankees enjoyed combined with the huge popularity of the Babe Ruth Yankees combined for a deadly stream of revenue.

In 1920, Babe Ruth exploded all previous home run records with a mind boggling fifty-four. Ruth's previous high was his major league record twenty-nine the year before (Sullivan, 2001). To demonstrate how impressive this feat was, only the Philadelphia Phillies, playing in the smallish dimensions of the Philadelphia Baseball Grounds II, team mark of sixty-four was more than what Ruth personally accomplished in 1920 (Sullivan, 2001). Ruth's first season in New York helped the Yankees outdraw (1,289,422) their landlords, the New York Giants, at the Polo Grounds for the first time in franchise history. Eventually, this combination would lead one to believe the Yankees would financially stay above other clubs for years to come, hence providing them with a better teams and more consistent profits.

The Power of Ruth and a New Baseball

Blickstein (1995) mentions sport facility dimensions are not always dictated by the city street grid but sometimes by the ability of athletes and the rules under which they play. Sullivan (2001) and others point out obvious social preferences for Ruth's long ball exerted great impact on the shape of Yankee Stadium and other facilities which followed (Bess, 1983b; Blickstein, 1995; Smith, 2000, 2003). Specifically, these scholars claim Yankees owner, Jacob Ruppert, designed Yankee Stadium's short porch in right field for Babe Ruth's particular physical talents as a left-handed pull hitter. Appropriately, Babe Ruth generously donated a ball into the outfield seats designed for him on Yankees Stadium's Inaugural Day (New York Herald, 1923).

Yankee Stadium sat on land immense enough to adequately support a large sport facility so city streets and other existing structures did not impose their will on the structure. However, Ruth's home run prowess dictated the right field fence line

and left-center field's spacious wasteland where balls flew to die. Interestingly, the Yankee's management placed monuments in this part of the outfield around 1932 as they were convinced no ball or likely very few balls would contend with the monuments (Bess, 1986; Smith, 2000; Sullivan, 2001).

Gershman (1993) offers numerous other examples of sport facilities changing their layout or shape based on their players' abilities. For example, the Boston Red Sox placed a bullpen in right field after Ted Williams' rookie year in 1939 to help his home run production. The Pittsburgh Pirates did the same for Hank Greenberg in 1947 when they reduced the left field fence by thirty feet through moving their own bullpen (Bak; 1998; Gershman, 1993, Leventhal, 2000; Smith, 2003).

Sullivan (2001) mentions baseball before Ruth utilized speed and general cunning to eek out runs. This is clearly demonstrated by examining Ty Cobb's Triple Crown season of 1909 when he led the AL in homeruns with nine, all in-the-park (Wright, 1999). Examining available home run records of those facilities created before 1903 also help support this conclusion. For example, this study found with the help of Vincent (1995), Wright (1999), and Major League Baseball, thirty-five sporting venues appearing before 1903 saw an average of 34.48 home runs per year (See Table 4.3). Furthermore, analyzing homeruns per game also help us reach this conclusion. Specifically, this investigation found the various major leagues existing prior to 1921 produced only 0.26 home runs per game while the subsequent decades generated an average of 0.80 home runs per game (See Table 4.4). These findings also indirectly demonstrate the incredible size or dimensions most professional sport

facilities possessed which overall, meant teams found scoring difficult and physically draining.

Baseball clearly benefited by scoring more runs per game during the 1920 season following Babe Ruth's trade from Boston to New York however, the introduction of new rules to increase scoring also aided to baseball's popularity. For instance, the American League increased over 1.4 million in total attendance and 1,700 per game versus 1919 while the National League supported similar growth with an increased total attendance over 1.1 million and an average attendance over 1,300 per game (See Appendix B Tables 2 and 3). Interestingly, Voigt (1983) suggests baseball entrepreneurs sought to increase scoring even by 1910 because they predicted higher scoring games would produce higher attendance figures and thus more profits for their organization. Consequently, as Wright (1999) and others point out, manufacturers introduced a new "livelier" cork-centered baseball in 1909 upon which the major leagues embraced by 1911 (Bak, 1998; Kuklick, 1991). The new cork-center, surrounded by yarn treated with rubber cement, held its shape better than the previous generation of baseballs and consequently played "better" primarily for pitchers who recognized their trick pitches (spit ball, shine ball, and mud ball) would perform more effectively (Wright, 1999).

Name	City	Years	Number of Home Runs	Average Per Year
Oriole Park I	Baltimore	1883-1891	110	12.22
Oriole Park II + III	Baltimore	1891-1899	138	15.33
South End Grounds I	Boston	1876-1887	185	15.42
South End Grounds II	Boston	1888-1894	315	45
South End Grounds III	Boston	1894-1914	956	45.52
Congress Street Grounds	Boston	1890-1894	225	45
Huntington Avenue Grounds	Boston	1901-1911	389	35.36
Washington Park I	Brooklyn	1884-1889	105	17.5
Washington Park IV	Brooklyn	1898-1915	394	21.89
Eastern Park	Brooklyn	1890-1897	261	32.63
Lake Front Park II	Chicago	1883-1884	214	107
West Side Park	Chicago	1885-1891	594	84.86
West Side Grounds	Chicago	1893-1915	593	26.95
League Park I	Cincinnati	1884-1893	429	42.9
League Park II	Cincinnati	1894-1901	209	26.13
Palace of Fans	Cincinnati	1902-1911	146	14.6
League Park I	Cleveland	1891-1909	241	12.68
Recreation Park	Detroit	1881-1888	248	31
Bennett Park	Detroit	1901-1911	177	16.09
Athletic Park	Indianapolis	1887-1889	171	57
Eclipse Park I	Louisville, KY	1883-1892	159	15.9
Eclipse Park II	Louisville, KY	1893-1899	266	38

Continued

Table 4.3: Home runs per year for ballparks completed before 1903. Collected from mlb.com (2005); Vincent (1995); Wright (1999)

Table 4.3 continued

Polo Grounds I	New York City	1883-1888	153	25.5
Polo Grounds III – V	New York City	1890-1910	706	33.62
Jeffereson Street Grounds	Philadelphia	1883-1890	188	23.5
Philadelphia Baseball Grounds I	Philadelphia	1887-1894	284	35.5
Philadelphia Baseball Grounds II	Philadelphia	1895-1938	3,028	68.82
Columbia Park	Philadelphia	1901-1908	199	24.88
Exposition Park II	Pittsburgh	1890-1915	416	16
Sportsman's Park I	St. Louis	1882-1892	422	38.36
Sportsman's Park IV	St. Louis	1902-1908	135	19.29
Robison Field	St. Louis	1893-1920	815	29.11
Swampoodle Grounds	Washington, D.C.	1886-1889	137	34.25
Boundary Field	Washington, D.C.	1891-1899	392	43.56
Griffith Stadium II	Washington, D.C.	1901-1903	166	55.33
Average				34.48

Decade	League	Home Run per Game Average
1871-1880	National Association (71-75')	0.244
	National League (76-80')	0.126
1881-1890	National League	0.308
	American Association (82-90')	0.315
	Union Association (84')	0.283
	Players' League (90')	0.5
1891-1900	National League	0.29
	American Association (91)	0.411
1901-1910	National League	0.133
	American League	0.135
1911-1920	National League	0.2
	American League	0.151
	Federal League (14-15')	0.327
1921-1930	National League	0.476
	American League	0.404
1931-1940	National League	0.497
	American League	0.597
1941-1950	National League	0.568
	American League	0.517
1951-1960	National League	0.91
	American League	0.778
1961-1970	National League	0.788
	American League	0.865
1971-1980	National League	0.697
	American League	0.757
1981-1990	National League	0.721
	American League	0.886
1991-2000	National League	0.999
	American League	1.12
2001-2004	National League	1.4
	American League	1.48

Table 4.4: Homeruns per game in each major league. Compiled through information provided by mlb.com (2004) and Wright (1999)

To battle the success pitchers found with the new baseball, professional baseball formed rules prior to the start of 1920 which made doctoring the ball illegal and furthermore required its umpires to introduce new balls more regularly during the course of a game (Bak, 1998; Wright, 1999). For example, by 1929, professional baseball utilized nearly 100 baseballs each game (Wright, 1999). Previously, baseball rules established in 1874 expected a ball to last the entire game and described a “fit” ball as only unripped (Wright, 1999). Obviously, these points demonstrate the major leagues “juiced” the baseball well before the 1920 season however, organized baseball’s own strategies likely held them back from becoming more popular sooner and scoring more runs.

Again, Hilton (1974, p.6) suggests the expansion and renovation of ballparks, particularly in the 1920s and 1930s, occurred because “Ruth-mania swept the country,” and rules supported a new big moment style of play. Additionally, it is easy to see the country’s explosive economic prosperity during the 1920s also contributed the trend toward renovation and expansion (Voigt, 1983). Sullivan (2001) acknowledges home runs meant money to sport franchises and no owner would consider tearing down a highly attractive part of their activity in order to make them more difficult. Consequently, as Bess (1983) and James (1988) advocate, many facilities, seeking to add an offensive punch, were renovated to shorten fields through increased seating opportunities. Appropriately, the next section of this paper shows how much the other professional organization responded to capitalize on the spoils only the Yankees appeared to enjoy.

Expansion and Renovation: Accommodating the More Spectacular Event

Voigt (1983) and others posit the increasingly prosperous national economy and thriving appetite for heroes greatly affected baseball and football attendance and consequently facility growth approaching and passing the 1920s (Lowery, 1986; Oriard, 2001; Riess, 1999). Riess (1999) and Rockerbie's (2004) work further supports this as they recognize typical baseball and football crowds of the 1920s consisted mostly of middle and blue collar workers, respectively. Clearly, this statement reflects increased salaries and discretionary time, expressed earlier in this chapter, reached the point where a larger and more diverse group of spectators could attend football and baseball contests than previously.

Smith (2003) supports fences mainly decreased during the second half of the early modern era to increase profits from the larger pool of prospective customers, not to promote home runs. The popularity of the home run was not predicted by those involved with major league baseball however, it was a wonderful accident (Smith, 2003). Clearly, this is reflected in number of years it took to change strategy and adopt rules to produce more spectacular scoring. The fences of the early modern professional sport facility also fell because sport franchises were limited by their location (Bess, 1986; Lowery, 1986; Rader, 2002; Richmond, 1993). Consequently, sport entrepreneurs looked to expand within their typically cavernous dimensions in order to maximize their facility's seating capacity. Remember, gate receipts still dictated the success of a franchise (Bess, 1999; King, 1999). Bak's (1998) work on the Detroit Tigers (American League) organization backs this up as he found gate receipts accounted for seventy-five to eighty percent of the team's revenues.

Interestingly, Leventhal (2000, p.11) promotes the “idiosyncrasies of playing fields only increased as teams sought to add more seats within constraints of their urban setting.” There is much to this assumption as I found when comparing the newly constructed facilities to renovated one, fence distances fell across all locations. Specifically, the left field decreased nearly four feet, left-center over three feet, center field nearly eight feet, right-center roughly thirteen feet, and right field almost ten feet. Consequently, as Bess (1986) and Bak (1998) argue, professional sport facilities evolved into “jewel boxes” within their urban environment because fans appeared closer to the field of play and extremely odd angles or dimensions materialized for players. This work found a variety of professional sport facilities hosting baseball and football suffered under extensive renovation or expansion plans (stage six) to bring more people to the game.

In 1919, the Detroit Tigers drew 643,805 and produced \$110,000 profit. Consequently, the value of the club increased to \$1,000,000 that year when John Kelsey and Walter O. Briggs bought fifty percent of the club for a combined \$500,000 (Bak, 1998). This money was put back into a 1922-1923 ballpark expansion effort as the popularity of the team and the growing local population (then the nation’s fourth largest) prompted needs for a larger facility (Bak, 1998). Temporary bleachers consistently found themselves surrounding the playing field in Detroit during big games and opening day even after the 1923 expansion. Temporary stands typically were comprised of a light steel frame and wooden seats (The American Architect, 1923). Therefore, Tigers owner, Walter Briggs completely enclosed the ballpark with

an upper deck grandstand after the 1937 season to accommodate 53,000, a remarkable increase from the previous seating capacity of 36,000 (Bak, 1998; Smith, 2000, 2003).

In order to complete the 1938 renovation/expansion project, the Detroit Tigers found themselves in a little bit of a dilemma. Walter Briggs, clearly wanted to expand his facility to accommodate the growing interest in his team but the location of the stadium hindered expansion efforts. Unable to move Trumbull Avenue, which bordered right field, Briggs moved the fences in, for his double-decked section, approximately forty feet to stand 325 feet away from home plate (Gershman, 1993; Smith, 2000). Interestingly, because Briggs was uncomfortable bringing in the fences any closer, the upper deck of the right field line along Trumbull Avenue hung out over the lower deck roughly by ten feet towards both towards the playing field and Trumbull Avenue (Gershman, 1993; Smith, 2000). Consequently, the upper deck of Tiger Stadium stood only 315 feet from home plate and often favored lefties who hit underneath the baseball (Gershman, 1993).

Cherry Street, located along Tiger Stadium's left field line intersected with Trumbull Avenue. This location posed problematic for the Tiger organization during the early 1930s because many houses located on this street prevented Briggs from expanding the stadium in this direction. Additionally, streets are not exactly easy to move so Briggs had to wait until the popularity of 1934 pennant before he could successfully convince city leaders to redirect the street and tear down the small number of houses remaining (Gershman, 1993). Ultimately, the houses were removed and the street was redirected to allow the complete double-decking of Tiger Stadium

(Bak, 1998). Resultantly, the left field distance fell thirty feet and the center field reduced seventeen feet when meeting the right field double-deck expansion.

Ebbets Field (Brooklyn) like Tiger Stadium featured a major ballpark expansion effort during the course of its lifetime. The original dimensions of Ebbets Field stood at an incredible 421' for left field, 365' in left-center, 450' up the middle, 500' towards right-center, and 301' at right field. Clearly, these dimensions made Ebbets Field a pitcher's paradise like its forefathers of the temporary era. However, the expansion of 1932 changed the park into a pitcher's nightmare (Leventhal, 2000).

The seating capacity for Ebbets Field increased from 25,000 to over 32,000 after the third baseline and left-center field was entirely double-decked (Ritter, 1992; Sullivan, 1987). Resultantly, this decreased the outfield dimensions to 353' for left field, 365 in left-center, 399' up the middle, and 415' towards right. Right field was largely unaffected because Bedford Avenue would not allow the facility to expand out or in (Sullivan, 1987). Subsequently, the Dodgers installed a thirty-eight foot high concrete fence from right field to center field (Sullivan, 1987). Amusingly, the right field wall was concave which produced some interesting plays when balls hits towards the bottom moved away from the field (Ritter, 1992).

The permanent versions of the New York Polo Grounds surfaced after 1911 following a fire to the previous Polo Grounds (Ritter, 1992; Smith, 2003). The initial permanent steel and concrete structure created enough room for 34,000 however, 15,000 of these seats fell in the outfield to enclose most of the facility (Ritter, 1992). Obviously, as explained earlier, this is problematic because most people want to sit close to the action of the game. However, this bathtub-shaped seating configuration

appeared because the surrounding environment (Coogan's Bluff) would not allow the facility to expand any farther. Resultantly, the Polo Grounds produced some of the most outrageous dimensions a sport facility could hold.

The 1922-1923 expansion finished a complete double-decking around the whole facility to bring the seating capacity to 55,000. Gershman (1993) appropriately suggests the emergence of the automobile allowed the Polo Grounds to enlarge and fully enclose by 1923 because space for carriages was no longer needed by patrons attending football or baseball games. However, despite this renovation and expansion effort little helped alleviate the problems of the narrow facility. Suitably, like Tiger Stadium, the upper deck overlapped the lower deck along the outfield. Therefore, the listed 257 foot distance to right field realistically stood at 250 feet for those able to pull a baseball towards the right field corner (Smith, 2000). The left field foul pole only rested twenty-two feet farther from home but like the right field, those unable to pull the ball saw their hits quickly swallowed up by the sharp angle towards the cavernous center field.

Ultimately, the highly recognizable feature of stage six sport facilities prompted the "expansion of new facilities rather than their abandonment," (Bess, 1986, p.10). Abandoning professional sport facilities was prevalent in the pre-modern era when sport entrepreneurs sought to attract larger crowds. Obviously, this was easy for the pre-modern sport entrepreneur because they did not have as much money invested in their temporary facilities. However, these sport entrepreneurs had a significant amount of money invested on permanent materials and peripheral interests surrounding the sporting structure. The investment sport entrepreneurs made in this

location is also revealed in the amount of money they spent on expansion/renovation efforts. In general, based on the information available, sport entrepreneurs provided on average \$1,257,263 (\$12,839,427 in 2005) to complete renovation/expansions during the early modern era (See Appendix B Table 9). Strikingly, this figure is more than sport entrepreneurs spent on new construction for this period, which again equaled \$938,899 or \$10,716,802 today.

Overall, expansion efforts were completed in many cities across the United States during the early modern era to help accommodate a larger group of people. Specifically, cities like Philadelphia, Cincinnati, Washington, D.C., Cleveland, Pittsburgh, Chicago, St. Louis, Green Bay, Baltimore, Seattle, Miami, Dallas, Boston, New Orleans, and San Francisco all completing facility expansions during this period. Clearly, the above information shows these expansion efforts helped change the layout of the professional sport facility, although they generally did not change in size because of site restraints. These seating structures also created interesting moments within games to help the facility and contest become more of a spectacle. However, other structures also imposed changes upon the professional sport facility just as much as those areas created for seating.

Night Lights and the Press

The American Architect (1920b) promoted a competition for the City of Chicago, which invited designs on a new stadium at a lake front site south of the Chicago Museum. Within the competition announcement, the American Architect (1920b) listed items for the stadium designers to consider such as; the site itself, automobile parking south of 16th street, and fire or weatherproof materials.

Additionally, the competition committee announced certain structures the facility needed to incorporate within the building. This list includes 60,000 permanent seats with room for 40,000 more temporary seats, a running track thirty feet wide on each side, areas for bunting displays around the facility, and space underneath the facility for storing temporary seating, ten offices, a first aid station, stables for horses and cattle, and dressing rooms. Furthermore, the designers of the new stadium must consider lighting accommodations for night visitors and provide enough room for the press, media, and concession stands. Following the conclusion of this competition, Soldier Field surfaced as one of the true legendary edifices of the city.

The description of this competition demonstrates a variety of structures found homes within the stage six professional sport facilities to help them alter their shape or layout. The previous section of this chapter illustrates how seating expansions dictated change on the facility. Like the Soldier Field contest, this segment of the chapter focuses more on other spectacle driven structures like lighting systems, scoreboards, and media locations.

Gershman (1993) and Leventhal (2000) claim the first attempt to integrate lighting systems into a sporting event occurred on September 2, 1880 at Nantasket Beach in Hull, Massachusetts. At Oceanside Park, rival department store teams (Jordan Marsh & Company vs. R.H. White & Company) participated in this historic contest (Leventhal, 2000). Sponsored by the Northern Electric Light Company, three 100-foot towers were installed surrounding the infield. Thirty-six lamps connected to each of the light towers utilized Thomas Edison's newly invented (1879) carbonized cotton filament because it burned better than other types of lighting combinations

(Leventhal, 2000). Overall, the three towers produced approximately 30,000 candlepower of light for curious customers of the night game. It was not wonderfully bright.

Night time sporting activities were not common during this time or well into the early modern era for a variety of reasons, most of which surrounded money. Appropriately, pre-modern sport facilities did not install lights because many could not tell whether or not they would be at the same location the next time they played. Additionally, the location of many temporary era professional sport facilities would likely prevent the addition of light structures because electricity simply was not available at the ballpark's location.

Most early modern sport facilities failed to include lighting systems because they simply cost too much to install. Electricity would not have been a problem as public transportation lines typically went through these areas in the early 1900s but the extra cost of material to build the structure and a limited number of quality lamps/bulbs to project the light necessary for the contests likely scared the cost controlling sport entrepreneur. Some professional sport facilities like Forbes Field considered incorporating lights into the structure when they were being built (Pittsburgh Post, 1909n). However, the high associated costs and a lack of confidence on their return did little to convince those designing Forbes Field and other places to install lights before the mid-1930s and Great Depression hit (Bess, 1999).

During the 1930s, attendance dropped all across professional sports because the Great Depression reduced discretionary income and true leisure time for the average middle class sport patron (Voigt, 1983). Resultantly, the sports industries

searched for answers to bring people and their money back to the sport facility. The sport industries gambled by introducing games at night as one method to better attract an audience (Blickstein, 1995; Smith, 2000; Voigt, 1983). The innovative night contests surfaced because Depression Era citizens worked or sought work during daytime hours. Consequently, night baseball evolved because it literally existed as the only time baseball games could attract the fans it needed.

Bale (2001) and Leventhal (2000) argue the introduction of lights to professional sport facilities helped change their image by upgrading their status versus other recreational activities. Kuklick (1991) suggests this upgraded image brought a new type of consumer to the professional sport facility because with lights, football and baseball events became a greater spectacle and no longer competed with many other entertainment or leisure options offered only during daylight hours. Essentially, as Serby (1931, p. 153) predicted, incorporating lights into sport facilities would further bring the “stadium into the national life.” Overall, night ball made enough a spectacle out of the games to attract public attention and therefore most MLB teams (nine of fourteen) supported lights at their facilities by 1941 (Gershman, 1993; Leventhal, 2000).

It seems logical producing games at night surfaced as a safe gamble by the late 1930s because lighting technology improved and installation costs appeared low enough to provoke the investment. Lighting additions were roughly \$100,000 during the mid and late-1930s so someone had to take the lead to convince the rest of the world sporting events at night were a smart investment (Gershman, 1993; Sullivan, 1987). Cincinnati’s Redland Field became the first major league professional sport

facility to invite lights and night baseball on May 24, 1935 (Blickstein, 1995; Gershman, 1993; Smith, 2000). The lighting system consisted of approximately 614 1,500-watt light bulbs, which produced 921,000 watts of light (Blickstein, 1995; Gershman, 1993). The eight 130-foot towers holding up the lights cost the Reds nearly \$50,000 however, the Reds quickly made up the investment as the first night game drew 20,000 or roughly ten times what the pathetic Reds (68 wins 85 losses) regularly drew during that particular Depression Era season (Blickstein, 1995). Overall, Voigt (1983) mentions Cincinnati's first seven night games produced attendance figures of 130,337 which exceeded some franchise's total attendance figures for the year. Obviously, other clubs quickly recognized the Reds' success and incorporated lights into their stadiums.

Ballparks in Philadelphia, Brooklyn, and Detroit existed as excellent examples of this point. Philadelphia quickly incorporated lights into Shibe Park to help produce bigger crowds like Cincinnati, but ingeniously they regularly started contests around dinner time because they recognized this start time helped them sell more concessions (Kuklick, 1991). Ebbets Field followed the lead of Philadelphia and Cincinnati in 1938 (Gershman, 1993; Sullivan, 1987). Like Cincinnati and Philadelphia, Ebbets Field saw its average crowds grow when night contests were introduced. The Detroit Tigers received similar benefits when its 150-foot towers and 1,458 large incandescent light bulbs surrounded Tiger Stadium (Bak, 1998). For example, night baseball produced record numbers in attendance over a three-year period for Detroit from 1947 to 1949 and by 1956, night crowds out performed day crowds nearly three times in actual attendance (Bak, 1998). Overall, this information indicates night sporting events

were hugely popular among the people and sport facilities took another step toward permanence by accommodating these contests (Rader, 2002; Smith, 2000).

Earlier in this study, the media was recognized as playing a large part in the development of sport's growing popularity. Despite this fact, sport entrepreneurs paid little attention to housing the media when planning their sporting facilities during the 19th and early 20th centuries (Oriard, 2001). Consequently, a significant number of sport facilities failed to possess a press box for newspaper and radio announcers (Oriard, 2001). Ebbets Field and Tiger Stadium existed as two facilities failing to anticipate the needs of the media. Distinctively, Ebbets Field neglected the media by failing to build a press box during its inaugural season in 1913 (Smith, 2003; Sullivan, 1987). A real press box adequate for news and radio did not appear until 1938 as part of a \$200,000 renovation, which also installed the lights mentioned above (Sullivan, 1987). Bak's (1998) work shows Detroit really did not address its media population until the 1922-1923 renovation/expansion projects. Previously, Tiger Stadium held a small area set aside for the media but this renovation project incorporated a new rooftop press box into the facility (Bak, 1998; Leventhal, 2000). Stage six professional sport facilities included the press or media and integrated their needs into the facility. Consequently, the stage six facilities housed press boxes, which invited radio and telegraph broadcasts of their events.

Bak (1998) and others express most sport entrepreneurs probably neglected to invite the telegraph, radio, and later television industries into their world because they were fearful broadcasting their games to the public for free would prevent them from coming to the sport facility (Kuklick, 1991; Voigt, 1983). However, the benefits of

broadcasting the game to the public using these mediums helped sport organizations financially in more than one way. First, telegraph operators gave money to sport organizations for the right to broadcast their games. For instance, Western Union paid the Tigers roughly \$17,000 for their telegraph rights during the 1913 season (Bak, 1998). Typically, Western Union and other telegraph companies relayed the game action to bars and other public places of businesses.

Sports radio broadcasting appeared on August 5, 1921 when Pittsburgh's KDKA radio station broadcasted the first baseball game and shortly, like the telegraph, radio also financially impacted the sport organization (Bak, 1998). For example, the Detroit Tigers and WXYZ began a partnership to broadcast Tiger games to stations outside of Detroit for \$25,000 during the 1934 season (Bak, 1998). These five outside stations received their broadcasts via telephone lines and became the Michigan Radio Network (Bak, 1998). Kuklick (1991) also suggests Philadelphia realized significant monies from radio broadcasting. The St. Louis Cardinals similarly utilized the radio to broadcast their games for money. Consequently, about 124 stations in fourteen states heard Cardinal game radio broadcasts (Smith, 2003). Appropriately, the Cardinals and other teams found broadcasting their game over the radio helped build their fan base (Golenbock, 2000; Smith, 2003).

Radio overtook the telegraph as the preferred broadcast medium by the mid-1920 because radio ownership skyrocketed from a 5,000 in 1920 to 2.5 million by 1924 in the United States (Gershman, 1993). Additionally, radio equipment sales leaped from \$60 million in 1922 to nearly one-billion towards the end of the decade (Bak, 1998). The radio probably appealed more to individuals than the telegraph

because people interested in sport preferred immediate and descriptive feedback about the progress of an event. In essence, radio better allowed people to see or recreate the actions of the game.

Resultantly, sport facilities sought to accommodate the medium which provided them money and more fans by rewiring and installing lines throughout the building. The *New York Times* (1924) provides a splendid illustration of this point as it describes Harvard Stadium and the Yale Bowl each wiring new spaces with microphones to help realistically broadcast their games. The telephone was especially helpful in completing radio broadcasts across the United States (Oriard, 2001). Therefore, sport facility operators took great care to place microphones around various parts of the sport facility because the telephone was able to adequately broadcast crowd noise or player collisions (Oriard, 2001).

The scoreboard and public address system surface as another major structural attachment stage six sport facilities incorporated to help make the professional sporting event a spectacle. Driven by crowd control fears of the previous era, the scoreboard and public address system were invented to help satiate the crowd's desire for more information and to produce a better behaved audience (Blickstein, 1995; Murdock, 1982; Voigt, 1983). Previously, information was relayed through the crowd or by ushers using megaphones at sport facilities (Bak, 1998). However, the public address system and scoreboard appeared to help alleviate people's concerns about the score or time of a contest.

Initially, manual scoreboards surfaced in stage six professional sport facilities although the electronic scoreboard was invented in 1908 by George A. Baird (Benson,

1989). The manual scoreboard was easier to build, cheaper to maintain, and likely provided more information than the simple electronic scoreboard. Consequently, the smart and cost controlling sport entrepreneur incorporated the cheaper and more informative of the two devices. Today, Chicago's Wrigley Field center field and Boston's Fenway Park left field exist as two early modern sport facilities which contained the manual scoreboard (Smith, 2000).

The earliest electronic scoreboards listed only those batting and the names of the contestants much like Shibe Park's first scoreboard following its construction (Kuklick, 1991). However, larger and more effective electronic scoreboards, like Yankee Stadium's were developed to overtake the strengths of the manual scoreboard. Still, the manual scoreboard dominated the electronic in size during the early modern era (Bak, 1998; Smith, 2000). For example, although Tiger Stadium added two small electronic scoreboards around 1937, the massive hand operated scoreboard in left field subsisted large enough for even the furthest fan to see (Bak, 1998). Consequently, the electronic and manual scoreboard appeared as a revolutionary device for stage six facilities because fans no longer waited to hear information or relied on their own abilities to follow the contest. The electronic and manual scoreboard provided immediate feedback to the growing and maturing spectator group which sat reliant and expecting quicker and more accurate information from the professional sporting spectacle.

Public address or loudspeaker systems did not materialize until 1929 when the Polo Grounds offered the first (Gershman, 1993). Noticeably, radio broadcasting occurs before the public address system found a home in sport facilities. Blickstein

(1995) mentions sport facility primarily included public address systems during the 1930s. Consequently, ballparks with public address systems and scoreboards provided more safety, better comfort, the information spectators needed to interact with their sport (Murdock, 1982; Voigt, 1983).

Conclusion for Stage Six

The stage six professional sport facilities surfaced initially as structures focused on trying to get as many people into the seats as possible because gate receipts comprised most of the revenue sport franchises earned (Bess, 1999). Resultantly, we see massive seating capacity expansion efforts attempted throughout these facilities (See Figure 4.2). However, sport entrepreneurs clearly recognized other structures could enhance their profits through creating a spectacle of the event and adding consumer or participant friendly options to the facility. Consequently, structures like massive advertisements, lights, “dugouts, locker rooms, public restrooms, ticket offices, concession stands, team offices, press facilities, horizontal and vertical circulation pathways, and maintenance facilities,” were incorporated into stage six buildings (Bess, 1999, p.30; Dyreson, 1995). However, Smith (2000, 2003) suggests most professional sport facilities still offered an inadequate number of restrooms and concession structures.

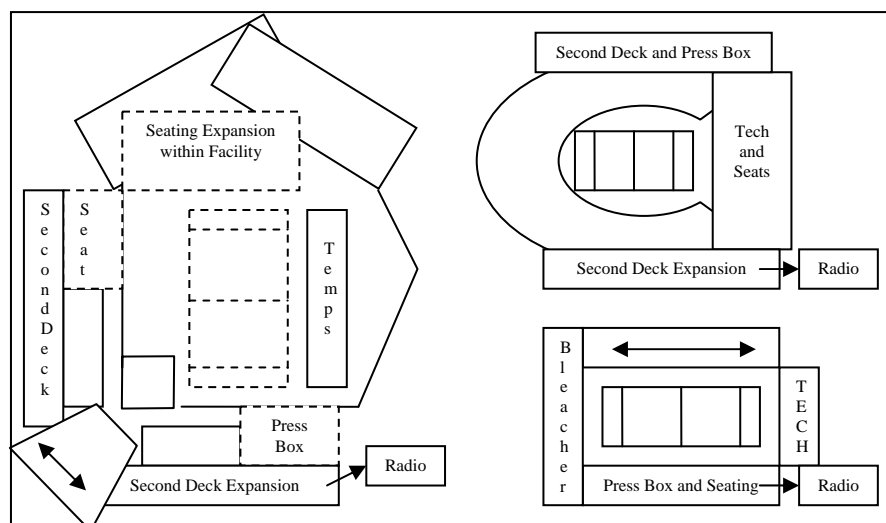


Figure 4.2: Stage 6 of professional sport facility development. Seating expansions and technological features most commonly added within the site.

Appropriately, these improvements to professional sport facilities appeared initially because using structural steel and reinforced concrete allow them to quickly adapt to their surrounding environments. Distinctively, the use of structural steel and concrete provided sport facilities the ability to expand up by adding second or third decks above existing space rather than growing outward into streets or likely expensive community space. Clearly, this technology provided more seating opportunities and allowed fans to sit closer to the action however, some negative aspects of these structures materialized (See Appendix B Table 10 and 11). For example, the angle of some upper decks positioned people with others sitting in front of them, ultimately blocking their view. The use of steel girders and trusses to support upper decks also fully obstructed viewpoints for some fans unlucky enough to sit

behind them. The stage six professional sport facilities also offered poor seating comfort due to site constraints and the push for more seating options or amenities.

The literature also reveals the rush to maximize space created problems within the concourses of the stage six professional sport facilities because again site constraints and other structures prevented easy navigation underneath the stands. Specifically, Smith (2000) describes Cleveland Municipal Stadium contained dirty, small, and dark concrete concourses which prevented Indians or Browns fans from enjoying the game after leaving their seats. Similarly, Smith (2000, p.24) describes the concourses of Fenway Park as “narrow, dingy, and difficult to navigate.” The New York Times (1929) found Yankee Stadium possessed poorly conceived pathways for its customers in 1929 when an exit panic occurred following a downpour allowed two people to be trampled to death.

Interestingly, Kuklick (1991) suggests the media and spectators held Shibe Park in high regard because it held luxuriously wide concourse approximately fourteen feet in width. The Architectural Record (1931) also heralded the expansion of the Los Angeles Coliseum as a structure providing comfortable room with its sixteen feet wide concourses. Yet, today’s professional sport facilities would laugh at such figures and conditions. For instance, Philadelphia’s new Citizen Bank Ballpark provides its customers an open view of the field from the Terrace Level and Main Concourses (mlb.com, 2005) while Franklin Financial Field II supports a concourse varying from sixty to ninety feet (nfl.com, 2005).

Serby (1930) proposes building a sport facility which hosts more than one activity supports a variety of problems like those mentioned above and typically, the

stage six professional sporting structures attempted to accommodate more than one type of event. For instance, Kuklick (1991) demonstrates Shibe Park (Philadelphia) held football contests, political rallies, boxing matches, the circus, and professional wrestling. Football, as expressed earlier, materialized as a competitor for the spectator's attention thus, football entrepreneurs sought to occupy some professional baseball facilities to complete football contests. Professional baseball facility owners were happy to invite football into their facility because it provided the specialized single-purpose facility revenue during the downtime of late fall and early winter. However, structural changes often occurred to these stage six facilities to accommodate football contests. For instance, Hilton (1974) posits the 1926-1927 renovations at Comiskey Park also considered football practices in the design to make the park more multi-dimensional for the Chicago Cardinals (NFL).

Kuklick (1991) characterizes the Philadelphia Eagles (NFL) imposed some changes on Shibe Park during the fall and winter of the 1940s and 1950s as management erected temporary stands from center field to the right field foul pole to increase the park's capacity to 39,000. Interestingly, the Eagles' fans rarely filled the facility on the Saturday and Sunday games offered because the temporary stands sat unprotected from Philadelphia's chilly fall and winter weather (Kuklick, 1991). Additionally, the original placement of Shibe Park's permanent stands left odd angles for people to view the football contests (Kuklick, 1991). Resultantly, the Eagles left for stints in Sesquicentennial Stadium and Franklin Field II (1958-1970).

The Detroit Lions' lack of professional accommodations prompted them to move into a professional baseball facility (Tiger Stadium) in 1938 (Bak, 1938).

Obviously, Tiger Stadium's development revolved around assisting Detroit's baseball fans and franchise. Football was not exactly expected to be played within the facility as it evolved. Consequently, Tiger Stadium hosted a number of seats (maybe 10,000) so low to the field bench players, coaches, and other officials often blocked the view of those in the stands (Bak, 1998). Despite this undesirable set-up, the Lions franchise continued to play in Tiger Stadium until 1975 because the fans maintained adequate or acceptable attendance figure for the Lions management.

By 1910, nearly 500,000 automobiles existed in the United States (<http://www.aaca.org/history/>, 2004) but this figure failed to impel sport entrepreneurs to consider automobile parking for sport facilities constructed during the early modern era. Ritter (1992) comments most people arrived at professional sport facilities by trolley, streetcar, or by walking. However, the popularity of the automobile would soar by 1912 when Henry Ford flooded the automobile market with his cheaply priced Model T. Specifically, Ford's assembly line invention produced approximately 26,000 vehicles a month in 1912 and 500,000 for the year in 1914 (<http://www.aaca.org/history/>, 2004). Ultimately, these high production numbers lowered the cost of Ford's automobile to a very affordable \$440 dollars (<http://www.aaca.org/history/>, 2004).

By 1929, one in five Americans owned an automobile and as 1966 approached this number improved to one in three (Firestone, 1967). Appropriately, road construction grew to match the popularity of the automobile. For example, in 1939 road construction figures show approximately 1,063,000 miles of paved roads existed in the United States but doubled by 1950 and increased to roughly 2,730,000 by 1964

(Firestone, 1967). Obviously, sport franchise owners finishing stage six professional sport facilities failed to accept the popularity the automobile gained in the American way of life because their sport facilities provided little opportunities for parking automobiles and game times remained (Smith, 2003). Perhaps their vested interest in public transportation prompted them to eliminate parking areas from their sport facility (Rader, 1992).

However, the cost of providing parking also influenced this decision. Serby (1930) suggested one acre of parking was needed for every 3,000 spectators and Gershman (1993) estimates it took roughly ninety square feet of space to park one car by 1914. Thus, providing space for 1,000 cars meant acquiring 90,000 square feet within the ballpark's urban location. Buying an additional 90,000 square feet of property meant buying more than two acres of land. Consequently, when this price is added to construction costs, the figure often exceeded the total a sport entrepreneur was willing to pay for his privately-financed sport facility. In essence, sport entrepreneurs saw the parking lot as unnecessary or at least one way to reduce facility costs stage five facilities and stage six sport facilities often suffered later on because of their encroaching urban street grid location. For example, Smith (2003) and Sullivan (1987) express the Dodgers ownership thought Ebbets Field's location provided little opportunities for fans to park around the ballpark. Resultantly, the Dodgers blamed parking inadequacies on their inability to fill Ebbets Field. Still, it would not be responsible reporting to declare this as the major reason sport organizations desired a new location. The breakdown or changing demographics of the ballpark's surrounding neighborhood likely provoked most to leave their stage five and six locations.

Overall, the stage six professional sport facilities demonstrate permanent single-purpose structures wanted to expand within their site by adding seating locations on top of existing decks or inside outfield/end zone fences. Other structures added to the permanent facility sought to improve the event for spectators and participants. Consequently, a variety of structures like temporary seating, lights, scoreboards, press boxes, concession stands, and locker or restrooms surfaced within the facility to make the event and facility a spectacle to take in like an opera house or movie theatre. However, site constraints often limited restrooms and concession options and imposed uncomfortable conditions upon spectators because the facility either offered limited parking opportunities or inadequate seating comfort and access around the facility. The improving popularity of professional football also prompted some franchises to offer contests inside stage six professional baseball facilities seeking to maximize profits during baseball's off-season or downtime. Appropriately, football and its spectators suffered regularly inside baseball facilities because these structures did not surface with football sightlines in mind. Obviously, the next era of professional sport facilities would need to address these problems.

CHAPTER 5

THE LATE MODERN ERA: 1953-1991

Introduction

Clearly, the early modern era (1903-1952) presents professional baseball and football facilities as interesting structures but overwhelmingly these small and simple buildings failed to provide the adequate supply of amenities, comfort, or technological features sport organizations and a growing fan base desired. Conditions promoted by the first half of the 20th century similarly influenced the development of the stage seven professional sport facilities into larger, more complex, permanent structures much like the previous era. For example, the population of the United States increased over 109 million following the end of World War II to 1990 (U.S. Census Bureau, 2005). Specifically, each decade of the late modern era offered the following population figures: 1) 1950 (154,233,234); 2) 1960 (183,285,009); 3) 1970 (207,976,452); 4) 1980 (226,542,199); and 5) 1990 (248,706,873).

The tremendous expansion of the American population occurred throughout the country yet the Southern Atlantic (Delaware, West Virginia, Georgia, Virginia, South Carolina, North Carolina, Maryland, Washington, D.C., and Florida), Pacific (California, Oregon, Washington, Alaska, and Hawaii), and Mountain (Utah, Nevada,

Arizona, Colorado, Idaho, Montana, New Mexico, and Wyoming) regions produced the largest growth. Distinctively, the U.S. Census Bureau found the Pacific region's population multiplied over forty percent each decade from 1950 to 1970 while the Mountain and Southern Atlantic states averaged over twenty percent during that same time span. Resultantly, professional baseball and football benefited from the remarkable population growth primarily through appropriate franchise relocation and league expansion efforts (Bess, 1986).

In 1953, the City of Milwaukee completed the first professional sport facility built with public funds to house the first professional baseball franchise move since the early 1900s. Milwaukee County Stadium produced a National League attendance record for 1953 as nearly two million (1,800,000) fans came to see the newly acquired Braves in the 36,000-seat facility (Leventhal, 2000; Sullivan, 1987). Following this success, the Braves expanded the stadium's seating capacity to 43,000. Appropriately, the popular Braves became the first National League team to break the two million mark in 1954 (Sullivan, 1987). Milwaukee County Stadium was heralded as a success and a pioneer for the evolution of the professional sport facility.

Sullivan (1987) points out the "Milwaukee Model" provided multiple rewards to professional sport organizations. Specifically, the new publicly funded facility helped reduce initial construction and annual maintenance costs sport franchises would typically incur (Sullivan, 1987, 2001). The "Milwaukee Model" also appeared as an attractive building because it surfaced as a cleaner and more spacious shape than that offered by the early modern era. For example, Rader (2002) and others offer the

early modern ballpark frequently possessed several seating areas with obstructed viewpoints of the field and showed deteriorating surfaces inside and outside with cracked foundations, dirty and tight concourses, and inadequate safety conditions (Gershman, 1993; Ritter, 1992; Sullivan, 2001). Gershman (1993) suggests the Great Depression and a shortage of maintenance resources during the war years (1941-1945) prevented these buildings from avoiding or averting decay. In Milwaukee's case, the 14,000-seat Borchert Field or Athletic Park III (1927-1954) suffered from a small seating capacity and extraordinarily cramped dimensions. Resultantly, when the Braves moved to Milwaukee from Boston, their attendance improved nearly 1.5 million because the fans wanted a major league team and a house with better accommodations (Buege, 1988; Sullivan, 1987). Overall, Milwaukee Braves owner Lou Perini made over a \$500,000 profit from the first year at the new stadium (Sullivan, 1987).

The success Milwaukee experienced inspired other major league owners to examine the possibility of acquiring their own public assistance when building a sport facility. Sullivan (1987, 2001) promotes the Dodgers feared the Braves new stadium deal would provide them with similar advantages the Yankees enjoyed (i.e. sign top prospects and trade for others) after Yankee Stadium was completed. Consequently, many professional teams or potential owners connected new stadium efforts, being considered through expansion and relocation efforts, to civic pride and the obtaining of major league status in order to help out their own franchises and reduce personal investments.

Appropriately, league expansion and relocation efforts appeared in MLB because the demographics of the country were changing and professional baseball supported a growing fan base in different locations. Following the end of World War II baseball achieved a remarkable turnout as approximately eighty million (79,534,035) people attended games between 1946 and 1949 (Quirk & Fort, 1992). Baseball eventually grew to attract average crowds over 17,000 in the National League for 1970. By 1980, this figure increased for MLB to 20,434 and improved again to 26,045 by the start of 1990 (See Appendix B Tables 2 and 3).

However, the early 1950s show MLB baseball started to decrease in popularity as crowds between 1950 and 1955 averaged only 12,813 per game. In contrast, the 1946 to 1949 period attracted 16,029 for each contest. A variety of authors show multiple arguments for why this occurred (Bak, 1998; Kuklick, 1991; Smith, 2003; Sullivan, 1987, 2001; Weiner, 2000). Primarily, this literature shows the popularity of television, declining urban conditions, and poorly maintained facilities prompted people not to show. Still, the attendance decrease should mainly be viewed as time where the American population's spending habits began to settle following the excesses encouraged with the economic booms post World War II.

Weiner (2000) points out in 1952 ten cities hosted the sixteen major league baseball organizations but five of the fifteen largest markets did not possess a major league baseball team. Those markets were Los Angeles, San Francisco, Baltimore, Minneapolis-St. Paul, and Buffalo (U.S. Census Bureau, 1950). Accompanied by improvements in travel technology (replacement of propeller airplanes for jet planes)

which provided for cheaper and faster air travel, a redistributed population prompted the weaker team in multiple team cities to move into the more bountiful western and southern locations of the United States (Davies, 1972; Kuklick, 1991; Smith, 2000; Sullivan, 1987). Appropriately, between 1953 and 1961, six of the sixteen major league baseball teams moved from their multi-team locales to cities like Milwaukee, Kansas City, Baltimore, Minneapolis-St. Paul, Los Angeles, and San Francisco who were without major league baseball (Leventhal, 2000). These baseball franchises moved into renovated minor league stadiums or new facilities which accommodated a larger and typically more enthusiastic new fan base (Leventhal, 2000). Interestingly, professional football already existed in many of the cities (Los Angeles, San Francisco, and Baltimore) MLB would enter.

Previous rival leagues like the AFL II (1936-1937) or AFL III (1940-1941) and the AAFC (1946-1949) competed with the NFL. However, the NFL (See Appendix C Table 1) showed gradual improvement in spectator attendance during the first half of the 20th century, which exceeded or matched those offered by the competing rival associations. Specifically, adequate but incomplete data on AFL II and III teams indicate spectator attendance reached roughly 7,000 per game (Quirk & Fort, 1992). In contrast, the NFL attracted nearly 18,104 per contest from 1936 through 1941. The AAFC attracted significantly larger crowds than the AFL II or III franchises at 28,138 per game. However, the NFL matched the upstart league's (AAFC) attendance at 27,684 per contest and ultimately, the NFL as the more established league, invited

some of these organizations (Cleveland, San Francisco, Baltimore, New York) to join them by 1950.

Data from the start of the 1950s supports 25,356 appearing at each NFL game (Oriard, 2001; Quirk & Fort, 1992; Rockerbie, 2004). Gradually, Oriard (2001) posits, the NFL's average attendance increased over seventy percent from 1950 to 1959 primarily due to the merger and the use of television because it created a larger fan base for the league. Smith (2003) professes the NFL also received a boost from MLB because the local media of New York suffered to find items to write about in their sports columns following the Dodgers and Giants departure to the West Coast. Overall, these conditions helped the NFL's average attendance grow to roughly 43,611 by the start of 1960 (See Appendix C Table 2).

Despite rapid interests existing through television and professional media promotions, the NFL only expanded to twelve with the AAFC merger before 1960. Obviously, this created opportunities for competition in America's growing regions (Southern Atlantic, Pacific, and Mountain Regions). Consequently, others began to look into starting another professional football league by the late 1950s (Rockerbie, 2004). Rockerbie (2004) suggests the near doubling of the NFL's popularity during the 1950s likely eased concerns sport entrepreneurs might have held about the success of professional football in new or existing NFL locations. Yet, this work believes this was doubtful.

Eventually, the AFL IV (1960-1969) emerged in 1960 throughout the United States in new places like Oakland, Denver, and Houston but in existing NFL

strongholds like Los Angeles and Dallas. The AFL IV also sought success competing against the NFL in the large New York market and in other unexploited urban locations like Kansas City, Buffalo, San Diego, Boston, Miami, and Cincinnati. The NFL responded to the AFL IV's aggression by expanding into Minnesota, Atlanta, and New Orleans during the rival league's existence. Rockerbie (2004) argues the competition between the two professional associations resulted in lower earnings for each league although attendance figures stayed strong or improved. Resultantly, the two leagues agreed to merge in 1970 to create the foundation of the NFL we know today and its passionate fan base, which increased nearly 10,000 per game between 1970 (52,381) and 1991 (61,792). Clearly, the growing strength of the NFL as a professional league would influence this period of professional sport facility construction because professional football would no longer accept its second-class citizen status in baseball-only structures. Thus, this stage of professional sport facilities evolved into multi-purpose structures, which could accommodate football as well as baseball.

Sport organizations also desired their sport facilities to be more entertaining, comfortable, and multi-functional in order to meet the demands of the late modern consumer market (Blickstein, 1995; Brown, 1979; Sullivan, 2001). Brown (1979, p.142) represents well the ideology of the day as he claims sport facilities should possess, "good visibility from all parts of the facility," be "safe, flexible, and convenient for all users," accommodate all needs of sponsoring companies, and "economical in expenses and maintenance." Ultimately, the professional sport facility

evolved to accommodate these characteristics through the attraction of local and state government contributions toward their construction and this municipal funding resultantly, helped produce similar shapes in playing areas and general structure all across the country (Bess, 1983b, 1986; Progressive Architecture, 1971).

Overall, the second half of the 20th century expresses stage seven of this work's ideal-type as professional sport facilities evolved naturally toward offering more flexibility, comfort, and convenience while emerging as one massive monumental structure capable of changing shape for each activity (Bess, 1986). In order to explain this ideal-type, this work first describes how television imposed changes on the professional sport facility. Other structures like concession stands, restrooms, or specialty seating and technological innovations such as artificial turf, electronic scoreboards, and retractable seating also appear in the chapter to demonstrate increasing flexibility, comfort, and entertainment. Next, a discussion about changing urban conditions and locations appears in the chapter to show how the professional sport facility gained its distinctive "cookie cutter" shape and how minor league cities altered their minor league facilities to become major league structures. Finally, the chapter concludes by describing the various problems of the stage seven professional sport facilities.

The Impact of Television

Kuklick (1991), Rader (2002), and others identify television as one of the great innovations for professional sport because sporting leagues could broadcast visual images of their drama to remote audiences across the country or local region thus,

providing more interest in their team and game (Smith, 1998; Sullivan, 1987; Temko, 1993). Specifically, Sullivan (2001) backs television's rise to prominence in mid to late 1950s to help baseball become even more popular in newer markets. Additionally, Oriard (2001, p.99) suggests, "Television struck a blow at football's local-rootedness more generally, as it made every team a potential 'home team' for football fans everywhere, enabling the National Football League to transcend geography."

Television was first introduced to professional baseball during the early modern era as the Dodgers and Ebbets Field hosted the Cincinnati Reds on August 26, 1939 (Ritter, 1992). However, the 1948 Chicago Cubs were the first team to broadcast all of their home games on television (Smith, 2003). Barnett (1998) claims early efforts to introduce television coverage of sporting events met some resistance much like radio experienced because sport franchise owners' perceived television broadcasts as giving their product away for free. Essentially, as Kuklick (1991) and Noll and Zimbalist (1997) declare owners worried television would directly hurt their gate attendance, the primary revenue producer before the 1960s.

Sullivan (1987) suggests baseball also struggled to utilize television in the early modern era because the sport facilities did not possess the necessary locations or auxiliary equipment to broadcast all the proper angles for television watching. For instance, Shibe Park televised its first baseball game in 1947 when facility managers converted a concession stand underneath the upper deck behind home plate for the park's only camera location (Kuklick, 1991). Additionally, the popular night games could not be broadcasted because the expensive lighting systems incorporated into a

facility's layout provided only 100 foot-candles of light, which was just enough for all sport participants to see. Proper television broadcasts of night events necessitate 300 foot-candles of light. Consequently, these features clearly limited television producers' ability to broadcast the baseball event.

Sullivan (1987) also argues early television broadcasts preferred straight shots like those provided by football because the technology could only capture all the action contained within one angle. Appropriately, Rader (2002) claims more football fans prefer watching games on television than baseball fans because baseball holds action in simultaneous areas. For example, the pitcher to catcher exchange occurs simultaneously with movement around the infield (e.g. attempted steals, shifts, pick-offs). Therefore, the spacing of the players prevented early television camera locations from seeing the whole field. Consequently, television-viewing opportunities for baseball fans were limited by the early technology and the lack of anticipation for future technological advancements.

Eventually, televised sporting events changed from novel acts into big business for professional sport organizations and baseball continued to lead the way for football to follow. The 1947 World Series between the Brooklyn Dodgers and the New York Yankees drew a television a huge audience of nearly 3.9 million (Bak, 1998). However, most people had to attend bars or local taverns to see the World Series because approximately one percent of American households owned a television (Bak, 1998). Boddy (1998) specifically claims only 60,000 television units existed in the whole country and approximately two-thirds of those subsisted in New York City with

upper class individuals. The lack of television sets noticeably acted as an obstacle for embracing this broadcasting technology into the early modern professional sport facility (Bess, 1999).

Still, television set production increased dramatically over the next decade and a half. For example, Lichty and Topping (1975) point out nine percent of homes owned televisions by 1950. Bak (1998) claims this figure suggests fewer than four million households possessed televisions. In 1952, roughly fifty percent of American households owned television units (Bak, 1998). Again, Lichty and Topping (1975) suggest this figure grew to sixty-five percent by 1955 and ninety-three percent by 1965. Ultimately, this information suggests the lower and middle income homes started to own television sets well before the end of the 1950s and Americans spent a substantial amount of their personal time in front of the television (Boddy, 1998; Oriard, 2001; Rader, 2002). Additionally, as Rader (2002) and Sheard (2001) suggest, television relocated leisure from public places the private spaces.

Boddy (1998) and Oriard (2001) claim the American family changed their daily rituals around television broadcasts and the popularity of television overtook the radio and print media as the preferred method for understanding sporting action (Boddy, 1998; Oriard, 2001). Oriard (2001) maintains sporting activities grabbed hold of a national audience because the television industry preferred to use sporting events as a vehicle to attract viewers. Specifically, sporting events appealed to television broadcasters because they were time oriented activities and less costly to produce (Boddy, 1998; Oriard, 2001).

Distinctively, sport organizations benefited heavily from their television broadcasts because they found it helped improve their gate attendance and ultimately their wallets (Bak, 1998; Kuklick, 1991; Weiner, 2000). For instance, Bak (1998) argues television broadcasts somewhat helped continue the Tigers' string of record setting attendance performances from 1948 to 1950 despite the lack of televisions. Kuklick (1991) also claims broadcasting revenues also helped the Phillies lead the National League in profits in 1950. Interestingly, all major league baseball teams combined television and radio profits stood at \$3.4 million for 1950 (Rockerbie, 2004).

Television broadcast rights were initially negotiated between the sport organization and local television outfits. However, sport organizations occasionally bought airtime and produced their own sporting event without the assistance of the local television networks (Rockerbie, 2004). Consequently, by the mid to late 1950s the Dodgers and other teams varied on how much money they collected from television and radio broadcasting.

The 1955 and 1956 Dodgers collected \$787,155 and \$888,270 respectively from their television and radio deals (Sullivan, 1987). In contrast, the Milwaukee Braves collected only \$135,000 from radio and television while the Washington Senators made roughly \$300,000 during the late 1950s (Antitrust, 1957; Weiner, 2000). Likewise, NFL organizations used television to their advantage. Information from the same House Committee report on Organized Professional Team Sports (see

appendix) shows the average NFL team making \$113,637 in 1955 and \$143,332 in 1956.

In 1960, the upstart American Football League (AFL) collectively agreed to sell its broadcasting rights to ABC. The results produced higher revenues for league members to share in because competition between member organizations racing to sell their personal broadcasting rights failed to appear (Rockerbie, 2004). The NFL and MLB completed similar deals during this time. This collective behavior appeared because the Sports Broadcasting Act of 1961 appeared to permit professional football and baseball to essentially operate as cartels during the sale of broadcast rights (Rockerbie, 2004). Resultantly, the NFL's first television contract brought each team about \$330,000 for 1961, an obvious increase from those numbers gained by each team during the 1950s (King, 1999; Quirk & Fort, 1992). Another contract with CBS beginning in 1964 tripled this figure to one million per team (King, 1999; Quirk & Fort, 1992; Rushin, 1994). The television contract for baseball in 1965 helped contribute a couple hundred thousand dollars to each baseball franchise (Bak, 1998).

By the start of the 1970s, the AFL and NFL merged and allowed NBC, CBS, and ABC to broadcast its football games. Rockerbie (2004) interestingly points out this tactic likely removed any threat of a rival league gaining a successful television contract during this time. However, the World Football League (WFL) and United States Football League (USFL) were able to secure television contracts. Specifically, the WFL earn \$1.6 million for 1974 and the USFL earn \$15.5 and \$34 million with ABC and ESPN in 1984 and 1985 (Quirk & Fort, 1992).

Collectively, the NFL contracts earned the league forty-seven million from 1970 to 1973 (Quirk & Fort, 1992). This figure grew to fifty-four million a year with the next contract for 1974 to 1977 (Quirk & Fort, 1992). The close of the 1970s (1978-1981) brought a staggering 161.7 million a year for each team of the league to share (Quirk & Fort, 1992). By the late 1970s, most baseball franchises also saw a collective national television deal bring them around one million in revenue (Bak, 1998).

The 1980s produced a tremendous growth in cable broadcasting of sporting events. For instance, Ted Turner's TBS broadcasting station sent baseball's Atlanta Braves to homes all over the country in 1982. Other networks like ESPN and Fox Regional provided broadcasts of local or national events to other audiences all across the United States (Rockerbie, 2004). These also surfaced as all-sports broadcasting networks who predictably sought out sporting events to broadcast on the twenty-four hour sports network. Expectantly, the NFL and MLB achieved significant gains in television revenue. Specifically, MLB earned roughly fourteen million a year for each team by the early 1990s with its national contract (Bak, 1998). Local or regional cable revenues generally varied team to team but a market like Detroit provided the Tigers with approximately \$10.3 million a year during the early 1990s (Bak, 1998). The NFL fared much better than MLB as its television revenues grew through the beginning of the 1990s to over three billion between 1990 and 1993 (Rushkin, 1994).

Appropriately, professional sport facilities responded, physically, to accommodate television by the start of the 1950s through the 1990s. Sheard (2001)

declares this was necessary in order for professional sport facilities to survive. For example, Philadelphia installed television camera booths along the first and third baselines to improve viewing angles (Kuklick, 1991). Husky Stadium added a fifty-four foot press box within their upper deck expansion project of 1951 (Architectural Record, 1951). This press box expansion was primarily created to assist television announcers and camera operators attempting to broadcast various sporting events. Sport facilities also altered their layout by incorporating large interview or press conference rooms to accommodate growing media requests (Blickstein, 1995).

Predictably, lighting structures surfaced appropriate for the broadcasting of night sporting events. For instance, Three Rivers Stadium introduced a new type of floodlight specifically designed for television broadcasts. Engineered by the Westinghouse Corporation, these floodlights allowed television cameras to film under better conditions for the highest quality of broadcasts (Pittsburgh Post-Gazette, 1969). Finally, in order to assist television's technological advances for the changing demands of the virtual or remote spectator, sport facilities modified and updated their space within and around the structure (Oriard, 2001; Rockerbie, 2004). Examples of major technological advances television created for the remote spectator include slow motion instant replay, the telestrator, and colorful player or team statistical graphics.

Overall, Smith (1998) and Temko (1993) posit television is one of the truly remarkable inventions of the 20th century. Primarily, these individuals take this position because they believe television helped transform our consumer driven economy to communicate, gather information differently, and seek out more

immediate comfort. Resultantly, as Temko (1993) states, television instituted great cultural expectations in all professional buildings by the 1960s. Distinctively, stage seven professional sport facilities incorporate a variety of structures in order to embrace the expectations of most consumers.

Distinctive Structures of Stage Seven Facilities

Temko (1993) argues the United States of the late 1950s through 1970s existed within a period of grand scientific and technological innovation. Yet, Sheard (2001) and Gershman (1993) also suggest this accompanied extreme safety and security pressures so sport participant and spectator would have reduced anxieties. The stage seven professional sport facilities reflect these statements. Specifically, as Rader (2002) suggests the stage seven professional sport facilities seated more people, often featured all-weather roofing, and artificial playing surfaces not offered or developed by the previous eras (Rader, 2002). Additionally, Rader (2002) mentions the late modern professional sport facility incorporated large electronic scoreboards, advertising, and glass boxes to meet the informational and entertainment needs of its wealthier guests and the media patrons.

Other comforts like improved spectator circulation, restroom accommodations and concession opportunities also dotted the landscape of the stage seven facilities (Bess, 1999; Sheard, 2001). Resultantly, Blickstein (1995) argues the late modern professional sport facilities met the new consumer needs adequately and adapted well to the event, while previous stages of facilities failed to protect spectator interests and required the event to often adapt to facility. Overall, these features, with the aid of

computers, made the late modern sport facilities appear similarly across the country as large antiseptic buildings removed of character and charm (Sheard, 2001; Smith, 2003). Appropriately Finch describes, the stage seven professional sport facility represents a normal “cycle architecture goes through,” as what works “in one place is assumed to go well in another,” (Progressive Architecture, 1971, p.78).

Bess (1999) describes the late modern professional sport facility provided quite a different location for the vertical circulation of its spectators versus the early modern era facilities. Typically, as offered in the previous chapter, the sport facility of the 1903 to 1952 era developed vertical circulation inside the volume of the sport facility. However, the late modern stadium developed its vertical circulation structures outside the confines of the structure or beyond the volume of the building. The suburban location likely provided architects and sport facility planners the opportunity to extend the vertical circulation structures outside the building because little or no site constraints limited their ability to build out.

The efficiency of spectator movement serves as an important contrast between early modern and late modern professional sport facilities. The previous chapter shows early modern sport facilities typically possessed narrow aisles, seats, and concourses within the structure which prevented efficient, comfortable, and safe movement. Ritzer and Stillman (2001) suggest the late modern professional sport facility supports wider, more open concourses and aisles to assuage peoples’ worries about missing the action when they leave their seat. Sheard (2001) concurs as he also argues late modern

professional sport facilities supported more efficient entrance and exit arrangements with bigger and wider aisles, concourses, and vertical circulation supports.

Shea Stadium, Milwaukee County Stadium, and Oakland Alameda Stadium all act as exemplary stage seven examples. For instance, Smith (2003) found literature of the late modern era held Milwaukee County Stadium as possessing spacious concourses. Smith (2003) also claims Shea Stadiums provided easier access to all levels of the stadium with a revolutionary and luxurious escalator system. Temko (1993) further complimented the designers of the Oakland Alameda County Coliseum for sinking the structure into the ground because it allowed spectators to enter from the top of the facility and walk around its spacious perimeter. Distinctively, Temko (1993) mentions walking around the top of Oakland Alameda County Coliseum allowed people the freedom to buy souvenirs and concessions as well as use one of its numerous restrooms.

Kuklick (1991) discovered articles about the poor or primitive restrooms and concession areas at Shibe Park and how the long lines and dirty accommodations often persuaded people not to return to their seats. Ritzer and Stillman (2001) suggest the increased number of restrooms and concession stands of the late modern era primarily helped assuage peoples' worries about missing the action because they spent less time waiting and more time watching. This investigation supports Ritzer and Stillman's (2001) claim because existing data shows the average late modern professional sport facility supported 35.38 restrooms and 44.64 concession areas (See Appendix C Table 3 and 4). Clearly, this was a tremendous increase from the previous eras and sport

organizations benefited from adding and renovating these structures because less wait time at concession stands and restrooms likely meant more return trips to the concession stand and more money into organizations' pockets.

Late modern professional sport facilities also improved the attraction and size of restrooms and concession areas to help decrease wait times and encourage return trips. For example, Smith (2000, 2003) found Milwaukee County Stadium described as possessing spacious restrooms while the Houston Astrodome provided enough plumbing for 40,000 people to wash their hands simultaneously. Temko (1993) again complimented Oakland Alameda County Coliseum and its restrooms for their superior comfort while Leventhal (2000) and Smith (2003) argued many late modern professional sport facilities were more sanitary than the early modern era facility. The concession industry acted similarly and provided more extravagant concession and souvenir options (Leventhal, 2000; Noll & Zimbalist, 1997; Sheard, 2001). Appropriately, sport entrepreneurs introduced new items to their customers such as chicken, shrimp, pizza, and roast beef sandwiches in a bigger and cleaner concession area (Kuklick, 1991; Sheard, 2001).

Other areas of comfort the stage seven professional sport facility predominantly addressed dealt with protecting spectators from obstructed viewpoints and extreme weather conditions (Leventhal, 2000). Smith (2003) and Sullivan (2001) found computers assisted the shape of the late modern era's distinctive cantilever design, first introduced by the Philadelphia Baseball Grounds II in 1895, because sport organizations felt paying customers wanted their seats to have a clear view of the field

(i.e. no blocking of view from steel support beams and other structures). This was one major criticism of early modern sport facilities (Smith, 2000). Candlestick Park (1961) reintroduced the cantilever design and became the first major concrete and structural steel sport facility to eliminate all obstructed viewpoints (Smith, 2000). However, the popularity of football and substantial municipal contributions prompted this facility and others to adopt a circular shape and use moveable or retractable seats which pushed spectators back farther from the field. Richmond (1993) and Weiner (2000) promote the moveable seats also acted as eyesore for late modern professional sport facilities because they often scarred natural and artificial grass surfaces and left unnatural ugly backgrounds when fully retracted. Weiner (2000) offered the famed “Hefty Bag” in the H.H.H. Metrodome as a prime example.

Retractable or moveable seating was born when the Osborne Company established D.C. Stadium (R.F.K. Stadium) as a true multi-purpose facility with its sliding ground-level retractable seats for football and baseball events in 1961 (Richmond, 1993). The success of D.C. Stadium led to Candlestick Park, Shea Stadium, Busch Stadium, Veterans Stadium, and so on all adopting this unique feature. Interestingly, Shea Stadium (1964) introduced the first motorized tracks to help convert it from a baseball facility into a football gridiron. This too led to further advancements and produced a larger more adaptable structure which could host more than just football or baseball. The Louisiana Superdome evolved into such a stage seven structure. For instance, designers of the Superdome desired to build a facility versatile enough to seat all sorts of events like conventions, rock concerts, trade

shows, and political rallies many early modern era facilities attempted in vain to successfully accommodate. Aptly, Superdome engineers produced a cable driven moveable seating system which allowed the structure to move out from or into an overhanging section of seats (Architectural Record, 1976). Overall, the massive moveable steel stands weighed approximately 1,000 tons, stood twenty-five rows high, and stretched 550 feet in order to seat 15,000 spectators in a variety of positions (Architectural Record, 1976). The roof on top of the Superdome operated as another distinctive feature of the stage seven professional sport facilities.

Dome technology introduced itself to the world in 1965 when the City of Houston, Texas opened the engineering marvel called the Harris County Domed Stadium. The domed stadium promoted itself as a climate-controlled facility capable of eliminating rain, heat, cold, snow, ice, and wind which could all quickly turn an event sour for sport spectators (Smith, 2000). Suitably, the Houston Astros' opening game program of 1965 stated, "The Texas sun will still beat down, the angry Gulf winds will still howl, and the tropical rains will still fall, but not on the spectators in the Astrodome," (Leventhal, 2000, p.14).

Interestingly, baseball franchises in Brooklyn and San Francisco both considered retractable roof or domed stadiums in the 50s and early 60s because of these problems and others (Sullivan, 1987; Richmond, 1993). Specifically, Allen Temko (1993), a Pulitzer Prize winning architectural critic, described the wind playing havoc on fielders and spectators inside Candlestick Park. Nicknamed the "Temple of Winds," Candlestick Park opened in 1961 with gusts approaching such velocities

people actually were moved against their will around the facility. Resultantly, a geodesic dome designed by R. Buckminster Fuller was offered which could cover Candlestick Park to reduce the winds for approximately \$3.5 million (Temko, 1993). Unfortunately, the plan was never implemented and the renovation which enclosed the park to accommodate the NFL's 49ers made a poor baseball facility worse for the home MLB Giants (Smith, 2003).

The New York Times reported on March 6, 1952 that architect Norman Bel Geddes possessed a plan for a new retractable roof stadium in Brooklyn. The new Brooklyn Stadium also featured "foam rubber seats, heated in cold weather; a 7,000 car garage from which fans can proceed directly into the ballpark; automatic hot dog vending machines everywhere, including mustard; a new lighting system minus the present steel towers and a synthetic substance to replace grass on the entire field and which can be painted any color," (Sullivan, 1987, p.37). The idea for the retractable or domed-roof primarily developed because baseball owners wanted to assure their fans a game would take place on its scheduled date. Obviously, poor weather conditions (e.g. rain or snow) cancelled or delayed many baseball games over the past century costing both sport entrepreneurs and spectators in one way or another.

For instance, Weiner (2000) recounts Billy Robertson, a Minnesota Twins administrator and half-brother to owner Calvin Griffith (1961-1984) predicted a retractable roof facility could likely produce another 150 to 200 thousand attendees to baseball games during the summer because the spectators and athlete would be protected from the elements. Weiner (2000) interestingly, points out Robertson

believed individuals would likely not desire baseball games inside on a regular basis but would appreciate being protected from the elements. Additionally, cancelled games impose financial losses on owners because they refunded money spent on tickets. Furthermore, decreased attendance typically follows make-up games and delays often encourage many spectators to go home, costing not only revenue from parking but also from concessions and merchandise sales. Consequently, delays force owners to pay overtime to stadium workers who also likely missed a day's paycheck if the weather outright cancelled the game. Overall, Richmond (1993) suggests one rainout costs approximately \$500,000 in lost revenue to sport organizations during the early 1990s.

Delays and cancellations also inflict harm upon television networks because they must fill in the time the sporting event would have taken during a delay and worry about the possible ramifications of a delayed game running into regularly scheduled programs on the network. Obviously, inclement weather is problematic for all those involved in baseball contests.

Despite the advantages the doomed-roof provided sport organizations and spectators some disadvantages do persist. For instance, the dome also barred the sun, clouds, moon, and shadows from pleasing the fans. Furthermore, the domed roofs of other facilities in Seattle and Minneapolis also received criticism because they offered a depressing atmosphere and anodyne look (Smith, 2000, 2003). Smith (2000) and Golenbock (2000) also suggest the H.H.H. Metrodome's (Minneapolis) white Teflon coated roof acted as a difficult background for the catching of highly hit fly balls and

served as a distraction to Twin and Viking opponents because of the noise level reflected by a full or semi-full facility. St. Louis Cardinals, Joe Magrane, eloquently described the troubles one faces when playing against Minnesota in the Metrodome during the 1987 World Series in Golenbock (2000). Here Magrane says, “I wore earplugs the first game, and it was just unbelievably loud, but I didn’t like the feeling with the earplugs because there was an echo, and it made me feel like I was in a phone booth down the street,” (Golenbock, 2000, p.574). Clearly, these disadvantages serve as distinctive features of the late modern multi-purpose professional sport facility but artificial turf surfaced as its most notorious yet popular product.

The invention of artificial or synthetic grass should be respected as the profound trademark of the late modern professional sport facility (Bale, 2001; Bess, 1999; Blickstein, 1995; Ritter, 1992). Originally developed in 1966 for the Houston Astrodome, “Astroturf” materialized because natural grass could not grow properly under the facility’s painted glass ceiling (Ritter, 1992). Interestingly, the original Astrodome possessed a transparent roof made of Lucite so grass could grow indoors but the glare from the roof prevented fielders from identifying the location of fly balls. Consequently, thirty percent of the Astrodome’s roof was painted to reduce the glare however, this killed the grass. Ritter (1992) describes the grass substitute as being comprised of half-inch nylon fibers connected to polyester mats which covered half-inch foam rubber pads to protect against the facilities concrete and asphalt foundation. Appropriately, the artificial grass surface materialized as a durable, cheaper, and sleeker alternative to natural grass.

Artificial turf allowed facility owners to maximize the usage of the sport facility because the competition areas could bear the burden activities like multiple sporting events, rock concerts, political rallies, and religious gatherings better than natural grass surfaces. Bess (1999) and Ritter (1992) promote artificial turf mainly exceeded natural grass because artificial grass could adequately stand up to the rigors of holding more than one type of event on a regular basis without inflicting high maintenance costs on facility owners. Fittingly, Blickstein (1995) also supports these claims. Specifically, Blickstien (1995, p.18) describes artificial grass as representing the technological advancements of the late modern era because it, “required none of the expensive maintenance of sod; it could be used in all weather; it could endure constant use; and it gave a playing field a sleek, modern look consistent with the new stadiums of the day.”

Overall, synthetic turf provided professional sport facilities the ability to transform from weather dependent structures into self-sufficient and highly adaptable buildings. This appears because the cheaper maintained synthetic turf allows field conditions to stay the same and transforms easily from one activity to the next. Ultimately, these advantages prompted many new or existing late modern professional sport facilities to replace natural grass surfaces for artificial turf. For example, open-air facilities like Busch Stadium and Candlestick Park ripped out their natural grass and installed artificial turf. Additionally, buildings surfacing after completion of the Astrodome like Arrowhead Stadium, Royals Stadium, Veterans Stadiums (Philadelphia), Three Rivers Stadium (Pittsburgh), Riverfront Stadium (Cincinnati),

Giants Stadium (East Rutherford, NJ) and others all embraced artificial turf before their opening. Blickstein (1995) argues these facilities welcomed artificial turf because they were municipally funded structures. Noticeably, municipalities pressed for artificial turf because they wanted to demonstrate or legitimize their financial assistance towards the facility benefited the community in some financial or social manner (Blickstein, 1995).

The overwhelming use of synthetic turf across professional sport facilities changed the nature or shape of the sporting product for sport spectators (Bess, 1983b). Generally, synthetic turf acts to speed up all aspects of the baseball or football game. Resultantly, faster or quicker players owned an advantage on the hard surface and each game adapted to the new conditions by changing the make-up of their roster. Golenbock (2000) describes this well through his description on the St. Louis Cardinals and how they put together their roster with team speed in mind during the late 1970s and early 1980s. Players like Lonnie Smith, Willie McGee, Ozzie Smith, and Vince Coleman were all highly valued by the Cardinals and respected across major league baseball because of the tremendous offensive and defensive plays they accomplished on artificial turf fields.

Fast yet predictable bounces for baseball also emerged as another by product of the hard and flat surface (Bale, 2001; Ritter, 1992). Natural grass fields often provided unique and interesting bounces because they are more affected by the weather and other events appearing in the facility. Footballs bouncing on artificial turf produced similar consequences because of its oblong shape but football players do not

desire to see the ball hit the turf so these unpredictable plays are minimized. Many baseball fans felt disenchanted with the artificial turf sport facility because it produced predictable plays. For example, artificial turf acted so reliably and fast, Cincinnati Reds shortstop Dave Concepcion used it for many years to bounce his throws to first base. Suitably, infielders and outfielders each played further back from typical positions natural grass fields would allow them to play because they feared the speed of the ball would change outs into singles, doubles or triples (Ritter, 1992). Clearly, this supports the team speed preference offered above.

The previous generation of professional sport facilities typically took shape based on considerations about which developments would present a particular sport in the best possible light. Consequently, the sporting structure was not conceived to exist as attractive as the event alone. However, the late modern professional sport facilities became attractions themselves with the incorporation of other structures like mammoth electronic scoreboards and luxury boxes (King, 1999; Smith, 2003).

Smith (2003) suggests the Astrodome's biggest contribution to the future of professional sport facility development was the luxury suite. The Houston Astrodome reintroduced the luxury box concept appropriately on a larger scale to also help distinguish the earlier facilities from the late modern structures. Previously, this work recognizes Chicago's Lake Front Grounds III and Pittsburgh's Forbes Field offered limited luxury seating for wealthy customers but neither offered anything like the fifty-five boxes the Astrodome held. The luxurious space, comfortable cushioned seats, and access to a various food items were just some of the unique features of the

Astrodome's luxury suites. Other professional sport facilities followed the Astrodome's lead and installed or incorporated luxury seating into their structures. Overall, this investigation found late modern facilities averaged roughly 56 luxury boxes and 1,167 club seats (See Appendix C Table 5).

King (1999) and Gershman (1993) mention the Astrodome, along with many other late modern facilities, evolved to accommodate and promote businesses with their luxury boxes as more and more corporations became involved with the ownership or recognized the benefits of being connected to sport. Voigt (1983) estimates these early luxury boxes cost corporations roughly \$20,000 per suite a year. Fittingly, professional sport embraced the maturing of this nontraditional stream of revenue and premium seating ideas progressed during the multi-purpose era into more elaborate structures (Blickstein, 1995; Noll & Zimbalist, 1997). For instance, the City of Pittsburgh elevated the status of luxury seating when it introduced the Allegheny Club to Three Rivers Stadium in 1970. The location of the Allegheny Club sat in between the right field decks of the stadium and was anticipated to generate over \$100,000 in stadium revenues for the City of Pittsburgh (Pittsburgh Post-Gazette, 1968). The Allegheny Club featured a restaurant capable of seating 400 and provided a spectacular view of the field. Interestingly, the Steelers and Pirates did not control the rights of the Allegheny Club so Three Rivers became even more economically restrictive upon them because it took up valuable real estate space (Trumpbour, 2001). This is something sport organizations addressed more powerfully in the post modern wave of professional sport facilities.

The Royals and Chiefs also followed Pittsburgh and Houston's lead on the club seat and luxury suites as they incorporated them into Royals Stadium and Arrowhead Stadium designs (McKenzie, 1997). However, Chiefs owner, Lamar Hunt, intended Arrowhead's luxury suites to be much grander than those offered in Houston. Consequently, Arrowhead's luxury suites contained some of the most beautiful pieces of art and highest levels of comfort available for those who could afford it (McKenzie, 1997).

As previously stated, the multi-purpose era facilities accommodated technology greater than previous sport facility representatives. Large electronic score and video boards now secured a place in the late modern structure for the first time to help further enclose the facility from the outside world along with luxury boxes and television structures. Initially, Chicago White Sox owner Bill Veeck started the scoreboard craze when he established the Monster Scoreboard in 1960. Veeck's scoreboard, likely inspired by the circus, added strange noises, shot off fireworks, and supported pinwheels which all erupted into action following a White Sox win or home run. Eventually, the electronic scoreboard further evolved into a spectacular entertainment vehicle when the Houston Astrodome introduced its 474 foot \$2 million behemoth in 1965 (Jares, 1965; Leventhal, 2000; Smith, 2003; Truex, 1999). Wrapping around the length of the outfield, the colossal scoreboard entertained fans unlike previous generations of scoreboards (Truex, 1999). Specifically, the scoreboard not only relayed important information but also used its flashing lights and booming

sounds to display animations and implore appropriate types of noise all which added to the overall experience (Jares, 1965).

The next step for scoreboards involved using captured video to show highlights and replays of sporting action with commercials also appearing for the benefit of sport organization sponsors (Gershman, 1993). Previously, the best sponsors could obtain was signage attachments to the sport facility. Video advertising allowed them more interactive opportunities with potential clients. The earliest video boards primarily resembled Milwaukee County Stadium's gigantic scoreboard in right-center field, which showed only black and white video replays (Smith, 2000).

The 1980s supported a significant revolution in video scoreboard displays with the introduction of colorful scoreboards like Mitsubishi's Diamond Vision and Sony's JumboTron. These display systems provided sport franchises the opportunity to show every fan the events and players on the field in a closer and more detailed fashion. These video boards also evolved to entertain fans with clearer cartoons/images and more complex clips of statistics, trivia, announcements, and television-produced commercials. Suitably, this work found many stage seven professional sport facilities endured renovations to incorporate the new video systems. For example, Three Rivers Stadium and Oakland Alameda County Coliseum added new video scoreboards within the confines of their building for the reasons offered above (Smith, 2000, 2003). Smith (2003) describes large Diamond Vision replay boards and high tech stereo equipment worked together to reinvigorate the crowds attending contests at the Oakland Alameda County Coliseum. Additionally, Smith (2000) found Three Rivers Stadium also

utilized the new video boards to display ads and attach advertising signs for the capturing of the spectator's attention.

The late modern professional sport facility changed the electronic scoreboard to help entertain fans and prompted them to cheer and be more interactive with the event. Gershman (1993) suggests the size of these giant scoreboards and video displays found a home in these late modern sport facilities to help reduce anxieties or at least focus the consumers' attention away from those that might worry them. Fascinatingly, Australian Sociologist John Goldlust (1987, p.174) proposed, "The giant video screen is there to attract people to the stadium event and to ensure that by attending they will not be deprived of the television experience." Ultimately, these things helped spectators experience the event differently than the previous era and further isolated the professional sport facility from the outside world.

A Change of Scenery

In the 1980s, the Chicago White Sox management felt concern the neighborhood surrounding Comiskey Park was deteriorating because the demographics of park's environment changed favoring low income and minority tenants. Euchner (1994) points out well over fifty percent of the ballpark's surrounding neighborhood was minority affiliated and between the years 1972 and 1984 and approximately half the residents of this area lost their jobs. The White Sox management also made claims Comiskey Park began to show its age and was difficult or costly to maintain (Euchner, 1994). Resultantly, these factors led the White Sox to conclude its redistributed middle or upper class white patrons seriously tried to avoid

games at Comiskey Park because the possibility of urban crime and an uncomfortable facility worried them. Interestingly, this conclusion is relatively supported by the Brookings Institution which found professional sport facilities located in minority dominated neighborhoods produce a lower number of white spectators (Noll, 1974). However, the White Sox only produced five winning seasons between 1972 and 1984, so because winning is acknowledged as the greatest factor in producing attendance, this likely remained the strongest reason people failed to show the ballpark (Hanson & Gauthier, 1989; Porter, 1992). In time, this argument, along with the threat of departure to another city, wore on the City of Chicago and the proper funds materialized to support the last of the late modern facilities, U.S. Cellular Field.

The argument and rationale used by the White Sox to gain a new ballpark was not that uncommon among professional sport organizations. Weiner (2000) mentions cities like Cincinnati, Pittsburgh, and St. Louis used similar arguments. This investigation also found cities like Philadelphia, Brooklyn, and the Bronx sought new sport facilities by claiming the location of their current provided them with many inadequacies.

Kuklick (1991) describes the North Penn area of Philadelphia (Shibe Park's location) losing small businesses and its bigger industries during the Great Depression and after World War II. However, those Italian and Irish immigrants leaving the inner city Philadelphia area were replaced by blacks. For instance, Kuklick (1991) discovered although the total population of Philadelphia changed little, the black population grew from 134,000 to 650,000 between 1920 and 1970. Kuklick (1991,

p.167) also found the total population of Philadelphia fell roughly thirteen percent from 1970 to 1980 because “habitable housing ceased to exist as people and politicians abandoned or demolished residences, business establishments, and industries.” Smith (2003) and Kuklick (1991) suggest the neighborhood surrounding Shibe Park supported more crime than before by 1969 and the structure like the neighborhood fell apart. The seating capacity and parking remained inadequate and impossible to expand upon. In the end, the Phillies thought these circumstances produced an undesirable neighborhood for their ball club and desired a new one in a different location because they thought white customers would not want to travel to the now non-white neighborhood of Shibe Park to partake in a game (Kuklick, 1991; Smith, 2003).

Data collected by Rosenwaik (1972) shows the make-up of the Bronx changing significantly like Philadelphia from 1940 to 1970, although the total population of the area changed little. White people represented roughly 1.37 million and Blacks almost 24,000 of the Bronx’s make-up in 1940 but in 1970 these numbers were approximately 1.08 million and 358,000 respectively. The Bronx area also displayed increases in crime, abandonment, and drugs through the mid-1970s (Sullivan, 2001). Apparently, these figures proved disappointing to the New York Yankees (MLB) and Giants (NFL) as Bai (1994) provides eighty-five percent of a typical Yankee home game crowd comes from outside the city limits and eighty-eight percent come by cars (Progressive Architecture, 1971).

Brooklyn likewise thought too many poor people resided there to support their team (Sullivan, 2001). Rosenwaik (1972) again, shows Brooklyn's breakdown for 1940 as 2.59 million White and 107,263 black. In 1960, these figures changed to 2.25 million White and 381,460 Black for a narrowing of the racial gap. Ultimately, the Dodgers exhibited such poor attendance before their move to Los Angeles, likely their broadcasting revenues kept them from becoming a losing (e.g. economically) franchise (Sullivan, 1987).

Ultimately, the redistributed population forced sport organizations to abandon their old facilities and establish new ones. Furthermore, sport entrepreneurs found it difficult to realize all the potential profits available in their current location because sport facilities often failed to provide adequate seating and parking for the increasing number of people wishing to attend sporting events (Euchner, 1994; Leventhal, 2000). Rader (2002) and Voigt (1983) also claim the emptying of residents from urban centers to the suburbs left a lower economic class, who could not meet the expense of attending sporting events or protecting the property surrounding the professional sport facility. Distinctively, Weiner (2000) and Rader (2002) also suggest the non-white population grew in urban centers from thirty-nine to fifty percent between 1951 and 1960. Therefore, after forty years or more in some cases, professional sport facilities began to show their age (Leventhal, 2000).

Fittingly, sport organizations moved into sport facilities built in the suburbs because the fans with the most disposable incomes are located there (Euchner, 1994). Baade and Sanderson (1997a) also support the automobile was accommodated in late

modern ballpark. Thus, the stage seven professional sport facilities also are recognizable by the miles of parking surrounding them and their immense size which is not limited by existing structures like residences, businesses, and parks, typical of the early modern era (Rader, 2002).

A variety of scholars support these claims that fans were not where they once were. Petersen (1996) and others say the years immediately following the conclusion of World War II saw remarkable growth outside city limits in surrounding suburbs as many governmental, judicial, and financial services relocated along with the people (Euchner, 1994; Oriard, 2001; Sheard, 2001; Sullivan, 2001). Sullivan (2001) mentions businesses decentralized away from downtown locations because suburban locales operated as cheaper work sites but suburban locations also offered attractive closeness to suburban residential developments and easier access to shipping roads.

Rosentraub's (1997) work argues the relocation of industries, production, and manufacturing to suburban locations produced a substantial change in commuting patterns of the average American. For instance, Sullivan (1987) claims simple installment buying plans made cars easier to purchase for the average American to help facilitate car ownership growth across the United States during the late modern era. Resultantly, new multi-lane highway systems spread throughout the country to isolate the urban sport facility from its ever retreating suburban fan base (Bess, 1993; Temko, 1993).

The street car/public transportation system officially came to a halt in 1955 for Detroit when public officials felt citizens did not utilize the system enough to keep

paying for its use (Bak, 1998). Temko (1993) also describes San Francisco in 1960 as trying to avoid the painful invasion of the automobile and parking garages which could hold a total of 630,000 cars. Clearly, these facts demonstrate the automobile firmly established itself as the dominate transportation vehicle for American citizens before the end of the 1960s.

Sullivan (2001) and Kuklick (1991) suggest the urban locations of professional sport facilities failed to provide the adequate parking necessary for the car loving American citizen. Additionally, as Rader (2002) suggests, early modern facilities also failed to anticipate the growth of the automobile as a central part of American's lives (Rader, 2002). Brooklyn's Ebbets Field and Philadelphia's Shibe Park act as two genuine examples of this phenomenon. Kuklick (1991) and Sullivan (1987) support residents of Philadelphia and Brooklyn also pursued places to drive their automobiles as they surfaced more dependent on it for their personal transportation. A lack of streets to adequately move traffic around ballparks also prevented individuals from moving quickly to and from a ballpark. However, if the road were fine a very limited number of on-site parking opportunities ultimately, awaited customers to helped force their sport organizations to move away from their ballparks.

Specifically, Sullivan (1987) points out Ebbets Field supported only 700 parking spots while Kuklick (1991) claims the Shibe Park area held 400 spaces and could not accommodated the necessary number of spots within walking distance to the facility (See Figure 5.4). This fact combined with the increasing occurrence of night games prompted mounting frustration for the car addicted American and especially the

Philadelphia Eagles of the 1940s because their great teams could not maximize their profits with empty seats (Kuklick, 1991). Fittingly, the Eagles moved the University of Pennsylvania's Franklin Field II because it provided a better set-up for football spectators and more parking options than Shibe Park's surrounding area. The results proved the Eagles' decision was wise as the franchise drew over 400,000 for seven games in the early 1960s compared to the record of 187,000 for six games at Shibe Park in 1947 (Kuklick, 1991). Still, other factors should also be valued for the increase in attendance like an overall increase in the popularity of the NFL.

The Dodgers and Phillies attempted to find a new location for a ballpark inside the city limits but these plans folded because the sport entrepreneurs could not offer the excessive funds necessary for the acquisition of all the space needed (Kuklick, 1991; Sullivan, 1987). Appropriately, Rader (2002) suggests obtaining several additional acres for automobiles on top of those required already for a new professional sport facility made the project unfeasible within city limits because of the great costs associated with buying and completing land for sport use.

The Free-Standing Superstadium

Bess (1983 p.118, 124) considers the permanent late modern professional sport facility as "free standing object" and describes the late modern era "superstadium" as significantly larger than its predecessors. This work supports this conclusion as it found the average late modern sport facility occupied nearly seventeen acres of land while the early modern sport facility controlled roughly nine (See Appendix C Table 6). Bess (1983) accepts the evolution of professional sport facilities from the smaller

traditional sport structures to mammoth multi-purpose superstadiums because urban economic constraints limited the traditional stadium's ability to maximize profits and usage.

Resultantly, Bess (1999, p.22) describes the "superblock" upon which a superstadium rests contains as "a massive parcel of land undivided by through streets or into smaller blocks." Bess (1999) and Smith (2003) argue the superstadium traditionally exists on a superblock because it cannot find a large enough urban street grid to host its expanded seating and automobile needs. Consequently, most superstadiums materialize in suburban locations as an immense structure which dominated its surrounding environment with its sheer height and width. However some urban superstadiums, like U.S. Cellular Field, found sites in urban locations to wipe out existing neighborhoods and structures.

Like its predecessors, U.S. Cellular appeared with updated technological advancements, like massive video scoreboards and advertising signs, and better modern conveniences like larger concourses and picnic areas. However, similarly to its contemporaries, the facility also stood symmetrical, dominated its surrounding environment, and positioned fans far from the field. Bess (1999) and others criticize U.S. Cellular Field's occupation of South Armour Square because eighty residential buildings disappeared before the facility could surface in 1989 (Euchner, 1994; Gershman, 1993; Smith, 2003). Ultimately, U.S. Cellular Field destroyed the neighborhood homes of the elderly and working class along with some light industry

businesses for the buildings of the park and its periphery businesses (i.e. parking and merchandising) to occupy roughly seventy acres (Bess, 1999; Gershman, 1993).

Richmond (1993) and Smith (2003) also recognize U.S. Cellular Field as a free-standing object when they criticized it for incorporating three decks of seating. For instance, the triple-deck design and extended width provided a long pilgrimage for those attempting to walk completely around the ballpark. Additionally, the thirty-five degree angle of the upper deck seemed to induce dizziness and jokes that one needed binoculars and breathing equipment to watch contests (Richmond, 1993; Smith, 2000, 2003). Richmond (1993) and Bess (1999) compliment its predecessor Comiskey Park (Chicago) because the last row of its upper deck sat closer to the field than the first row of U.S. Cellular Field (see appendix). Finally, Richmond (1993) supports U.S. Cellular surfaced as a suburban-like free-standing sport facility because it provided large areas of pedestrian parking and pedestrian bridges for those attending games. Essentially, these features allowed White Sox patrons to attend a suburban facility in an urban setting because they really never actually set foot on the City of Chicago.

In due course, the super stadium developed into a highly recognizable monument mainly outside city limits because previous city commercial and residential developments imposed few limitations on the new structures. However, stage seven facilities within city limits still erased commercial or residential buildings residing in their path when they surfaced. Interestingly, Bess (1983, 1986 p.13) argues the “modernist” movement contributed heavily to this era’s sport facilities attempts to dominate other surrounding structures because architects and engineers believed sport

facilities as objects to be admired. Additionally, Bess (1999) suggests the late modern sport facility produced such a “free-standing” structure as a result of increased efforts to assuage America’s obsession with the automobile.

Minor League No More

The growth and redistribution of the American population to the suburbs and other regions of the country transformed smaller communities into major cities (Temko, 1993). Yet, many of these growing communities failed to possess major league professional sport. The literature overwhelmingly points out these locales often felt others viewed them as “cow towns” or holding a national image as less than great (Sullivan, 1987, 2001; Smith, 2003; Weiner, 2000). Sullivan (2001) and Weiner (2000) promote many towns sought out to remove this perception within the national stage through the building of professional sport facilities. Appropriately, civic boosters and local politicians went to work on their communities to help them complete these structures.

Temko (1993) suggested in the 1960s cities found they were influenced by local politicians, contractors, financiers, lawyers, sport franchise owners, and sport writers during the construction process of a professional sport facility. This investigation found a variety of places throughout the United States exhibited these thoughts. For instance, Sullivan (1987, p. 159) mentions the *Los Angeles Times* and local political leaders, like the mayor, supported a referendum allowing the Dodgers to build Dodger Stadium because they thought it would bring together all the estranged municipalities in the area to make Los Angeles a “great city.” Weiner’s (2000) work

discusses in wonderful detail how local Minneapolis politicians and businessmen (Charles O. Johnson, Gerald Moore, and Norman McGrew) thought bringing a major league franchise to the Twin Cities (Minneapolis/St. Paul, MN) area would do a lot for their national image. Likewise, Judge Roy Hofheinz also convinced local politicians and the media a domed-stadium would raise Houston's national reputation from a cow town to a progressive highly technical city. Ultimately, the size, success, and innovations produced from the Houston Astrodome generated tons of national notoriety for the city of Houston as one of the few modern cities capable of such accomplishments.

An interesting strategy used by growing cities like these was to build or renovate a professional sport facility, with municipal funds, in order to attract a major league football or baseball franchise. Communities in Denver, Houston, Milwaukee, Minneapolis/St. Paul, Atlanta, Arlington (TX), Kansas City, and Baltimore all fit this description. Sullivan (1987, 2001) and Smith (2003) suggest this occurred following the Braves' (MLB) success after their move to Milwaukee from Boston.

Appropriately, the weaker teams in multiple team cities or those with dying support abandoned their towns for greener pastures. Additionally, each professional association (MLB and NFL/AFL) also recognized the growth of these communities and expanded. Resultantly, many of the communities listed above secured major league football or baseball franchises from Boston, St. Louis, New Washington, and Philadelphia.

The public subsidy used for the construction of these professional sport facilities desired to stay low as the attempt to attract a major professional franchise appeared risky. Weiner's (2000) work illustrates this point with the Minneapolis area failing to acquire the Giants (MLB) during the 1950s. Fittingly, these communities primarily focused their public dollars on serving the needs of one sport initially but accommodated the other when possible. Consequently, these facilities also started out as smaller structures with room to expand quickly upon reaching an agreement with a major league franchise.

This inquiry found multiple examples of this phenomenon. For example, the cost cutting City of Arlington, Texas situated the original Arlington Stadium forty feet below street level in an attempt to save money during its construction (Leventhal, 2000; Smith, 2000, 2003). Initially seating only 10,600 and costing less than \$2 million to complete, this small facility supported little luxuries other than an expansive area around the stadium to expand. Appropriately, Arlington Stadium surfaced as an "erector set facility" with expansion in mind. Unfortunately, for those who attended games at Arlington Stadium, too much of the facilities final 41,097 seats sat in the outfield and not behind home plate or along the first and third baselines.

Like Arlington Stadium, Metropolitan Stadium (Bloomington, MN) surfaced as a small 18,200-seat minor league facility before it finally lured a major league professional franchise to the Minneapolis/St. Paul area (Leventhal, 2000; Weiner, 2000). Quirk (1997) and Weiner (2000) mention Metropolitan Stadium was publicly supported by the *Minneapolis Star* and *Tribune* papers but surfaced on the cheaper

land of Bloomington, MN because each community worried about the costs of the facility. Smith (2000, p.252) and others also thought Metropolitan Stadium “looked like a giant erector set with a crazy combination of single, double, and triple decks that appeared to be squeezed together in a design-as-you-go floor plan,” (Ritter, 1992; Smith, 2003; Weiner, 2000). Metropolitan Stadium took its shape based on anticipated expansion efforts the large 14,000 spot parking lot provided it (Smith, 2003). Overall, the build as you go design accommodated expansions to 30,000 for baseball and 40,000 for football in 1961 with additions to 40,000 for baseball and 48,000 for football by 1965.

Municipal Stadium (KC) started out as the minor league Muehlebach Field (1923-1955) but in less than six months it was a completely overhauled in 1955 to become a major league facility capable of hosting the newly acquired Athletics (MLB) and eventually professional football. Municipal Stadium acted as home to the Kansas City Chiefs (AFL/NFL) from 1963 to 1971. A second deck materialized along the first base line almost to the foul pole. Another stopped at third base with uncovered bleacher seating added down to the left field foul pole (Ritter, 1992). By in large, these additions augmented the total seating capacity to basically doubled Muehlebach Field (Ritter, 1992). A big scoreboard also took residence in right center field during the overhaul along with a small picnic area and petting zoo outside the foul territory along the left field line (Ritter, 1992).

Other places possessing major league franchises felt pressure their teams might leave them for places like the ones mentioned above because they felt the nation

perceived them as declining or minor cities due to the noticeable population and business redistributions occurring. Suitably, places like Pittsburgh, Cincinnati, Philadelphia, and Detroit all demonstrated a zest to erase their image as a declining city with the development of their sport facilities. Three Rivers Stadium represents a great example of this point as Pittsburgh's political and economic leaders felt a new facility would clean-up the image of the Steel City as a rusting or dirty town (Dvorchak, 2000). Specifically, through the leadership of Mayor David Lawrence and local businessman, Richard Mellon, Three Rivers Stadium surfaced by 1970 (Dvorchak, 2000). Trumpbour (2001, p.30) argues the "rust-belt cities seemed to particularly enjoy the association with modernity," the new sport facility provided them. Consequently, each of these cities and franchises sought to add the structures mentioned above to their new or renovated facilities to help project a different image to their community and the rest of the country.

Conclusion for Stage Seven

Stage seven professional sport facilities were obviously impacted by a variety of influences. This inquiry found the American population shifted towards the western and southern states and suburban locations grew outside city limits to encourage the construction of professional sport facilities in these locations. Rader (2002) and Noll and Zimbalist's (1997) work suggests professional sport facilities changed dramatically when population and public financial support systems increased to force the expansion or relocation of professional baseball and football teams to these locations. City businesses and political organizations appropriately moved to these

locales to build upon its cheaper space and to be closer to the redistributed population because the abandonment of urban location by upper and middle class residents allowed the downtown to be ravaged by crime and its own age. The automobile gained popularity among American citizens because it allowed them the ability to travel to distance places away from the crowded inner city at their own convenience. Fittingly, the improving American infrastructure provided better highways and roads for individuals to travel upon and so they could move to suburban locations (Smith, 2000). Clearly, public transportation did not hold the influence it once did because people no longer lived in the city limits.

Professional football grew tremendously much like the suburban population and love for the automobile during the early part of the late modern era to match the popularity of baseball. Specifically, Blickstein (1995) promotes professional football became a more equal partner to baseball in the 1960s and 1970s. Gershman (1993) and others support this as they show at least half of the twenty-two professional football teams played in MLB parks in 1961 and many ballparks like those in Minnesota, San Francisco, and Anaheim suffer significant renovations to accommodate football requests (Leventhal, 2000; Noll & Zimbalist, 1997; Smith, 2000). Other work shows professional football was aided significantly by the invention and use of the popular television to promote the product.

Television dramatically improved the visibility and attractiveness of professional football to directly help push municipalities into seeing they were as important to their community as baseball. Harris Polls conducted in 1968 illustrate this

point beautifully as they regularly found sport fans preferred to watch football over baseball on television (Gershman, 1993). Resultantly, professional football franchises improved their bargaining position on the design of any new sport facility with municipal funding. Therefore, professional football franchises pushed sport facilities to accommodate the needs of television broadcasters first and foremost (Gershman, 1993). Accommodating television became an important topic for baseball MLB franchises as well. For example, this work acknowledges the Dodgers and Giants likely stayed afloat in New York despite poor attendance marks because of broadcasting fees (Sullivan, 1987). Eventually, by the 1980s, television out produced gate attendance as the number one source of revenue for most sport organizations.

Gate attendance, although still number one, noticeably received competition from other sources besides television for revenue. Sport entrepreneurs also recognized merchandise, concession, and advertisement sales provided viable means to improve the economic position of their franchise. For instance, Voigt (1998) suggests concessions transformed themselves during the late modern era to eventually become just as beneficial as tickets sold by the 1980s. Bak (1998) also describes Detroit Tigers owner Mike Ilitch as a savvy promoter because he successfully produced millions by selling advertising and sponsorships to a variety items and places throughout Tiger Stadium. Specifically, Ilitch sold the rights to the opening pitch, provided space for rotating advertising signs, provided advertisement time on video boards, and hung signage on the facility's foul poles (Bak, 1998).

Ultimately, surrounded by crime and a deteriorating neighborhood with few parking opportunities for the relocated and more demanding consumer, sport organizations sought to move away from their economically inadequate ballparks and their urban locations. Sport franchise owners sought to build new sport facilities closer to suburban neighborhoods and businesses but often asked for public assistance to complete the facilities.

The suburban or suburban-made location of the stage seven professional sport facility provided huge amounts of space for sporting structures to develop. Smith (2003) posits many individuals thought the early modern ballpark suffered in the eyes of many because it possessed few nearby parking opportunities. Thus, sport entrepreneurs made sure miles of parking surrounded the stage seven facilities. The work of many individuals corroborates these thoughts. For instance, Rosentraub (1997, p.183) provides, “Creating giant parking lots for the sport facilities emerged as the primary means to accommodate people traveling to view sporting events.” Richmond (1993) posits the late modern professional sport facility primarily sought to speed up traffic flow for automobiles with massive parking areas. Smith (2000), Bess (1999), and Ritter (1992) also believe spacious automobile parking found homes around professional sporting structures to act as a significant characteristic of the stage seven facilities.

Appropriately, this investigation found the average stage seven professional sport facilities supported roughly 9,000 parking spots on-site (See Appendix C Table 7). The limited data on early modern facilities show these facilities possessed barely

over 3,000 next to the facility. Unmistakably, the spacious parking area replaced the restrictive confines early modern professional sport facilities suffered under like existing streets, residences, places of business. Hence, stage seven professional sport facilities to evolve into “big, round, sterile, symmetrical, concrete structures that focused on amenities and comfort at the expense of intimacy and atmosphere,” (Smith, 2000, p. 17).

Baseball broadcasting failed regularly in oval designs because it provided poor television shots and unsuitable seating angles which likely turned the spectator away from the action during live and remote attendance (Gershman, 1993). Football preferred to avoid square shaped facilities because its spectators preferred to avoid the obscure viewpoints sharp corners bestowed upon them (Brown, 1979; Gershman, 1993). Thus, in the name of progress, baseball and football franchises agreed to compromise and build round sport facilities with curved front rows to improve corner viewpoints. This work found late modern professional sport facilities exhibited traits one could call symmetrical as outfield dimensions on new construction stood at 331 feet for right and left field, 377 feet in left-center and 378 feet for right-center field (See Appendix C Table 8). Additionally, renovations changing the dimensions of late modern era facilities show similar qualities as left field stood at 328 feet, right field fell at 325 feet, left-center sat 376 feet, and right-center surfaced 379 feet from home. Not surprisingly, the institution of professional baseball also added to the symmetry of buildings by implementing new rules which stated all ballparks built after June 1,

1958 could not create foul distances of 324 or less and a center field distance less than 400 feet.

Many criticize this time period of construction for its standardization or symmetry simply because it destroyed the individualism each stadium could likely impart on its teams style of play (Oriard, 1976; Relph, 1989; Ritzer & Stillman, 2001). Relph's (1976) work shows the modernity of these buildings encourage a sense of sameness or placelessness such as when former MLB player Richie Hebner said, "When I'm at bat, I can't tell whether I'm in Cincinnati, Philly, or St. Louis," (Smith, 2003, p.301).

Interestingly, Richmond (1993) suggests the minimalist architectural style of the stage seven professional sport facilities reflected the popular "modernist" movement favored by architects of the 1950s through the end of the 1980s. Archetti (1992, p.214) supports, "modernity clearly implies a destiny of specialization of participation, with well-defined boundaries." Bale (1992) also acknowledges modernity seeks to eliminate or reduce the effect of weather for competitive sport. Thus, the stage seven professional sport facilities also lack a natural landscape. Ultimately, Bess (1999) and others describe the stage seven professional sport facilities as a sterile industrial looking building with poor aesthetics offering little opportunity for affection due to its modernist and monstrous nature (Bandyopadhyay & Bottone, 1997; Richmond, 1993). Therefore, it should not be surprising sport spectators embraced these facilities as much as they would their own office building or manufacturing plant.

Still, as Bess (1999) points out, professional baseball and football organizations had little options to the circular facility if they wanted their local municipalities to assume payment. Thus, as Blickstein (1995) and Brown (1979) show, the late modern facility evolved to adopt the circular shape in order to maximize its usage because municipal funding considered all the activities their facility would enjoy before designing a project. Furthermore, most municipalities were not going to pay for the construction of two separate facilities for football and baseball although Kansas City's Arrowhead and Royals Stadium did surface as the exception.

Within and around the circular structure, the late modern professional sport facilities addressed the narrow ramps, aisles, and concourses offered by the previous generation of sport facilities by improving the seat size and width of these areas (Progressive Architecture, 1971). Richmond (1993) and others also support people wanted more comfortable seats (Bak, 1998; Golenbock, 2000). Amusingly, Bak (1998) explains Detroit's renovation of Tiger Stadium in 1978 utilized medical studies to reduce the capacity of the sport facility by nearly 1,500 because medical researchers found the average American enjoyed a larger rear end than those studied before World War II.

Richmond (1993) also claims people wanted easier access to walk around the facility because they desired to move from one place to the next. Progressive Architecture (1971) and Golenbock (2000) specifically point out sport spectators wished for greater and easier access from their seats to concession and restroom areas. Sport entrepreneurs willingly expanded concourses and aisles and developed more

efficient ramps because they also desired for their patrons to get to these areas. Smith (2003) fittingly argues the narrow aisles and ramps and inadequate average of restrooms (around a dozen) held back the money making ability of the sport entrepreneurs. Appropriately, sport entrepreneurs supported larger aisles and concourses because they found people made more trips to and from the concession stands with easier access.

Traffic flow interestingly improved with access ramps outside of the confines of the facility (Richmond, 1993). The previous generation adapted to its surroundings and installed access ramps and stairs within the facility but without restrictions on site size but Legion Field and other late modern facilities erected massive external pedestrian ramps outside their façade. Richmond (1993) suggests this improvement in traffic flow serves as another important feature of the stage seven professional sport facilities.

Overall, structural innovations such as external vertical circulation ramps and luxury boxes increased the stadium footprint. Other improvements in seat, concession, and restroom size also added to the size of the stage seven professional sport facilities along with technological advancements in television, scoreboards, and advertising systems. All of these structures combined to totally enclose the building from the outside world because they sought to help extract more money from the spectator by giving them a better experience at the sporting structure. Unfortunately, Richmond (1993) and others acknowledge the multi-deck cantilever design desired by owners and architects to eliminate obstructed viewpoints prompted stadiums to not only

become larger but positioned the seats further away from the action to hurt the spectator experience (Bess, 1999; Rader, 2002; Ritter, 1992).

Roy Marshall, of Parkin Architects, Engineers, and Planners, claims the late modern facility's cantilever multi-deck design entirely encircles the competition area in order to provide something for each sporting activity (Progressive Architecture, 1971). However, this compromise provided more open space and placed spectators farther away from the playing action because it attempted to accommodate the demands of football and baseball action. The playing field required for baseball action seems unusual compared to other American sports because a 90-degree arch between the first and third base lines contains both a strictly regulated infield and a loosely defined outfield (Bess, 1999). Therefore, the outfield is really only limited by one's imagination or other physical constraints. Oriard (1976) also explains rule limitations define the size of the football field. Thus, the compromise between the two sports prompts baseball and football spectators to feel removed from the action because the number of quality seats closest to the action is reduced (Bess, 1999; Golenbock, 2000; Kadohata, 1989; Progressive Architecture, 1971; Ritzer & Stillman, 2001; Weiner, 2000). Overall, Sherman (1998) and others suggest these physical requirements demanded by baseball and football prevent an ideal stadium from surfacing because the high numbers required for adequate football seating create too many seats for spectators which require them to turn oddly during any sporting action (Noll & Zimbalist, 1997; Smith, 2000).

Much of the literature examined during this study points out baseball suffered more than football (Leventhal, 2000; Ritter, 1992; Smith, 2003; Weiner, 2000). For example, Weiner's (2000) piece on the professional sport franchises in Minnesota describes the changes the Vikings imposed upon the building of the H.H.H. Metrodome and renovations to Metropolitan Stadium in order to accommodate the NFL and their fan base made the facility worse for baseball. Again, the odd position of the new seating in each facility caused many to complain about the compromise between the Twins and Vikings. Distinctively, Weiner (2000, p.95) comments the baseball sightlines were "horrendous" at the Metrodome as many fans along the third base line can attest because of their awkward placement permanently faces left field. Interestingly, the NFL likely pushed the Metropolitan Stadium and other stage seven sport facilities into these changes because it promoted itself as maturing league needing mature facilities. Ultimately, NFL rules on minimum stadium capacity and revenue sharing express the increasing maturity of the league.

For example, on May 15, 1968, AFL and NFL owners unanimously approved a measure that required stadium seating capacity "in the vicinity of 50,000 by 1970," although the leagues unofficially promoted this standard before 1968. Additionally, the NFL also mandated road teams receive forty percent of gate receipts (Weiner, 2000). Thus, Metropolitan Stadium suffered massive renovations costing roughly \$600,000 in 1964 so the Vikings, their NFL opponents, and the Twins could capitalize from the increased capacity (Weiner, 2000). Following these changes,

Weiner (2000) claims the Vikings cleared at least a \$500,000 most years despite Metropolitan Stadium's 48,000 existing as the smallest capacity in the NFL.

Trumpbour (2001, p. 202) also points out Three Rivers Stadium's "circular design...limited the number of top-quality baseball seats to less than 15,000." Other stage seven professional sport "cookie cutter" facilities exhibit similar numbers. Smith (2000) proposes the stage seven facility's increased size also hurt baseball because baseball organizations found it difficult to sellout a facility nearly double its predecessor's size. This inquiry found Smith's (2000) claim about the stage seven facility's size in relation to the early modern facility to be somewhat accurate as the early modern facilities averaged 24,249 for new construction and 39,141 following renovations. Late modern facilities for football averaged 51,929 during new construction and 60,293 following renovations while baseball averaged 44,859 with new construction and 48,024 after renovations (See Appendix C Table 9). In essence, the multi-purpose facility grew to accommodate football's eight to ten games a year but hurt baseball's near eighty.

Conflicting opinions exist that football actually suffered more than baseball in the stage seven facilities. For instance, Progressive Architecture (1971) and Trumpbour (2001) argue football spectators normally felt most penalized by multi-purpose structures because seats generally accepted as ideal (e.g. fifty yard line) sat significantly further from the action than a traditional football-only facility would have offered. Progressive Architecture (1971) suggests these feelings appear because football only requires 90,000 square feet of space while baseball needs 150,000 square

feet. Thus, even with retractable seats, football suffers because the extra 60,000 square feet prohibits many from sitting closer to the action. Amusingly, Quirk (1997) suggests Metropolitan Stadium was great for baseball but poorly situated for football even after the renovations were complete. Quirk (1997) supports this position by stating the facilities football seats sat too far from the field of play and despite the regular sell outs the Vikings still found themselves under the average league attendance from 1961 to 1981. Observably, the dimensions or layouts of baseball and football fields do not find themselves to be compatible partners but the action or nature of each game also poses a problem for hosting both in the same facility.

Progressive Architecture (1971) argues the pace of football action differs considerably from that offered in a baseball game. Football events seem more concentrated while the leisurely-paced baseball contest provides more opportunities to engage in other activities. For instance, baseball supplies at least eighteen more opportunities to get up and walk around each game (Progressive Architecture, 1971). Interestingly, this prompts baseball facilities to need more expansive concession, restroom, and entertainment opportunities to accommodate their spectators differing tastes. Football facilities, in contrast, just need a high volume of concession areas to provide their fans faster and more efficient service so they can return to the action quicker. Unfortunately, the compromise between football and baseball did not offer enough concession or restroom areas to help the increased number of football fans who crammed into the stage seven facilities.

Washburn (1932) also claims the pace of baseball and football action also imparts different seating accommodations. Baseball games develop slowly under fairly similar summer weather patterns (e.g. sun and no rain) while football contests include violent starts and stops under a variety of weather conditions offered by late summer, fall, and early winter. Therefore, baseball facilities should encourage the installation of chair back seats to enjoy action because they likely will produce the most desirable comfort level for the relaxing baseball spectator (Washburn, 1932). Football action, on the other hand, requires little more than a bench seat because the sudden bursts in action leave the average spectator constantly on alert to respond to the field of play. The body language tells the story of a football spectator as they typically lean forward, stand, and react emotionally to the sudden action offered on the field.

Obviously, the spectators of stage seven professional sport facilities were highly dissatisfied whether they were watching a football or baseball contest in the late modern era facility (Ritzer & Stillman, 2001). Yet, the multi-purpose facility also created many problems between its two houseguests as each fought against the other in ridiculous battles. Brown (1979) and Oriard (1976) acknowledge football and baseball participants require different conditions for the competition of their respective activities. Specifically, football and baseball players utilized totally different kinds of equipment to participate in their home facility. This imposes different locker room requirements upon the sport facility because roughly fifty professional football players are highly accessorized and need an adequate amount of space to store their equipment

and feel comfortable. Still, nearly thirty baseball players compete in the professional sport facility and do it approximately eighty-one times a year so their locker room should feel more like home. The Cincinnati Bengals (NFL) and Reds (MLB) bickered for years on many structural changes regarding locker rooms, concession areas, parking, and the addition of stadium club seating to Riverfront Stadium to illustrate one example of football and baseball teams sharing the same facility (Cincinnati Enquirer, 1974; Trumpbour, 2001). Ultimately, the consequences of these confrontations produced little if any advantages for each and likely left both further from their desired financial position.

The stage seven professional sport facilities (See Figure 5.1) ultimately desired to provide more comfort and entertainment to those live and remote spectators and to produce more revenue for sport organizations and municipalities, hoping to recover some of their donations to the structure's construction. This investigation found municipal investments were likely heavy because the cost of the massive stage seven professional sport facilities with all the trimmings averaged \$43,502,750 for new construction or \$172,412,929 in the 2005 dollar (See Appendix C Table 10). To put this number in perspective, the previous era's simple professional sport facilities only averaged \$938,899 or \$10,716,802 in the 2005 dollar. Renovations were also significant during the late modern era as the typical renovation averaged \$9,857,588 or \$31,502,623 for 2005. Again, the early modern era's significant renovations paled in comparison as they consumed only \$1,257,263 (\$12,839,427 in 2005) on average.

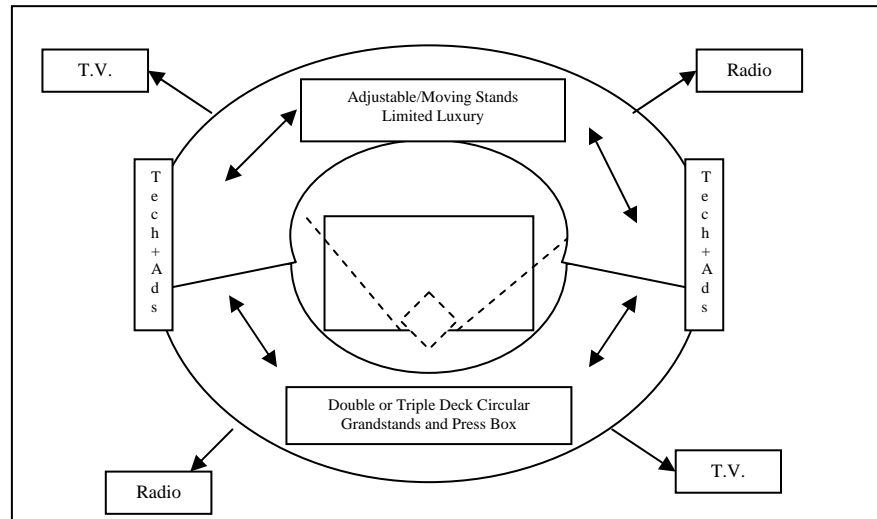


Figure 5.1: Stage 7 of professional baseball and football sport facility development. (Arrows reveal spectator movement)

For the most part, the stage seven professional sport facilities met these objectives but failed to maximize comfort and profits for those the structure was intended to host. For instance, Smith (2000, p.64) describes the concourses of Milwaukee County Stadium and other stage seven facilities as “dingy and cramped” when compared to today’s facilities. Additionally, patrons desired more concession and restrooms areas than the stage seven facilities offered. Richmond (1993) further characterized Memorial Stadium and other stage seven sport facilities as inadequate for the broadcasting of professional sporting events. Richmond (1993) particularly singles out Memorial Stadium because television crews of the opposing teams often blocked other broadcasters attempting to comment on the games. Clearly, stage seven professional sport facilities were not the television studios they needed to be (Barnett, 1990). Adler (1989) also points out the multi-purpose facility was inadequate as a

huge revenue producer for sport entrepreneurs because many did not anticipate local or national organizations would find thousands of dollars to spend every year on luxury accommodations. Additionally, sport entrepreneurs did not foresee the popularity the club seat would realize with individual spectators at sporting events. As a special section, these seats provided individuals close access to luxury accommodations like bars, restaurants, and lounges. Finally, the post modern ballpark would address all the problems baseball and football organizations encountered to change the professional sport facility again during the 1990s and beyond.

CHAPTER 6

THE POST MODERN BALLPARKS: 1992 to PRESENT

Introduction

This chapter will reflect changes sport organizations made to professional sport facilities to move them into another stage of develop. Specifically, the chapter will discuss how certain latent (restrooms, concession stands, disabled seating, and security structures) and overt constructions (luxury seating, advertising and sponsorship signage, press boxes/areas, and entertainment zones) altered the shape of the professional sport facility. Smith's (2000) work suggests the multiplication or incorporation of these structures typically emerge as some of the most noticeable stage eight facility characteristics because they focus on generating revenues. However, this work also found numerous technological innovations also dictate the shape of the post modern sport facility. Distinctively, this effort acknowledges television, retractable roofs, new artificial turfs, electronic display boards, sound systems, and individual seat technology imposed their will upon shaping stage eight sport facilities. Finally, this chapter concludes with a short discussion on how these structures and innovations affected the size and total cost of the post modern professional sport facility to make it distinctive from previous eras.

Trends provided by the previous era of professional sport facility construction show the United States experienced a significant population increase with remarkable municipal growth in the Southern Atlantic, Mountain, and Pacific regions of the country. The post modern era would exhibit a similar development. For example, the population grew roughly to 292,801,000 by 2004 (U.S. Census Bureau, 2004). This exists as an increase of nearly forty million compared to the start of 1990 (U.S. Census Bureau, 2004). Pacific, Mountain, and Southern region states again primarily incurred most of the country's growth. Most notably California (six million), Texas (five million), Florida (4.1 million), Georgia (2.2 million), Arizona (two million), North Carolina (1.8 million), Colorado (1.3 million), Washington (1.3 million), Nevada (one million) and Tennessee (one million) occupied roughly 26.9 million of the increase between 1990 and 2004 (U.S. Census Bureau, 2004). Appropriately, this development pushed the mean center of the U.S. population even further south and west to Phelps County, Missouri by 2000 (U.S. Census Bureau, 2004).

The NFL and MLB responded to the population growth in these locations, yet again, by relocating existing clubs or expanding their leagues into new or old markets capable of supporting major league professional sport. Resultantly, the NFL opened up new stadiums and teams in Charlotte, Jacksonville, Houston, and Baltimore. Major League Baseball similarly established new franchises in Miami, Tampa Bay, Washington, D.C. (2005), Phoenix, and Denver. The new markets rewarded each league with helping to increase annual total and average game attendance figures. For example, MLB produced an average total annual attendance of 32,405,533 between

1992 and 2004 while the previous thirteen year time span (1979 to 1991) generated only 23,620,446 annually. The average game attendance for these separate time periods also demonstrates growth from the end of the late modern era to the post modern age. Specifically, the 1979 to 1991 years created an average annual attendance of 22,965 per game which grew to 28,570 for the 1992 to 2004 time period. The NFL saw its average total annual attendance increase from the 1979 to 1991 period of 12,886,974 to 15,520,014 for the 1992 to 2004 seasons. Furthermore, the average game attendance also improved annually for the NFL from 59,760 (1979 to 1991) up to 64, 095 during the 1992 to 2004 campaigns.

Clearly, a large discrepancy exists between professional baseball and football on total and average game annual attendance figures. Thus, problems obviously existed with stage seven professional sport facilities of the late modern era. For instance, professional baseball and football demonstrated they required very different layouts and amenities. Therefore, each sport sought a split because football needed to support its growth and baseball desired to reestablish the spectator intimacy it lost with the stage seven structures (Ritzer & Stillman, 2001). Noll and Zimbalist (1997) argue the NFL especially continued to seek stadium renovations or new construction because the bulk of their revenue comes from television and regular season ticket sales hence, the NFL sought out stadium designs which could better attract the most fans in live and remote/virtual attendance. Distinctively, Smith (2000, p.91) also supports baseball desired new facilities as he describes the late modern structures as being “devoid of the quirky physical characteristics baseball fans now [post modern era] demand from

their ballparks.” Ultimately, the NFL and MLB relocated or introduced their teams to a new type of facility for these reasons and others.

A new type of corporate ownership also gradually replaced private individuals as the directors of professional sport franchises (Sherman, 1998). Focused on the bottom line, the new corporate owners pushed for fresh facilities because the late modern sporting venue generated an inadequate amount of revenue to meet expenses and maximize profit expectations or investment returns. Blair and Swindell, (1997) and Howard and Crompton (1995) distinctively express, sport organizations failed to maximize revenue from a variety of sources like gate receipts, media broadcasting rights, and in-stadium opportunities (advertising, parking, concession, luxury seating, and merchandise sales). Therefore, the search to maximize revenues acts as another main source for the introduction of the stage eight facilities.

The literature demonstrates little evidence persists anything was physically wrong with late modern era sport facilities to prompt new construction. However, Euchner (1994) and Ritzer and Stillman (2001) suggest the stage seven structures ultimately became failures because their existing shapes and forms prevented proper or inexpensive renovation efforts from completing the necessary luxury accommodations and entertainment options demanded by fans, participants, and business partners of the NFL and MLB. Interestingly, luxury accommodations appeared more important to post modern era sport owners because they recognized profits from these areas did not have to be shared with others in the league like their gate receipts regularly were (Fort, 1997; Hamilton & Kahn, 1997; Zimmerman, 1997).

Ultimately, the search for profit maximization helped the stage seven professional sport facilities evolve from a multi-purpose structure to a single-purpose or sport specific building because the entertainment and luxury accommodations for customers or partners of baseball and football required different needs. The change from Memorial Stadium to the creation of Oriole Park at Camden Yards (Baltimore), the recognized first post modern ballpark, illustrates this point wonderfully.

Originally, Memorial Stadium appeared as a horseshoe 31,000-seat facility for football and baseball in 1950 (Richmond, 1993; Ritter, 1992). However, the facility suffered a major \$7,500,000 (\$55,350,000 for 2005) renovation in 1954 to welcome the new Orioles (MLB) franchise (via St. Louis) to the Baltimore area. The expansion and renovation project positioned a second deck along with mezzanine seating practically from foul pole to foul pole. Uncovered bleacher seating extended into the right and left centerfield from each foul pole leaving the centerfield open for the massive scoreboard which would occupy it for most of the stadium's life (Ritter, 1992). By in large, the stadium seated nearly 50,000 following these changes for the Orioles and Colts (NFL).

Eventually, by the end of the 1980s, the Orioles began to beg the City of Baltimore to help them build a new ballpark. Specifically, Richmond (1993) and others report the Orioles believed they could not field a competitive team without the additional revenue a stadium's new resources would provide them (Hamilton & Kuhn, 1997). Hamilton and Kahn (1997) acknowledge the Baltimore Orioles sought to incorporate large premium and luxury seating arrangements within their new sport

facility to help them earn more money. Richmond (1993) discovered the first plans formed for Baltimore's new baseball facility threw a massive symmetrical stadium with gigantic pedestrian ramps in the middle of a grotesquely large parking landscape much like Chicago's U.S. Cellular Field. However, the Orioles pushed and prodded the state and local governments into providing them with a unique yet still large building within the urban complex of the Camden Yards area because the City of Baltimore was fearful the Orioles would leave them like the Colts did in the early 1980s (Richmond, 1993).

Civic elites in the City of Indianapolis did a tremendous job in soliciting the Colts to move from Baltimore. Euchner (1994, p.105) mentions "several business and philanthropic leaders there [Indianapolis] met with Robert Irsay [owner of the Baltimore Colts]" in 1977 to inform him about their city's intentions to build a domed stadium. This obviously attracted Irsay because the facility was not shared with another professional team and therefore, the Colts could collect more revenues in the new building than they could from the outdated multi-purpose Memorial Stadium, which offered little or no luxury accommodations and few extravagant concession opportunities. The only real dependable source of revenue the Colts obtained from Memorial Stadium appears from the stadium's 65,000 capacity owned at the time of their move. The Hoosier Dome (Indianapolis), in contrast, offered the Colts over 60,000 well positioned for football, 104 luxury suites, 5,000 club seats, 4,000 more parking spots, and numerous concession areas.

Following the loss of the Colts franchise, the City of Baltimore and the State of Maryland's governor, William Schaefer, agreed to provide the assistance necessary for the Orioles to create the home they desired in Baltimore (Euchner, 1994; Richmond, 1993). Obviously, the Orioles created Oriole Park as the first post modern ballpark because the City of Baltimore, along with the State of Maryland, wanted to avoid losing its major league status (Euchner, 1994; Richmond, 1993). Appropriately, Richmond (1993, p.91) found Maryland Senator Thomas Bromwell supporting this conclusion by saying, "Without a stadium, with no baseball or football, we'll be on a line with cities like Roanoke and Butte. Mayberry is what we'll be." Evidently, the fear of losing major league status also influenced the creation of the post modern generation of professional sport facilities.

Howard and Crompton (1995) mention communities receive a tremendous amount of media coverage and enhance their community image as a "major league" town because local politicians and businessmen show they are competent enough to build a facility and control a professional sport organization or two. Euchner (1994) supports the post modern facility wave appeared because American cities were fighting to demonstrate they were a viable economic and social market. Many massive renovation and new construction efforts of the post modern era reflect this statement. For example, Cameron (2000b) shows Pittsburgh wanted new facilities for the MLB Pirates (PNC Park) and NFL Steelers (Heinz Field) because they felt people viewed them nationally as a second-tier city quickly losing its major league reputation. Oakland, also looking to gain back respect as a community stripped of its image,

induced the Raiders (NFL) to comeback to the city when it completed an extensive renovation effort of the Oakland Alameda County Coliseum in 1995 (Smith, 2000). The construction basically created a new luxury suite (143 boxes), club seat (9,000 seats), and general admission section in center field better known as “Mount Davis,” in honor of the Oakland Raiders and their desire to secure more revenue from their sport facility (Smith, 2000).

The new additions also added much needed revenue to their new hosts and directly improved the worth of professional sport franchises so corporate organizations could experience a higher return on their investment (Ernst, 1999). For instance, Baltimore immediately became one of the most lucrative teams by 1994 because Oriole Park provided them with an additional \$19.7 million in revenue (Ozanian, 1995). Renovation efforts to Texas Stadium (Dallas) in 1994 also provided the Dallas Cowboys (NFL) with nearly \$37 million in additional stadium revenue (Ozanian, 1995). Resultantly, these figures triggered a significant increase in the value of the sport organization. For the Dallas Cowboys, the improved stadium revenues increased the value of their franchise nearly twenty-five percent (Ozanian, 1995).

Fittingly, other sport organizations were inspired to replace their old accommodations for new ones because they too searched for increased revenues and a return on their investment. For example, Anderson (2000) suggests the St. Louis Cardinals (MLB) currently desire a new sport facility because Busch Stadium cannot maximize the revenue available to the club. Rosentraub (1999) reported new private facilities for the Philadelphia Eagles (NFL) and Phillies (MLB) were predicted to

produce significant revenues for each organization. Overall, the Eagles were projected to earn approximately a twenty percent return on their investment while a Phillies team, attracting three million, could still make a \$20 million profit while still operating an active roster worth over \$72 million (Rosentraub, 1999).

The value of the Cincinnati Reds and Bengals franchises also unexpectedly increased nearly thirteen and thirty-six percent respectively when discussions of a possible new sport facility for each persisted from 1995 to 1997 (Swindell, 1997). Appropriately, the completion of Jack Kent Cooke Stadium also increased the value of the Washington Redskins to \$800 million with its sale in 1999 (Washington Post, 2004). This represents an astonishing increase from Jack Kent Cooke's initial \$15 million dollar investment in 1960 (Trumpbour, 2001). Further renovations completed to Jack Kent Cooke Stadium in 2004 ultimately pushed the value of the franchise to over \$1 billion dollars because stadium revenue helped the Redskins achieve an operating income of \$69.6 million as recently as 2003 (Washington Post, 2004).

Rockerbie (2004) and others argue professional sport organizations sought strategies to maximize revenues and a return on their investments, in general, to pay off the skyrocketing salaries players increasingly demanded following the establishment of free agency (Euchner, 1994; Gunts, 1992b; Howard & Crompton, 1995; Ritzer & Stillman, 2001; Smith, 2000; Sullivan, 2001). Initially, average player salaries were not high for either the NFL or MLB participant. For instance, Rockerbie (2004) reports the average professional athlete of the 1960s earned little more than other skilled positions in the white collar world. Specifically, Rockerbie (2004) found

MLB players earned on average \$14,800 in 1964 and furthermore, only four players achieved salaries of \$100,000 or more by 1966. Eventually, the average baseball salary grew to \$29,303 by 1970, shot to 145,128 by 1980, and continued to soar to \$593,510 for 1990 (Fort, 2005). As 2000 approached, this trend sustained momentum and achieved a new average high of \$1,941,832. This mark was successively broken each year until a 2.7 percent decrease occurred between 2003 and 2004 which situated the average MLB salary at \$2,486,609. Professional football likewise demonstrated similar growth in average player salaries. Specifically, NFL teams provided its competitors on average \$41,000 for 1970, \$117,000 in 1980, \$518,804 by 1990, and \$1,256,262 during the 2003 season (Fort, 2005).

Professional sport organizations clearly felt they could induce more people to come to new facilities to help pay off player salaries and other large expenses such as facility costs and expansion fees. This primarily occurs because a large percentage of NFL and MLB customers possess a fairly high household income and many corporate organizations hold a high level of interest in being associated with sporting events and their organizations. Distinctively, 74.2 percent of NFL fans in 2004 possess a household income of \$35,000 or greater (Sports Business Journal, 2004) while 67.1 percent of MLB fans owned a household income greater than \$30,000 for 2003 (Sports Business Journal, 2003). However, the stage eight professional sport facilities demonstrate sport spectators would not willingly come or watch from home unless sport entrepreneurs provided them with expanded comfort and entertainment options to enhance their experience with the event.

Latent Structures of Stage Eight Facilities

Cameron (2001) writes spectators today expect the newest professional sport facilities to provide ample room for them to move throughout the facility. Thus, as Richmond (1993) describes, the designers of Oriole Park at Camden Yards purposely built their concourses larger and more spacious than those offered at Memorial Stadium. Suitably, Cameron's (2000a, 2001) pieces suggest the increased number of restrooms and concessions offered in the post modern era is a direct result of patrons expecting and demanding more comfort from their ballpark. Howard and Crompton (1995) and Cameron (2001) claim stage eight facilities require more concession and restroom spaces because the costs of time suggest every minute spent standing in line at the restroom or concession stand holds the potential to deter customer spending at the facility. Stage seven sport facilities held concourses which averaged roughly thirty-two feet in width (mlb.com, 2005). Appropriately, this limited the number of concession stands and restrooms each could hold and created more time waiting and standing for individual spectators (Blickstein, 1995; Cameron, 2001). Overall, this investigation estimates stage seven facilities possessed on average 35.38 restrooms and 44.6 concession stands (See Appendix C Table 3 and 4). In contrast, the post modern professional sport facility held an estimated average of 61.44 restrooms and 52.03 concession stands (See Appendix D Table 1).

Cameron (2001) and Blickstein (1995) offer there should be at least one restroom for every one-hundred gentlemen and one for every fifty ladies who enter a professional sport facility. Smith (2003) posits these figures require each stage eight

facility to incorporate at least fifty total restrooms. Cameron (2001) and Blickstein (1995) also suggest each post modern facility offers a point of sale for every 150 to 200 people attending a game. Sherman (1998) demonstrates Bank One Ballpark (Phoenix) exhibits such qualities as it provides 212 concession points of sale and a massive amount of toilet fixtures (340 toilets for women and 55 toilets with 218 urinals for men) inside the facility. Therefore, concourses should evolve large enough (i.e. forty feet or one row for every row of spectators) to hold all these structures (Cameron, 2001). Stage eight examples like Philadelphia's Franklin Financial Field (sixty to ninety feet) and Detroit's Comerica Park (forty feet) appropriately demonstrate concourses did grow to be larger than their predecessors (mlb.com, 2005; nfl.com, 2005) and as Williams (2001) suggests became a large part of the construction budget.

Concessions, amusingly, provide generous benefits to sport franchises because they often greatly exceed those prices retail establishments offer to the public (Noll & Zimbalist, 1997). Thus, concessions accounted for twenty-eight percent of sport organization revenues with beer sales fittingly contributing thirty-five to fifty-five percent of the concessions' total (Howard & Crompton, 1995). This figure has not changed much since the mid-1990s as Chris Bigelow, a consultant specializing in food service for sport facilities says, concessions make-up the fourth or fifth highest revenue source for NFL teams and likely exist in the top three for baseball (Cookson, 2001). To provide an illustration of how important concessions are to professional sport, Smith (2003, p.176) claims individuals consume nearly "26,000 hot dogs and

sausages, 38,000 cups of soda and beer, and two tons of pretzels, popcorn, and peanuts at an average big-league [baseball] game.”

Baltimore’s M & T Bank Stadium illustrates the importance of the concession business perfectly as its fans purchase regular stadium food and beverages like hot dogs, nachos, sodas, and beer but also specialty foods like Maryland’s famous crabs/crab cakes and beverages like wine or microbrews. Overall, M & T Bank Stadium hosts over 200 concession areas for its customers, which dominates any number offered by the stage seven facilities (Forgey, 1998). Other current generation sport facilities provide similar products and services (Austrian & Rosentraub, 1997). Obviously, spending more efforts to sell goods at the sport facilities requires more and fancier space. Thus, concession construction accounts for ten to fifteen percent of construction costs and ultimately reveals itself to be a distinctive feature of the stage eight professional sport facilities (Williams, 2001).

The Americans with Disabilities Act (ADA) of 1990 further impacts the layout and shape of the stage eight professional sport facilities as they seek to be safer and provide a better experience for those unable to utilize normal accommodations. The regulations established by the ADA specifically mandate one percent of a sport facility’s total seating to be wheelchair accessible and include companion seats (U.S. Department of Justice, 2004). Additionally, stadium planners must incorporate these seats into all areas of the stage eight facilities and should not seek to isolate those in wheelchairs and their companions from the rest of the crowd. Furthermore, a suitable line of sight must be provided by facility designers so disabled seating areas can

overlook the sporting grounds and not worry about standing spectators blocking their view. Finally, the ADA required disabled seating to appear in all areas of the sport facility such as general and specialty seating or in luxury suites (U.S. Department of Justice, 2004).

Overall, as Blickstein (1995) points out, ADA regulations added anywhere from a five to a ten percent increase in the professional sport facility's footprint size. Thus, not surprisingly, the post modern facility holds more wheelchair accessible and companion seats on average than the late modern facility and costs more. Specifically, this inspection estimates post modern structures possess nearly 1,000 wheelchair and companion seats (See Appendix D Table 2) while late modern structures possessed significantly less. Dickinson and Dickinson (1991) express this as they label many stage seven professional sport facilities generally identify disabled seating as difficult to reach, supported in limiting locations, far from the action, and not plentiful. Clearly, again, the post modern professional sport facilities appear different from its predecessors because it provides more access to a different skilled fan.

Finally, security needs evolved to produce other latent features of sport facility construction and many stage eight stadiums completed in Washington, D.C. (Jack Kent Cooke), Philadelphia (Lincoln Financial Field), and Baltimore (M & T Bank Stadium) addressed this issue by instituting detention cells within their facility. Stage eight professional football stadiums possess detention areas because as mentioned earlier, the action of football provokes emotional responses and when combined with alcohol it is foreseeable some illegal outbursts by its patrons will occur. Most other

major outdoor sport facilities include security cameras, computer/television security rooms, and a complex near possible high crime areas like concession stands, bank machines, and parking lots to help secure the facility and discourage such outbursts (Hermann, 1998; Washington Post, 1997).

Overt Structures of Stage Eight Facilities

Overt entertainment structures, oriented towards those who wish to engage in other more comfortable tasks, besides watching the event, regularly appear within the post modern professional sport facility to also create its' unique shape and size. For instance, with the tremendous costs current sport facilities inflict upon those paying for them, it is expected the sport facility will help pay for itself mainly through the selling of luxury boxes or club seats. The average luxury suite size ranges from 500 to 700 square feet with typical construction costs averaging approximately \$125 a square foot (Crawford, 2000). Owners of professional baseball and football franchises regularly host friends and family members in larger suites occupying anywhere from 1,300 to 1,500 square feet. These figures help bring some perspective to how big and costly the average luxury suite will run and support this argument that it exists as an overt feature of the post modern facility.

Again, a variety of scholars point out, professional baseball and football franchises each exclude their luxury seating revenues from league coffers (Fort, 1997; Hamilton & Kahn, 1997; Zimmerman, 1997). This obviously only encourages sport franchises to maximize this revenue strategy. Thus, we should expect a dramatic rise in the number of luxury suites and club seating opportunities in stage eight facilities.

This investigation found this true as newly constructed post modern professional sport facilities average 119.46 luxury suites and 6,994 club seats. Those facilities existing during the late modern sport facilities, in contrast, were found, based on the available data to host only 56.11 luxury suites and 1,185 club seats (See Appendix D Table 3).

Joe Robbie Stadium, a privately financed facility, offered the first significant number of luxury suites and club seats (215 luxury suites and 10,000 club seats) when completed in 1988 to appeal to owner interests to decrease the financial burden and improve their franchise's revenues. The expansion Carolina Panthers' (NFL) Bank of America Stadium generated nearly \$30 million dollars by selling luxury and club seating before its first game in 1996 to likewise pay off the debt of the stadium and league entry fee (Blickstein, 1995). Spanberg (2000) also found an additional 138-seat private club later added after the 2000 season to bring in another \$1.25 million annually to help towards this cause. Spanberg (2000) came to this conclusion as the Carolina Panthers reportedly charged a \$9,500 membership fee and \$4,250 per ticket. Rofe (1999) verified MLB teams like the Los Angeles Dodgers also invested heavily into luxury and club seating to raise more money. Specifically, the Dodgers invested \$50 million into building thirty-three new luxury suites and renovating premium seating locations throughout Dodger Stadium to raise stadium revenues \$18 million a year.

Crawford (2000) suggests the number of suites and club seats each sport facility entertains, like those mentioned above, depends upon a variety of regional factors like the size of the local population size and the number of business/corporate

organizations in the area. However, the type of sport also influences the number of luxury suites and club seats the post modern sport facility entertains. For example, this study discovered baseball parks incorporate on average 95.21 luxury boxes and 4,658 club seats into their structure while football stadiums embrace 147.76 luxury suites and 9,070 club seats. Interestingly, this contrast occurs because each sport entity requires different positions for its luxury suites. Baseball, remember, prefers seats which surround the infield while football desires seats along the sidelines. The cost of these accommodations to individuals and organizations implore luxury suites appear on these prime seating locations and because the size of the prime seating locations are smaller in baseball than in football, more luxury accommodations can appear in football stadiums than in baseball parks. Fittingly, this difference also prompted the reintroduction of the single-purpose facilities because football and baseball, again, could not accommodate each other's seating preferences.

Football spectators desire to sit close to the fifty-yard line while baseball patrons wish to sit in locations primarily surrounding the infield. The previous chapters demonstrate this phenomenon appears because these positions provide spectators with the best viewpoint of each sport's action. Clearly, the stage seven professional sport facilities failed to maximize these preferences for baseball and football fans (Ernst, 1999). Thus, stage eight facilities, as single-purpose structures, materialized to expand preferred seating locations for either baseball or football action. For example, Cameron (2000a) points out Paul Brown Stadium (Cincinnati) supports seventy percent of its seating between the goal posts to provide its fans better

sightlines for football contests versus Riverfront Stadium. Likewise, Lombardo (2000b) points out the New Soldier Field (Chicago) dramatically improved upon old Soldier Field's seating arrangement because sixty percent of the seats are no longer located in the end zones. Additionally, the planners of Bank One Ballpark also sought to give its patrons comfortable seating angled correctly within the playing action of the foul poles (Sherman, 1998). Jacobs Field (Cleveland) furthermore corrects some of the same inadequacies its predecessor Municipal Stadium offered baseball fans by angling seats towards home and installing a larger percentage of seats along the baselines and behind home (Leventhal, 2000). Clearly, the figures and this argument show as Zimmerman (1997) and Blair and Swindell (1997) also argue, the post modern era professional sport facility materialized with luxury seating in mind.

Advertising and sponsorship money also provides professional sport franchises with millions of dollars annually. Consequently, the sport facility adapted to showcase and accommodate sponsor requests for their brand (Heath, 1998). Most notably, post modern sport facilities overtly accept or incorporate the title of organizations onto the official name of their building. Currently, many post modern facilities like Heinz Field, SBC Park, and Gillette Stadium possess corporate sponsor names. Sport facilities adapt to produce large sign-age and supplementary in-house areas to help their title and event sponsors promote their products and services. The mammoth electronic video/score boards and administrative buildings provide sport facilities with numerous opportunities to gain additional revenue through broadcasting commercial advertisements or supporting large structures which permanently or rotationally

display advertisements to potential customers (Smith, 2000). Jacobs Field's large 220-foot scoreboard system sits 120 feet off the ground to accomplish this task (Smith, 2000). This structure obviously helps enclose Jacobs Field and other facilities and appropriately appears attractive because the auxiliary entertainment and luxury amenities added to the post modern facility (i.e. restaurants and play areas) mentioned below, remain open to the public year round.

Display advertisements such as these hold a unique place in the history of sport facilities (Leventhal, 2000; Richmond, 1993). For example, Leventhal (2000) demonstrates Bull Durham Tobacco ads existed in nearly all major ballparks in the beginning years of the 20th century. Ballantine Beer advertised heavily at Shibe Park and became one its' most noticeable partners (Kuklick, 1991; Leventhal, 2000). Other local businesses also provided earlier ballparks with character such as the Schaefer Beer and Abe Stark "Hit This Sign Win Free Suit" area at Ebbets Field or the Hudepohl Beer messages at Redland Field (Cincinnati).

These companies and those today primarily advertise to remote or live sport spectators to develop brand recognition or maintain brand status. For example, Ericsson owned little brand recognition in the Charlotte, NC area as of 1995 but with the introduction of Ericsson Stadium (now Bank of America Stadium), roughly fifty percent of Carolinians ages sixteen to sixty-five knew what Ericsson stood for and what kind of products it produced by 1998 (Zoghby, 1999). Nationally, Ericsson also saw a dramatic rise in brand recognition from thirty to forty percent and appropriately felt its advertising and sponsorship demands were met at its stadium (Zoghby, 1999).

Playgrounds or interactive video areas appear more and more frequently as a common entertainment feature of stage eight facilities to further help the professional sport facility pay owners and its own debt (Smith, 2000, 2003). For example, Pac Bell Park (San Francisco- MLB) incorporates a 17,000 square-foot Coke bottle shaped playground into its structure (Epstein, 1998a). Additionally, Atlanta's Turner Field (MLB) possesses an arcade area for its young and old attendees. Furthermore, Comerica Park (Detroit-MLB) embraces a Ferris wheel, carousel, and giant waterfall for similar audiences (Smith, 2000). Bank One Ballpark additionally supports a pool for its customers to enjoy at \$4,000 a game (Jenkins, 1998; Sherman, 1998). Clearly, these entertainment zones provide customers with unique experience at the professional sport facility but also provide the stage eight facilities with a revenue and a distinctively different shape and feel from the stage seven or late modern structure.

Numerous scholars also demonstrate the post modern professional sport facility separates itself from its predecessors by embracing other revenue structures such as administrative buildings, restaurants/picnic grounds, retail shops, and a Hall of Fame (Leventhal, 2001; Richmond, 1993; Sherman, 1998; Smith, 2000; Trumpbour, 2001). For instance, ballparks in Arlington, Atlanta, Phoenix, Denver, Detroit, and Baltimore all support upscale restaurants within their confines. Sport facilities in Green Bay, Arlington, Detroit, Phoenix, and Atlanta all embrace a Hall or Walk of Fame to display the histories of certain sports inside their community. Retail shops and administrative building/spaces appear in Arlington, Detroit, Denver, and other places to provide the stage eight professional sport facilities with supplementary

structures. Sheard (2001) argues post modern professional sport facilities uniquely provide these structures to keep people at the facility for longer periods of time during and between events so encourage the spending of money.

Technological Innovations Shaping Stage Eight Facilities

Weiner (2000) and others demonstrate local television rights increased significantly during the 1990s and into the current century (Howard & Crompton, 1995; Quirk & Fort, 1992). For instance, the New York Yankees and Mets television and radio deals show the Yankees started out the 1990s collecting \$40 million annually in cable and a total over a \$69 million from their various other broadcast deals while the Mets earned just over \$38 million from their radio and television deals (Baldo, 1991). Today, the New York Yankees collect nearly \$150 million a year from their deal with YES Network and its 8.5 million subscribers (Dickey, 2004). The Boston Red Sox likewise benefit greatly from their agreement with the New England Sports Network for \$90 million a year (Dickey, 2004). All other MLB teams possess their own multi-million dollar deals with local networks however; the New York and Boston deals represent two of the more outstanding agreements.

National television deals with CBS, ABC, Fox, ESPN, and Direct TV also prompted huge returns for NFL to share. Specifically, the current NFL television contracts show teams sharing \$8 billion from CBS and Fox until 2011, \$700 million a year until 2010 from Direct TV, and \$550 million from ABC sports (Shapiro, 2004). Obviously, the broadcasting of MLB and NFL contests holds tremendous influence on

sport franchises and the make-up of their facilities because of the million and billion dollar contracts each share and enjoys (Euchner, 1994).

Sullivan (2001) and others endorse figures like these prompted the post modern professional sport facility to alter its shape and act as a television studio more so than its forerunners (Blickstein, 1995; Penz, 1990). Specifically, Sheard (2001) contends the older facilities of the previous two waves of professional sport facility construction rarely accommodated more than four television cameras. Therefore, television failed to influence their structures as much as the stage eight facilities because the post modern buildings support adequate space for twenty or more television camera locations (Sheard, 2001).

Chandler (1988) mentions television broadcasters decide which portion of the game spectators see and hear and how close they will be to the action. Interestingly, Chandler acknowledges television producers find themselves limited by what actually happens on the field so they desire so many camera angles and shots to help them adapt their work to make the event more interesting to both live and remote spectators. Chandler argues the public pressures television broadcasters to show them more of the contest so they feel closer to being at the event.

The interest sport facilities possess in providing such high quality television broadcasts stems from sport associations attempting to make their sporting events more of a spectacle for those at the stadium and in their homes. By providing camera locations, television production rooms, and lighting conditions sufficient for close-ups, long shots, and over the field views, sport facilities elevate their sporting events into

dramatic affairs capable of captivating audiences for themselves and their sponsors. The newest interactive television technologies support this statement.

Sweet (2001) and Williams (2001, p.28) describes the yellow first down line initially broadcast during an ESPN game in the fall of 1998, as “one of the most viewer-friendly inventions in recent years.” Other spectator interaction inventions produced by the television production rooms are also predicted to impact the event at home. For example, Raider (2001b) reported Trakus, a Digital Sport Information provider, developed a new technology to track the movement of players using tiny transceivers located in a player’s helmet. Combined with small antennas installed around the surface of the competition area, technicians identify the position of each player and relay that information in real time back to production trucks. The information provides individuals with the ability to digitally recreate action occurring during the game. Clearly, sport facilities could evolve to accommodate this type of technology through a variety of structure inside the building or on the playing field.

The Trakus technology essentially allows individuals to understand the speed of movements of each game. For instance, how fast does Michael Vick throw a football or run in the open field. How fast does a ball reach the outfield bleachers? What is its trajectory? Sweet (2001) predicts this interactivity will increase in the coming years between people and sporting events because sport organization will provide fans more options in selecting camera angles and statistical information during broadcasts like that offered by the Choice Seats. Sweet (2001) reported Sportvision, a sport technology provider, also seeking to recreate sporting events through tracking

technology utilizes its system to make video games where individuals can race their favorite NASCAR stars in the actual previous year's Daytona 500 (Sweet, 2001).

Penz (1990) and Blickstein (1995) posit television also prompted the maximization of people in certain locations because the people attending sport events act as scenery for the television broadcast. Blickstein (1995) suggests television sport producers and advertisers assured this because they wanted to generate the most interesting or captivating television and seating angles for the broadcasting of the event and sponsorship displays. Obviously, within the stage eight facilities, the backdrop for the television evolved to be just as important as the introduction of the hitter's backdrop in baseball.

The new technology invested into audio/visual components of sport facilities truly changed them from ordinary places into highly complex technological structures, which Blickstein (1995) and others described was necessary for the entertainment and broadcast demands placed upon the large professional sport facility (Bess, 1999; Smith, 2003). For example, three different electronic display systems such as video displays, matrix boards, and fixed-format scoreboards specifically materialized to change the professional sport facility (Blickstein, 1995). Fixed-format boards provide spectators with in-game information like score, time, and other sport specific information (e.g. down and yards or balls and strikes). They are smaller simple structures essentially identical to the original electronic scoreboards offered by the previous generations of sporting venues. Matrix boards surfaced as larger more complex apparatuses which not only allow the sport facility to exhibit computerized

information on the event but also broadcast messages, animations, and advertisements (Blickstein, 1995). Video display boards represent the highest and largest accomplishments of visual technology offered by the post modern era professional sport facility.

Safeco Field (Seattle, WA) displays such features as its 26' by 46' \$7.7 million video scoreboard provides fans with "homelike" high definition television viewing that will not even fade under certain sunny conditions (Sherwin, 1998). Additionally, a bigger main scoreboard and ten supplementary electronic boards surround the facility (Sherwin, 1998). Raider (2001a, p.26) characterizes high-definition television as "the highest quality of digital picture and sound." HDTV, besides producing sharper images, also supports a wider screen so more of the playing field can be shown. M & T Bank Stadium provides similar technology in its stadium with its two 24' by 96' video scoreboards. These video boards cost an estimated \$12.5 million dollars and generate images comparable to those a movie theatre would produce (Morgan, 1998). Overall, the video boards in M & T Bank Stadium provide Baltimore fans with roughly three times more video display area than the previous generation of video boards (Morgan, 1998).

The high definition technology utilized by sport facilities developed only recently as the Light Emitting Diode (LED) surpassed the traditional Cathode Ray Tube (CRT) in visual clarity and adaptability. In order to understand this point more clearly, take a look at an old television and new computer monitor. The CRT likely exists in the old television while the LED is commonly found with new computer

monitors. Overall, people prefer the LED screen because it produces a higher resolution picture with the ability to showcase at least sixteen million shades of color (Heath, 1998). Many of the newest stage eight facilities like Franklin Financial Field (Philadelphia), Qwest Field (Seattle), and Petco Park (San Diego) obviously concur because they recently installed similar high-definition systems (mlb.com, 2004; nfl.com, 2004).

Ritzer and Stillman (2001) acknowledge the post modern ballpark pumps in music or sound effects to provoke crowd noise from the youth culture. M & T Bank Stadium employs a highly technical and advanced surround-sound system throughout its facility to accompany and enhance its high definition technology in order to evoke feelings within spectators they are closer and more important to the action occurring on the field. The surround-sound system at M & T Bank Stadium includes 1,894 speakers within a 300,000 watt arrangement at specific locations to perform this action (Morgan, 1998). As expressed earlier, prior professional sport facility eras provided few auditory opportunities to fans to help them feel closer to the action. Typically, early and late modern era sport facilities housed only a large central speaker system to broadcast information or music. Clearly, these highly technical video and audio systems changed sport facilities because they also require additional space in the form of production rooms. For instance, M & T Bank Stadium's production room surfaced large enough to employ fifteen individuals who work with nearly forty-two video monitors and fifteen personal computers (Morgan, 1998).

Stage eight professional sport facilities also separate themselves from those of the late modern era because they increasingly attempt to attract fans with more interactive or comfort oriented technology located no further than their own seat. For example, Blickstein (1995) and John and Sheard (2000) show us post modern sport facilities possess the ability to warm seats for customers on cold days and cool-off spectators during hot weather. This technology obviously impresses one when comparing the old wooden or metal seats provided in the previous eras of sport facility development.

Tropicana Field (Tampa, FL) and San Diego Stadium installed “Choice Seats” to promote interaction between their fans and the sport facility to produce a better spectator experience (King, 2001). Developed by Vyvx, Inc., these Choice Seats cost roughly \$250 to \$500 to install because they incorporate a touch screen computer monitor linked to an in-house television network so spectators can view immediate replays of game action, read game information or statistics, and order food or beverage service. Choice Seats also provide other entertainment opportunities like watching other television programs or playing video games to bring fans a spectacularly interesting experience (Alm, 1998; Bernstein, 1999; Blickstein, 1995; Davis, 1998; John & Sheard, 2000). Overall, King (2001) suggests the NFL wishes teams to incorporate this seating technology because of all the options it provides their patrons.

ADA regulations also required professional sport facilities to install new seating options for the hearing impaired spectators (Blickstein, 1995). Camden Yards, again, exists as one of the first structures to help serve the needs of these individuals

with assistive devices attached to specific seats throughout the structure (Smith, 2003). This system amplifies the sound of and delivers it to a special receiver the spectator wears or to the spectators' hearing aid, depending on the type of system being used. Overall, the number of available receivers in stage eight facilities must equal four percent of the total number of seats. Furthermore, signs must be provided to notify spectators of the availability of receivers for the assistive listening system. Again, this system is in place to help provide more access to opportunities at the sport facility however, the listening system also acts to protect individuals from harm like the retractable roof does them from the weather.

The retractable roof adds another significant structure that stage eight professional sport facilities may incorporate. Again, the retractable roof is not a new concept as the previous chapter shows the Brooklyn Dodgers considered one in the 1950s. Richmond (1993) also recounts a story of Orioles (MLB) owner Jerold Hoffberger commissioning architect Bo MacEwen to develop drawings for a new Baltimore stadium in 1967. The result of MacEwen's efforts produced a retractable roof and incorporated a massive replay scoreboard.

The retractable roof clearly evolved as a product to protect spectators against harsh weather conditions in certain climates. Thus, we find successfully completed retractable roof efforts in Houston (Minute Maid Park and Reliant Stadium), Seattle (Safeco Field), Milwaukee (Miller Park), and Phoenix (Bank One Ballpark) with another to be completed in Scottsdale, Arizona for the Cardinals in 2006 (ballparks.com, 2005; mlb.com, 2005; nfl.com, 2005). Other proposed retractable roof

projects also are being considered in New York (Yankees, Mets, and Jets), Minneapolis (Twins and Vikings), Miami (Marlins), and Dallas (Cowboys) for professional baseball and football franchises (ballparks.com, 2005; mlb.com, 2005; nfl.com, 2005). Overall, we see most of these communities suffer from excessive rain, seasonal cold, or heat and thus, desire the retractable roof to protect spectators against these elements of nature.

Fascinatingly, the retractable roof exists as a massive structure to those stage eight facilities incorporating it and moves quickly to cover the playing field anywhere from five to twenty minutes (Leventhal, 2000; mlb.com, 2005). For example, Miller Park's pivoting roof panel structure occupies approximately 10.5 acres and weighs roughly twenty-four million pounds (mlb.com, 2005). Safeco Field possesses a sliding roof roughly nine acres in size and weighs twenty-two million pounds to help protect it against six to seven feet of snow and winds approaching 70 miles per hour (mlb.com, 2005). Minute Maid Park owns a telescoping roof barely over six acres in size but still weighs a considerable 12.8 million pounds (mlb.com, 2005). Finally, Sherman's (1998) efforts express Bank One Ballpark materialized large enough to hold eight America West Arenas (19,023 seats) inside. Appropriately, Sherman (1998, p. 218) points out Bank One Ballpark surfaced this large to include its, "six massive chillers which would cool the stadium on those 110-degree days."

Obviously, artificial turf emerged as a profound invention which changed outdoor facility construction for nearly three decades. However, many sport participants (e.g. players) promote the synthetic turf forgives less during falls or slides

and increases injury rates to bodies who get “caught” in its grasp (Smith, 1995). Not surprisingly, artificial turf forgives less because concrete settles closely underneath the material’s surface. Additionally, the increased friction between the harsh synthetic material and the human flesh, during falls, promotes more scrapes and burns to appendages. Interestingly, injuries do occur on natural grass surfaces but most sport participants prefer this surface because it cushions blows better and rubs less harshly (Smith, 1995).

Ultimately, these conditions, along with television’s request for continued action and manicured fields, provoked the development of new technologies to bring together the two types of surfaces. Specifically, athletes wanted fields to feel softer and more natural while television desired fields to remain durable to assure contests but also appear more natural for the viewer at home. Eventually, companies succeeded in combining the look, feel, and results of the two surfaces. First, Sportgrass appeared at the University of Utah’s Rice-Eccles Stadium (Salt Lake City, UT) as an artificial turf but mesh field with surface holes available for real grass to grow. In order to keep the grass alive during the coldest and hottest months, Sportgrass fields support a warm/cold air-system which pumps air unto the field for maximum growth conditions (Smith, 1995). Typically, this type of field wears quickly in the middle so sport organizations grow replacement trays outside the stadium and move or incorporate them into the field of play to replace worn or dead areas of grass. Obviously, television preferred this to the first generation artificial turf because it did not fade in the sun and provided them with a perpetually playable and beautiful field. Professional

sport facilities like Bank of America Stadium, M & T Stadium, and Lambeau Field utilized this type of surface (nfl.com, 2005).

Eventually, Sportgrass prompted the development of a new kind of grass-like all-synthetic turf which could produce an easily maintained yet comfortable field for the participants (Best, 1998). Typically made of nylon, polypropylene, and polyethylene fibers cut to even heights, the new type of artificial grass met television request to resist fading like in the sun and remain unaffected by extreme weather conditions (Athletic Management, 2001, 2004). The current generation of artificial grass is supported by a non-compacted mixture of roughly seventy percent ground rubber and thirty percent sand which provides the field an unusually soft feeling to the touch but a springy return to those who fall, run, or jump upon the surface (Athletic Management, 2004). The surface also provides for adequate water drainage and prevents molding which plagued the older types of artificial turf. Today professional baseball and football facilities like Texas Stadium, Tropicana Dome, Georgia Dome, Giants Stadium, and Qwest Field employ the use of this type of surface.

One should not be surprised these technological innovations invaded most post modern sport facilities because more and more sport franchises fell under the control of media empires. For example, Time-Warner owns the Atlanta Braves, Hawks (NBA) and Thrashers (NHL). The *Chicago Tribune* owns the Chicago Cubs and other recent media empires like Disney and Fox owned the Anaheim franchises and the Los Angeles Dodgers, respectively. Sherman (1998) also recognizes the *Arizona Republic*

and *Rocky Mountain News* both own large portions of their local baseball franchises, the Diamondbacks and Rockies.

Sherman (1998) supports the media industries prefer to be involved with professional sport and embrace highly technological sport facilities because they provide them with cheap programming and easy access to front page stories.

Remember, the previous chapters show league expansions and the media industries likely produced more national interest in baseball and football events. Thus, the media industry covering sporting events grew and the sport facility also increased or expanded to accommodate the larger number of technological innovations requested by writers, photographers, radio, and television crews working the event.

Conclusion for Stage Eight

Noll and Zimbalist (1997, p.56) suggest, “The cultural importance of major league team sports in American society most assuredly exceeds its economic significance as a business. The postmodern professional sport facility supports this argument because it continues the superstadium tradition in a climate where cities still believe they are too weak to force sport franchise owners to fashion their sport facilities within budgetary and site limits (Bess, 1999). In essence, cities and their surrounding communities give in to sport organizations because they are worried the franchise will skip town and diminish or eliminate their major league status. Future professional sport facilities will need to address this issue.

The product of such a weak position creates poor and costly architecture for cities. Thus, the stage eight professional sport facilities appear much larger and cost

more than their predecessors. Bess (1999, p. 19) suggests the dramatic increase in stadium footprint size, from the above latent, overt, and technological structures, is poor architecture because it inflicts massive associated costs (land acquisition, infrastructure improvements, and residential and/or commercial relocation expenses) on communities. Specifically, Bess (1999) claims sport facility volumes increased from 300 to 500 percent over the years with vertical circulation changes, likely prompted by the above structures, accounting for most of this figure. This exploration (See Appendix D Table 4) supports Bess' (1999) position that the post modern sport facilities (24.96 acres) appear on average greater than stage seven facilities (16.97 acres). To put some perspective on this difference, Harvard Stadium (six acres), Shibe Park (six acres), and Ebbets Field (5.7 acres) hold capacities over 30,000. When added to the late modern or stage seven facilities, their combined size would not exceed the total size of the post modern sporting venue.

Appropriately, this work discovered the cost of the mammoth post modern venue exceeds those of the late modern era over \$125 million (see appendix). To demonstrate the accelerated costs of current sport facility construction, one only needs to examine the City of Cincinnati's laughable efforts to build Paul Brown Stadium and the Great American Ballpark. The Cincinnati Enquirer's Dan Klepal (2000) posited Paul Brown Stadium, alone, cost \$453.2 million dollars which was more than \$52 million over the proposed budget for both Paul Brown Stadium and the Great American Ballpark.

Clearly, the increased size and cost of the post modern professional sport facility can be attributed to the fact that, “The ballpark is no longer an oasis as it was for turn of the century fans who sought respite from urban-industrial society. It has been colonized by the consumer culture that has become the most prominent characteristic of our society,” (Ritzer & Stillman, 2001, p.111). Fittingly, Euchner (1994, p.26) believes the current culture of sport organizations treat sport spectators as “fansumers” because they are expected to buy items and receive services much like those offered in other types of businesses. Therefore, the most recent step in the evolution of the professional sport facility shows us they intend to make money for their occupants through creative methods which include the embrace of maturing advances in various technologies (Cameron, 2001; Euchner, 1994; Rader, 2002; Sullivan, 2001).

Cameron (2001) and others suggest the new renovations and constructions typical of the post modern era specifically accommodate the growing trend toward providing more luxury amenities to the average and above average customer in remote or live attendance (Eisinger, 2000; Euchner, 1994; Mitchell, 1999; Ritzer & Stillman, 2001; Sheard, 2001; Zimmerman, 1997). Smith’s (2000) work also suggests the multiplication of luxury amenities and the embracing of various technologies emerged as the most noticeable features of stage eight facilities primarily to match rising player salaries and to increase the worth of the franchise. Obviously, gate receipts, which used to supply sport franchises with their primary source of revenue, cannot alone adequately match a sport franchise’s rising expenses (King, 1999). Thus, television,

luxury seating, advertising, and entertainment options, allowed gate attendance to take a secondary place in importance to sport franchises as method to maximize income (Sheard, 2001). Ultimately, this modified the professional sport facilities of the post modern era (See Figure 6.1) to evolve into hybrid leisure centers for the consumption of sporting activities and peripheral activities like retail shopping, eating (e.g. restaurants), playing video games, site seeing (e.g. Hall of Fame), and thrill riding to create an attractive spectacle or event outside of sport (Eisinger, 2000; Ritzer and Stillman, 2001; Smith, 2003). Finally, professional sport facilities will likely continue to cost more and more money to those paying for them because if the contest fails to entertain, the facility must succeed in order to keep them coming back.

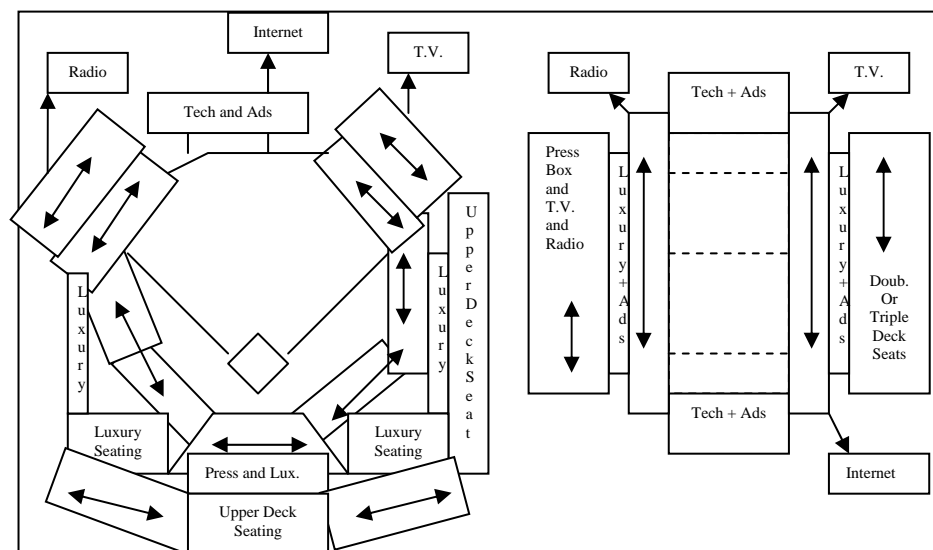


Figure 6.1: Stage 8 of professional baseball and football facility development. (Arrows indicate spectator movement)

CHAPTER 7

CONCLUSION

Eight Stage Ideal-type

This work attempts to show the layout of professional baseball and football facilities changed over their histories taking many different forms and expanding in size and complexity based on a variety of conditions. Stages of an ideal-type were discussed throughout this investigation to illustrate these points. Specifically, this investigation concluded eight stages exist concerning the evolution of the professional baseball and football sport facility (See Appendix E). This study may potentially interest those involved with architecture, engineering, sport management, and human geography for numerous reasons shown throughout the investigation.

Stages one through four primarily appeared before the beginning of the 20th century and existed as temporary structures. Distinctively, stage one represents a time when sporting activities served to break up the boredom and stress of the urban environment. Typically, these facilities utilized commons areas and open unmanicured fields which served to host many other activities and could do so simultaneously with game playing. Therefore, all sporting contests of stage one facilities commonly find themselves influenced by the shape of their surrounding environment and it's available

resources. Obviously, this produces difficulty when attempting to determine the size and shape of the competition grounds because with no fixed territories and few rules, if any, to regulate play, no spatial separation persisted between competitors and observers. Thus, spectators figured into the matches within stage one sport facilities because no rules or marked territories acted to limit their access. Ultimately, stage one facilities were undeveloped products of immature activities and their participant's skill levels.

Stage two sport facilities materialized only when the competition grounds became defined with society at large facing greater confinement during industrialization. Additionally, football and baseball helped prompt more complex sporting grounds because they became more acceptable and were perceived as more mature activities. Yet, football and baseball did not mature enough to secure permanent facilities due to the temporary and still random nature of their equipment and contests.

Eichberg's (1985, 1993) work shows professional sport facilities likely incorporated straight lines into their competition grounds because of the rules defining the contest. This was found to be true as the Massachusetts and New York styles of baseball helped popularize their game and assisted the spectators' understanding about the location of the competition grounds. Cartwright's innovation (New York version) specifically established foul lines for baseball facilities and natural spectator areas behind home and along the first and third baselines. This provided an important step in the evolution of the sport facility because spectators now appeared regulated to

position themselves outside of the playing field. Football likewise utilized standardized rules (i.e. field description, the line of scrimmage, and set of downs), from the Walter Camp and the Harvard game, to create advancements in football facility development. Distinctively, the line of scrimmage and set of downs helped stop and start play, primarily in the middle of the field, to assist in leading individuals to prefer seating locations near this area. Bale (2001) suggests the rise of rule standardization coincides with the evolving of the sport facility into a specialized site where people are restricted, removed, and fill space at specific times of the day or year. Therefore, stage two exhibits the first inkling of a growing consciousness regarding space as limited or restricted for specific activities during specific times of the day. Additionally, stage two shows us spectators separated themselves from competitors through the establishment of a fixed competition area and the use of ropes or earthen structures.

Eventually, football and baseball contests drew enough attention from individuals to become commercial activities. This obviously prompted the next stage in the evolutionary process. Hence, stage three appears to enclose the sporting structure because it allows sport entrepreneurs to create a new stream of revenue through segregating those willing to pay from those will not or cannot pay. The enclosure movement clearly reveals these sports matured as businesses while also seeking to provide better comfort based on how much customers paid for their seats. Butsch's (1990) work suggests this notion materialized only towards the end of the

late 19th century because wages and the work week provided the necessary time and money to support sports like baseball and football professionally.

Rader (2002) argues the enclosed stage three sport facilities assumed a temporary nature because each facility continued to utilize low cost materials in cheap locations which they typically shared with other activities. This encouraged the stage three facilities to embrace their pastoral heritage and exist as small or cheap investments for entrepreneurs. Thus, with a reduced ability to last, many temporary structures succumbed to weather and nature to affect spectators and participants with extreme and occasionally dangerous conditions. By in large, stage three sport facilities grew to accommodate larger crowds and appeared more popular than those offered before but many of these sport facilities still continued to fail in their attempts to accommodate the growing needs of spectators and participants. Therefore, as Leventhal (2000) suggests the crowds got bigger and their sport grew more complicated to help the sport facility evolve into becoming a more complex structure.

Appropriately, Voigt (1983) shows transportation and construction technology impelled the permanence movement because it assured sport entrepreneurs the local community could access their sport facility and maturing sport more comfortably than before. Still, evidence exists wood and other low cost building materials prevented sport entrepreneurs from utilizing more permanent materials because entrepreneurs were still concerned about the maturity of sports with such high failure rates. Thus, stage four professional sport facilities appear as large highly complex temporary enclosed buildings with structures like manual scoreboards, clubhouses, betting areas,

ladies sections, grandstand seating, and some limited luxury accommodations.

Interestingly, stage four structures typically did not occupy space near the field of play to alter the games of football and baseball because field dimensions still remained quite similar to those of the previous stages.

Professional sport facilities of the late 19th and early 20th century, in general, continued to surface or change into special structures significantly larger and more complex than their predecessors because professional baseball and football were clearly evolving into mature businesses with an audience imposing higher standards for their regular attendance (Sullivan, 1987). However, despite these improvements, stages two through four consistently failed to exhibit the trademarks associated with its surrounding industrial environment. Therefore, once sport entrepreneurs became convinced their sport organizations would produce acceptable profits and held the potential for greater returns, they invested into more permanent structures by the start of the 20th century.

The professional sport facilities typical of the early modern era gains recognition from this work as producing the first permanent baseball and football sporting venues and thus, stages five and six of this work's ideal-type. These facilities primarily took shape from technological innovations and site constraints presented by street grids and other existing buildings. Therefore, no stage five or six professional sport facility held the same shape.

The combination of the reinforced concrete and structural steel primarily allowed the stage five and six sporting venue to adapt to any location because they

were highly durable, flexible, and surprisingly cheap materials. Therefore, combined with maturing sports, sport entrepreneurs invested large sums of money into the construction of new facilities to maximize spectator interests and the money for their organization. Fittingly, this investment likely prevented sport organizations from relocating to another site but also provoked them to search for cheaper sites to reduce costs.

In order keep costs low, sport entrepreneurs sought small spaces which impelled seating areas close to the field of play. This obviously did not hurt the baseball or football spectator because they each desire to sit close to the action. Resultantly, stage five and six sport facilities materialized as mainly single-purpose facilities with seats concentrated near or above those areas where the action takes place.

Gate receipts continued to produce the primary source of revenue for stage five professional sport facilities. Consequently, stage five sport facilities offered little amenities other than grandstand seating which separate the upper classes from the lower. Few concession stands and restrooms surfaced in stage five facilities despite the remarkable increase in seating capacity. Vertical circulation structures like ramps, escalators, elevators, and stairs occupied much of the space sport facilities could have provided to improve concession and restrooms opportunities. Additionally, numerous other structures like rifle ranges, indoor tracks, dormitories, and assorted shops absorbed most of the left over space concessions and restrooms would fill in future sport facilities.

Overall, one can conclude spectator amenities suffered in the stage five sport facilities because other activities or structures often replaced them inside the structure. This work found this to be strikingly unsatisfactory for a society so rich in capitalism. Yet, the literature shows us sport entrepreneurs in the early modern era were more concerned with attendance statistics than revenues from other sources. Consequently, the stage six professional sport facilities appeared to accommodate the focus on gate receipts with massive and costly expansion efforts.

Suitably, stage six professional sport facilities emerged as buildings focused on trying to cram as many people as possible into an urban confined site. Resultantly, this era's signature feature is massive seating expansions which typically positioned a second deck on top of single decks or into outfield locations. Stage six facilities also regularly embraced other structures stage five facilities held in limited numbers such as large advertising signs, scoreboards, press facilities, team offices, and lights for night sporting events. Still, restrooms and concessions were limited in stage six facilities. The seating capacity expansions and these other structures often inflicted poor sightlines and comfort on customers who saw their views blocked and regularly felt squeezed in the narrow aisles and small concourses of the band box facilities. Stage six facilities also found difficulty hosting other sporting events (e.g. football in baseball facility) because these facilities were generally created with one sport in mind. Fittingly, sport spectators found difficulty watching the "other" sporting event in stage six facilities because seat locations failed to be maximized in prime locations and other seats often turned away from the action.

The automobile emerged as one of the most popular inventions during the early modern era as people in record numbers increasingly embraced the car and America's improving roads firmly by the 1930s. Unfortunately, sport franchise owners finishing stage six professional sport facilities failed to recognize the popularity of the automobile and provided little opportunity for them to be taken to ball games. This obviously occurred because sport entrepreneurs were unwilling to invest extra money into acquiring costly real estate surrounding their ballparks. The lack of parking eventually posed as a major problem for the car loving Americans who desired to attend games using their automobiles. Eventually, sport entrepreneurs complained this lack of parking prevented them from filling up their stadiums. Clearly, the next wave of professional sport facilities would need to address this issue.

Stage seven professional sport facilities were obviously impacted by a variety of influences occurring in the previous stages of facility development. However, this investigation discovered the shift in population and businesses towards the western and southern states and suburban locations to escape crime and confinement primarily encouraged a change in professional sport facilities. Professional football also grew tremendously using television to display its drama and promote its product. Additionally, with television increasing the visibility and attractiveness of professional football, the sports industry found professional football also setting terms on formation of any new facility in a community. Resultantly, the stage seven professional sport facilities emerged as a distinctly multi-purpose structure which attempted to accommodate professional football and baseball equally.

The suburban location of the stage seven professional sport facilities provided a large amount of unconfined space for the sporting structures to form. Visibly, sport entrepreneurs wanted a large amount of parking for their customers and therefore, acres of parking surrounded the stage seven facilities. The grotesquely large parking areas replaced the restrictive confines early modern professional sport facilities faced so stage seven professional sport facilities to evolve into “big, round, sterile, symmetrical, concrete structures that focused on amenities and comfort at the expense of intimacy and atmosphere,” (Smith, 2000, p. 17). This examination found stage seven sport facilities criticized for the compromise football and baseball agreed upon in their municipally funded building because it produced eerily similar and symmetrical buildings across the United States. Other comments regarding the modernist stage seven facilities describe them as sterile industrial looking buildings offering predictable plays and little charm to their patrons.

Gate attendance remained the number one revenue source like it did for the previous stages of sport facility construction but sport franchise owners noticeably acknowledged television rights, merchandise, luxury boxes, and advertisement sales also provided viable methods to improve the economic position of their franchise. Additional fan concerns were addressed in the stage seven facilities such as the introduction of new and bigger vertical circulation ramps, wider concourses, aisles, and chairs. Furthermore, restrooms and concession stands increased in size and number to provide the larger facility greater opportunities for its customers to return to the action quicker. Clearly, traffic flow served as an important characteristic of the

stage seven facilities because owners realized easier movement meant more money spent at the contest.

In general, the stage seven sport facilities emerged different from the previous eras because it evidently considered these structures in their design. Appropriately, these structural innovations increased the stadium footprint because the stage seven professional sport facilities were unconfined by their location. However, despite all these changes to accommodate fans, stage seven facilities positioned stands further away in these structures to eliminate obstructed viewpoints plaguing the early modern facilities. Thus, sport spectators of professional football and baseball remained unhappy because the compromise left them far away from the action on the field.

Giant scoreboards and electronic display units attempted to assuage the viewers in attendance by bringing them closer to the action but each sport differs considerably. Additionally, stage seven professional sport facilities were also not set-up to totally embrace television or another potentially huge revenue producer such as the luxury suite because many did not anticipate local or national organizations would find thousands or millions of dollars to spend every year on luxury accommodations and television broadcasting rights. Consequently, this era failed to produce the desired financial position for baseball or football organizations because unhappy patrons either stayed at home or did not reach into their wallet enough.

The size and costs of professional sport facilities increased during every wave of development and the post modern era or stage eight facilities were no exception. Primarily impacted by the consumer demands unrealized in its predecessors, the stage

eight professional sport facilities sought to treat all spectators in live and remote attendance with the greatest spectacle it could. Therefore, this era of development demonstrates the professional sport facility intended to make money for their occupants mainly with creative entertainment, comfort, and technological advances.

Interestingly, professional football and baseball went back to the single-purpose facility to accomplish this task (Gunts, 1992b). Lowery's (1986, p.20) work advocates this position as he states, "Ballparks with no idiosyncrasies are poor ballparks. When every fence is ten feet tall, every foul line is 330 feet, every power alley distance is 375 feet, and every center field distance is 400 feet, baseball's subtleties are minimized. Terraces in the outfield, in play angular scoreboards, high walls and low walls, short and long distances, 296-foot left field porches, second deck overhangs, monstrous open spaces in center field with monuments and bullpens and doghouses for long triples to rattle around in—anything that adds character to a ballpark makes a ballpark better."

Player salaries were shown to have skyrocketed following the institution of free agency in professional football and baseball. Resultantly, each association sought out alternative methods other than gate receipts to pay their players while still maintaining an adequate return on their investment. Therefore, stage eight facilities appeared to incorporate more luxury seating, fan amenities, and television production locations because they each increasingly provided significant revenues to the sport organization. Specifically, overt structures like luxury/club seating and restaurants, latent structures like expanded restrooms and concession stands, and technological

innovations like video boards and retractable roofs dotted the landscape of the stage eight facilities to fully enclose them from the outside world and segregate those within the sport facility. Ultimately, these features express the professional sport facilities of the post modern era evolved into leisure centers because sporting events now served as complimentary actions to entertain those who the facility could alone accommodate all other days of the week.

Generally speaking, this work accepts Webber's (1964) assertion that every building is limited in some way by its location. However, economic desires primarily drive professional sport facility construction practices because professional sport is inherently a capitalist venture where an individual or groups of individuals seek to create as much profit for themselves as possible. Initially, gate receipts acted as the primary source of revenue for sport facilities; therefore sport entrepreneurs sought out ways to maximize this revenue source (King, 1999). However, the increasing maturity of baseball and football along with accompanying technological breakthroughs and changing social standards impelled the sport facility to change with each passing year. For instance, this investigation found technical innovations with construction technology developed before the end of the 19th century helped transform buildings from smaller simpler structures into large complex constructions capable of becoming magnificent theatres (Oriard, 1976). Clearly, this work showcases the professional sport facility emerged as a remarkable civic feature of a community because they were not afraid to utilize the ability of architects and engineers and their innovative technology or designs.

Appropriately, professional sport facilities evolved from temporary to permanent structures once they realized they hosted mature sports and could depend on people spending more of their disposable income and leisure time within them. Thus, this work may also appear significant to sport historians because it provides another perspective on how and why simple games became monumental contests.

Sheard (2001) posits sport facilities changed to accommodate monumental contests because Americans seek perpetual entertainment. Sack's (1997) work furthermore shows humans historically transformed their surroundings to make them more livable or pleasurable to support this claim. Therefore, humans often find themselves in search of space to build emotional ties with for the purpose of pacifying their social and entertainment needs (Casimir, 1992). The evolution of the professional sport facility illustrates these thoughts. Interestingly, Casimir (1992) believes social needs, like those offered by the sport facility, exceed unsophisticated or primitive survival needs such as food and shelter. Thus, this work demonstrates the history of professional sport facility development, in essence, is the story of man's eager search to make human interaction easier and more pleasurable in a permanent environment. Ultimately, human geographers should find this aspect of the study fascinating because professional sport facilities show individuals willingly accepted segregation from the playing field in a trade for better entertainment and use of their discretionary time and money.

Ritzer and Stillman (2001) contend professional sport facilities also grew to accommodate larger crowds and thus became more rationalized. Therefore, the

professional sport facility evolved to become more efficient and predictable. However, recent modifications made to professional sport facilities encouraged them to become highly effective selling machines and produce interesting characteristics like their forefathers of the early modern era. This fittingly appears because fans crave more and more comfort from their sport facilities and owners desire more revenues (Ritzer & Stillman, 2001). Future professional sport facilities will likely continue these trends but should pay attention to other considerations like facility size, construction costs to communities, and eliminating boring aesthetics.

Finally, this work is valuable to sport managers and facility planners because it demonstrates what people (i.e. spectators, owners, and players) specifically want in a facility to produce the greatest show possible. However, it also reveals the importance of anticipating future demands in order to capture future rewards. Obviously, the number of restrooms, concessions, disabled seating, and other entertainment options must be included in the facility of the future but sport managers must look to toward the future and provide more interaction opportunities for their spectators. Specifically, sport entrepreneurs should seek out to maximize and employ innovative interaction opportunities because sport spectators, whether in live or remote attendance, traditionally show they want to get close to the action and those who reward this behavior typically benefit financially.

Future Recommendations for Professional Sport Facilities

Today's professional sport facilities do not revolve around and generally do not support community functions because that is not their primary purpose. This work

and numerous other opinions suggest this (Baade & Dye, 1988; Bess, 1999; Weiner, 2000), although some examples like Pac Bell Park and its 5,200 square foot medical clinic and Turner Field's day care center serve as exceptions (Epstein, 1998b; Smith, 2000). Weiner (2000) and others recommend sport facilities should attempt to host community-oriented businesses and services to increase the tangible worth of public investment into a sport facility because it is awfully difficult to justify spending \$300 to \$500 million dollars on any professional sport facility when they are utilized so few days of the year (Baade & Dye, 1988; Bess, 1999).

Weiner (2000) recommends we address the needs of the professional sport facility's surrounding community using the innards. The "innards of a stadium" are those areas underneath the seating arrangements and within the actual site of the building. Surrounding the professional sport facility with large amounts of space for automobile parking also does little to help the community because it does not prompt individuals and groups to stay and participate or interact with other commercial ventures offered surrounding the perimeter of the sport facility. Bess (1999) suggests future ballparks should look to encourage spending around the periphery of the sport facility by provoking them to stay after or come before an event. Fittingly, they should because Bale (2000) predicts professional sport facilities will receive a lot of pressure in the future to host more events other than sporting activities. Housing community oriented businesses or projects inside the professional sport facilities materialize as one method to encourage local traffic around the ballpark and improve the value of the local investment.

Bess (1999) and Parrish (1998) also recommend an urban location for professional sport facilities because site constraints force them to be smaller and consequently they cost less for those private investors and the public. Physically a smaller footprint should reduce the cost even in an urban location (Bess, 1999). Specifically, Bess (1999) supposes sport facilities one-third less in size should find a price tag half as much. Bess (1999) argues we could reduce the size of the professional sport facility by fighting our impulse to eliminate all obstructed seats which position upper decks farther away from the field and vertical circulation systems outside the constraints of the city block. Placing the vertical circulation inside the confines of the building appears attractive because spectators will inherently emerge closer to the action on the field which could help build a closer relationship between the team and its community.

Parrish (1998) and others believe professional sport facilities should attempt to utilize any renewable sources of energy such as wind, sun, water, and geothermal activities to help pay for themselves in the future (Blickstein, 1995; Sheard, 2001; Temko, 1993). For example, wave machines to collect the energy unleashed by the ocean, solar panels to gather energy provided by the sun, and windmills to harness the power of the wind could provide tremendous amounts of renewable energy to places like San Francisco, Phoenix, Chicago and most other urban locations. Clearly, it would be good for a facility next to the ocean (e.g. Pac Bell Park), in the sun (e.g. Bank One Ballpark), or near a windy lake front (e.g. Wrigley Field) to exploit these sources of energy to help reduce costs.

Keeping the skyrocketing costs of professional sport facilities down will impart special responsibilities upon designers. Therefore, sport facility planners will need to continue using durable low-maintenance materials like pre-cast concrete, plastic, fiberglass, and Teflon (Blickstein, 1995). However, other energy and cost efficient methods or tools should also be considered. Temko (1993) promotes the use of natural light when possible and utilizing natural light for the lighting of the structure through the use of tall windows. Combining this with a self-cleaning glass feature should reduce costs to the facility. Self-cleaning glass harnesses the power of the sun by using a metal oxide coating on one side of glass. Rain causes raindrops to form sheets of water on the window and wash away loose particles. The rest of the time the ultraviolet energy from the sun activates the oxide coating to accelerate the decomposition of organic matter attempting to collect on the window. Sheard (2001) claims solar and natural gas heating can also help reduce costs besides producing a seventy percent less Carbon Dioxide emissions. Additionally, wind fans and thermal chimneys can reduce sport facility size and costs by decreasing our dependence on air conditioning units. Wind fans and thermal chimneys, like the one at the Royal Selangor Turf Club in Kuala Lumpur, Malaysia increase the use of natural ventilation and are particularly excellent for tropical or excessively hot climates to reduce heat and move air inside the facility.

Professional sport facilities should continue to provide the appropriate environmental conditions for all those attending a sporting contest based on optimal levels of humidity, temperature, wind, and illumination because sport organizations

desire for their customers to feel comfortable (Parrish, 1998). Puhalla, Krans, & Goatley's (2002) work shows this concept will be particularly important as U.S. demographic trends continue to report a growing aged-population should influence the design of the next generation of sport facilities and any renovations. Crompton (1999) found, as of 1990, people sixty-five and older comprised approximately one-eighth of the U.S. population. However, based on current trends, Crompton (1999) expects the sixty-five and older population to increase significantly to constitute roughly one-fifth of the total American population. Another staggering statistic Crompton (1999) relays pertains to how much those sixty-five and older work. In 1948 almost fifty percent of those sixty-five and older continued to work for a living but this number declined to fifteen percent by the end of the 1990s (Crompton, 1999). Apparently, this is a market sport facility designers should pay more attention to in the future because they are growing in number and possess more leisure time than their predecessors. This work believes addressing America's aging population inside professional sport facilities surfaces as a wise investment because they clearly will look for things to do and places to go.

Moss (1987) asserts the modern office building materialized as one of the most important architectural structures of the 20th century and the invention of the telephone significantly influenced much of the office building's design. For example, if individuals continued to pass messages and information hand to hand instead of using the telephone, the office buildings would have evolved to contain more elevators and escalators for speedier inter-office and outer-office exchanges. Black, Roark, and

Schwartz (1986) along with Moss (1987) posit facility planners consider telecommunication and computer needs today when designing a building. Consequently, the next modern professional sport facility should also consider telecommunication and computer needs within its design because it no longer represents a space to be filled and emptied strictly for those attending athletic events. The professional sport facility generates, processes, and disseminates information for those in remote or virtual attendance.

Euchner (1994) also suggests professional sport venue planners must consider those in virtual/remote attendance as much as those physically at the facility. Consequently, future professional sport facilities will continue to evolve into television studios because television affects the way spectators view and interact with professional sport (Boyle & Haynes, 2000; Sheard, 2001; Smith & Patterson, 1998). Smith and Patterson (1998) predict sport spectators will desire to interact more with the event taking place. Interestingly, Smith and Patterson (1998) believe individuals spend more money when they feel the event involves them in some manner because it provides them with some intense experience. Bakker and Bakker-Rab dau (1973) and Chema's (1996) work suggests people search for opportunities to socialize and interact with each other and those on the field of play because advances in communication and information sharing technologies push our civilization towards individual isolation and confinement. Sack (1997) also proposes society naturally segments most people (e.g. work and neighborhoods) to prevent them from interacting and getting to know others

directly surrounding them (Sack, 1997). Therefore, modern society seems to make our neighbors at work and home strangers to us.

Appropriately, Chema (1996) shows, future sport facilities must include opportunities for interaction because experiencing human contact is rewarding and valuable not only socially but economically as well. Gershman (1993) and Golenbock (2000) demonstrate this point vividly with their descriptions of Bill Veeck and how he provided spectators numerous opportunities to interact with his baseball club to produce record attendance and profits for the St. Louis Browns (MLB). Specifically, fans attending St. Louis Browns games interacted with Manager Zack Taylor's decisions on whether to hit or bunt by holding up signs with each word printed upon them to prompt them to come to the Sportsman's Park.

Finally, Adams (1997a) argues the creation of computer technology likely persists as the most significant characteristic of the late 20th century. Adams (1997a) supports this conclusion as he suggests society increasingly depends on computers to provide them with cultural, economic, educational, and social forms of interaction. Resultantly, Adams (1997b) and others mention individuals live or often find themselves entranced within computer networks and can organize or create a new place as real as the bedrooms, offices, and highways of the real world (Graham & Marvin, 1996). In essence, computer technology provides people the opportunity to actively participate in various realities which sport facilities can capitalize upon by adapting with increases in computer technology (Adams, 1997a; Mitchell, 1995).

Haraway (1985) further claims by passionately interacting with technology in this manner we can discover a whole new way to live.

For instance, Mitchell (1995) posits two types of presence exist, physical and virtual. Therefore, as Adams (1997a) maintains, the internet or World Wide Web allows multidirectional instantaneous interactions which would help individuals occupy a different place other than the one they literally stand. Mitchell (1995) assumes we should view this computer network as a living city because it is inhabited by a variety of individuals with the ability to travel anywhere instantly through the use of an extraordinary amount of provided sensory information. Future professional sport facilities will need to work toward this goal of extensibility to increase the popularity and spending upon the sports they host. The next section of this chapter addresses the concept of extensibility more fully to show why professional sport facilities will need to adapt.

Extensibility: Attending Games at Home and in the Home

Kuklick (1991, p.60) describes, “The largest crowd ever to assemble in downtown Philadelphia watched the Bulletin’s electric scoreboard and listened to an announcer with a direct wire to Wrigley Field,” during the 1929 world series between the Chicago Cubs and Philadelphia Athletics. Telegraph, telephone, and radio services all combined to make the event from Chicago appear in Philadelphia. In essence, the Bulletin’s electronic scoreboard and the spectator’s own motivation allowed Philadelphia fans to attend the game in Chicago and thus, shrink space and time to alter their spatial consciousness.

Time-geographers argue people cannot exist in two places at one time because the laws of physics support their position in space-time as being exact (Carlstein, 1982; Lenntorp, 1976). Therefore, people traditionally see territory as tangible places to be filled and emptied (Bale, 1992). However, another conception exists for those people who possess the ability and desire to escape from their current and actual geographic location to areas predetermined as pleasing, interesting, or attractive (Bale, 1992; Sack, 1980, 1986). For instance, spatial analysis on human geography adds locations outside of geographic locales persist through the use of different social and intellectual perspectives (Massey, 1993; Sack, 1986).

Many scholars assume social activities, like attending a professional sporting event for example, provide individuals the opportunity to create a distinct interaction in time and space (Berger & Cuckman, 1967; Thrift, 1983). However, Pred (1984) claims an individual must first choose to create a new consciousness to prevent other obstacles from simultaneously changing their perceptions. Pred (1984) describes those individuals with the capacity to change consciousness as those who possess highly developed language skills, personality, self-understanding, and sense of consciousness. Brissett and Edgley (1975) say motivation prompts interaction to take place between an individual and their environment. Brissett and Edgley (1975) summarize information on motivation research suggests motivated individuals hold a higher developed sense of consciousness of themselves and others. Thus, a motivated person seems to be rationalizing within a specific state of consciousness and remains there until interrupted. Appropriately, Pred (1984) and Thrift (1983) suggest some

event based on time demands and importance seem to be easier to escape to than other events. Consequently, a sporting event becomes a highly desirable choice for an alternative consciousness because it is limited by time and supports powerfully significant symbols and contests to give people structure for socialization within their interaction.

Ultimately, this manuscript views territory not as a strict biological location but tries to understand territory as a location based on spatial consciousness. Therefore, this work holds territory as a social construct and anywhere an individual attempts to exert control over objects, ideas, privileges, or rights (Ervin & Dawkins, 1996; Sack, 1986). Also known as action territory, this work and others suggest people do not always act as passive observers but actively create the reality (i.e. time and space) around them to fit perceived information to a particular situation or set of circumstances (Ervin & Dawkins, 1996; Gibson, 1979; Peuquet, 2002; Sack, 1980, 1986). Overall, the degree of interaction one engages in with a specific environment basically determines a person's spatial consciousness.

Abler, Janelle, Philbrick, & Sommer (1975) and others suppose the increasing complexity our world imposes upon us requires us to seek out more information in order to adequately survive (Brunn & Leinbach, 1991; Sack, 1980). Janelle (1969) appropriately argues people often demand more ease in accessing the information they desire. Fittingly, Abler et al. (1975) predicted the ability of individuals to communicate with each would improve in the coming years as much as their geographic mobility. Clearly, this prediction appears correct and professional sport

facilities can benefit by providing easier and more descriptive feedback to motivated individuals to help alter their spatial consciousness.

Specifically, Sack (1997) and others suggest the world today seems to be shrinking because of mass communication and transportation efforts (Adams, 1995; Euchner, 1994; Gould, 1991; Janelle, 1973; Moss, 1987). Gould (1991) and others suggest the decreases in time and distance associated with the advancements in communication technology produce a coming together of space and time (Abler et al., 1975; Harvey, 1985; Janelle, 1969). Janelle (1969) supports the time-space convergence belief contributes significantly to an individual's ability to adapt to their location. Consequently, human extensibility results to decrease the significance of time and space and ultimately allows the sport facility to host millions instead of just tens of thousands.

Peuquet (2002, p.12) and Pred (1984) suggest, "to exist is to have being within both space and time." Thus, time and space present themselves as continuous sensory experiences upon which individuals can actively participate in making decisions or gaining information about a specific environment (Peuquet, 2002; Thrift, 1985). Extensibility combines sensory information and other knowledge acquired by individuals and relates them to people as social actors (Thrift, 1986). Adams (1995, p.267) proposes extensibility "measures the ability of a person (or group) to overcome the friction of distance through transportation or communication." Thrift (1985) argues extensibility provides us with a heightened understanding about an individual's

position in space-time without reducing the importance tangible places hold on interactions.

The evolution from print to electric communication improved the individual's position from being a passive developer of space to an active developer because improved telecommunication technology provided easier and more random access to other stimuli/environments (Nicol, 1985). Telephone, radio, television, and now computer technology represent recent communication devices which contact us physically through the use of visual or auditory energy. The energy offered by the professional sport facility uses these telecommunication devices to broadcast this energy (e.g. sights, sounds of the crowd, and feel of the game) from one point in space to another instantaneously in order to reduce the time-space window (Nicol, 1985). Adams (1992, 1995) interestingly, argues people who watch television frequently especially possess a greater ability to experience extensibility because television can act as a place for people to hold consciousness. This work also believes the computer holds equal status in the 21st century and sport facilities will need to accommodate television and computer advancements to provide viewers at home more sensory experiences of the contests they desire for extensibility.

Peuquet's (2002) work suggests sport facilities could assist an individual's attempt at extensibility because they can project sights and sounds, through mass communication technology, to help one's imagination for the establishment of a new spatial consciousness. Hagerstrand's (1970) work demonstrates a person attending a professional sporting event will likely find themselves impacted by the presence of

other people along with their shared cultural and legal rules of behavior. Adams (1997b) and others feel individuals can clearly create an alternate place through these interactions because people possess the ability to merge existing knowledge and technology to transcend normal reality (Gibson, 1979; Pred, 1984). Overall, Peuquet's (2002) manuscript offers graphic images and selective noises through modern communication technology provide individuals the opportunity to develop a new consciousness because visual scenes produce instantaneous lucidity and sounds evoke emotive feelings important for gaining a new awareness.

Hagerstrand (1970) posits adult individuals generally suffer from a limited ability to interact with an activity because their biological make-up regulates their capacity to use sensory tools for interaction. Essentially, Hagerstrand's (1970) work expresses the modern adult utilizes only their eyes and ears as instruments for interaction. Yet, Hagerstrand (1970) also shows recreation or leisure activities hold the special ability to help individuals redirect their energies to alter their spatial consciousness because recreational and leisure activities rely heavily on symbols to project the evolving contest. Nagel (1986) and others claim human beings are symbol users and individuals take meaning from places through the use of symbols (Brissett & Edgley, 1975; Sack, 1980). Tuan (1974) posits this allows people to develop a sense of meaningfulness (i.e. topophilia) when they interact with places which is necessary for using the imagination to alter spatial consciousness. Professional sport facilities possess a variety of structures (i.e. symbols) which sport organizations broadcast

through highly advanced computer or television lines to help individuals utilize imagination for the changing of their spatial consciousness.

Part of the basis for imagination depends on our ability to think of space as an opportunity for events other than which we generalize when in physical attendance. Therefore, an individual can transform a living room, bedroom, garage, or backyard into a professional sport facility simply by adapting and assimilating the information broadcast to them. The voluminous works of Piaget like *The Child's Construction of Reality* (1954) and *The Child's Conception of the World* (1969) assume individuals can adapt through accommodation and assimilation. Individuals assimilate by accepting information and altering their surrounding conditions and accommodate through being flexible to new and possibly changing situations. Piaget (1954, 1969) suggests one cannot survive without the other and each must work with the other to provide an individual with the ability to change their spatial consciousness. Increases in communication technology again can help bring the world inside the professional sport facility to the remote spectator.

Sack (1986) claims pre-modern societies fail to use their imagination and often limit themselves to this conception of space as a laundry room can only be used for laundry and a bedroom for sleeping. Consequently, linking space and time become useless to the pre-modern citizen because they find difficulty understanding or seeing events without actually attending the event. Modern America can most likely be characterized as a post-industrial society because it is wealthier than the typical

industrial society and encourages more consumption of leisure or recreational activities.

Appropriately, an actual physical location seems less important than a relative location in the post-industrial or digital-age because remote and virtual environments can be experienced as a real location where one can find contentment (Brunn & Leinbach, 1991; Gould, 1982, 1991; Gould & White, 1974; Gatrell, 1983). Sack (1986) and Adams (1997b) again show modern computer technology carries people great distances because it provides individuals with the necessary description of space and time elements to allow them to experience a consensual hallucination of spatial consciousness. Ultimately, professional sport facilities in the future should utilize communication tools which maximize interaction for those motivated individuals in remote attendance to help them change their spatial consciousness. Again, this conception holds sport facility designers and managers should value improving conditions for extensibility using the professional sport facility because they can increase the attendance at sporting events from tens of thousands to millions which can help add revenue to their pockets and improve or maintain the popularity of their sport.

APPENDIX A
PRE-MODERN ERA

Name	Original Capacity
Elysian Fields	Not Available
St. George Cricket Grounds	4,100
Worcester Driving Fields	1,000
Fashion Race Course	12,000
Union Grounds	1,500
Hamilton Field I	500
Capitoline Grounds	10,000
Case Commons	2,000
Athletic Park	9,000
Olympic Grounds	500
Fairgrounds Park	500
Dexter Park Racetrack	12,000
Lake Park	7,000
South End Grounds I	5,000
Lake Front Grounds I	5,000
Hamilton Field II	1,000
Union Baseball Grounds	7,000
Jefferson Street Grounds	5,000
Fort Hill Grounds	800
Hartford Baseball Grounds	10,000
23rd St. Grounds	2,000
Perry Park	1,500
Sportsman Park I	6,000
Palace Park of America I	10,000
Recreation Park I	2,500
Lake Front Grounds II	8,000
Messer Street Grounds	1,500
Recreation Park I	1,500
Recreation Park II	6,500
Eclipse Park I	10,000
Oriole Park I	6,000
Union Park I	6,500
Sportsmans Park II	6,000
Lake Front Grounds III	10,000
Recreation Park I	12,000
Polo Grounds I East and West	15,000
Recreation Park	1,200
Washington Park I	2,600
Metropolitan Park	8,700
Olympic Park I	5,000
South Side Park I	10,000
Wright Street Grounds	4,000

Continued

Table 1: Pre-modern sport facilities and seating capacities

Table 1 continued

Virginia Park	1,000
Palace Park of America II	10,000
League Park	1,000
Capital Grounds	6,000
West Side Grounds	16,000
West Side Park	6,000
Swampoodle Grounds	1,000
Recreation Park II	17,000
Borchert Field	10,000
Athletic Park	3,000
Philadelphia Baseball Grounds I	12,500
South End Grounds II	6,800
Washinton Park II	3,000
Brotherhood Park	1,000
Brotherhood Park	17,000
Exposition Park II	16,500
Speranza Park	4,500
Congress Street Grounds	16,000
Athletic Park	2,000
Oriole Park II	11,000
Boundary Field	6,500
Griffith Stadium I	6,500
Washington Park III	18,000
Polo Grounds III	16,000
League Park I	9,000
West Side Grounds	16,000
Sportsmans Park III	10,000
Robison Field II	14,500
South Side Park III	15,000
South End Grounds III	5,000
Vanderbeck Park I	3,500
Oriole Park III	6,500
Vanderbeck Park II	6,300
Franklin Field I	24,000
Philadelphia Baseball Grounds II	18,000
Nicollet Park I	4,000
Bennett Park I	5,000
Athletic Park	3,000
Greensburg Athletic Field	2,500
Pittsburgh Athletic Club Park	10,000
Washington Park IV	18,800
Sportsmans' Park IV	10,000
Neil Park	5,000
South Side Park IV	15,000
Burns Park	4,450

Continued

Table 1 continued

Bennett Park II	8,500
Columbia Park I	9,500
Oriole Park IV	14,000
Huntington Avenue Grounds	11,500
Griffith Stadium II	9,772
Palace of Fans	10,000
Sportsman Park V	8,000
Average	7,694

Name	Cost	Cost in 2005
Fashion Race Course	\$165,000	\$3,483,150
Union Grounds	\$1,200	\$23,460
Lincoln Park Grounds	\$10,000	\$195,500
Union Baseball Grounds	\$4,000	\$52,760
Lake Front Grounds II	\$10,000	\$131,900
Riverside Park	\$4,000	\$52,760
Oriole Park I	\$5,000	\$94,250
Union Park I	\$3,500	\$65,975
Lake Front Grounds III	\$10,000	\$185,500
Recreation Park	\$2,000	\$37,700
Washington Park I	\$30,000	\$565,500
Olympic Park I	\$6,000	\$113,100
West Side Grounds	\$30,000	\$565,500
West Side Park	\$30,000	\$565,500
Borchert Field	\$40,000	\$754,000
Athletic Park	\$75,000	\$1,413,750
Philadelphia Baseball Grounds I	\$101,000	\$1,903,850
Washinton Park II	\$60,000	\$1,131,000
Sportsmans Park III	\$50,000	\$977,000
Philadelphia Baseball Grounds II	\$80,000	\$1,563,200
Nicollet Park I	\$4,000	\$78,160
Sportsmans' Park IV	\$62,000	\$1,211,480
Neil Park	\$64,000	\$1,349,760
Columbia Park I	\$7,500	\$158,175
Oriole Park IV	Not Available	Not Available
Huntington Avenue Grounds	\$35,000	\$738,150
Sportsman Park V	\$168,000	\$3,543,120
Average	\$40,662	\$805,931

Table 2: Pre-modern professional sport facilities and available construction costs for the time and in 2005

Name	Left Field	Left Center	Center Field	Right Center	Right Field
Elysian Fields	None	None	None	None	None
St. George Cricket Grounds	None	None	None	None	None
Union Grounds	500	500	500	500	350
Lake Park	375	375	375	375	375
South End Grounds I	250	445	440	440	255
Union Baseball Grounds	375	N/A	N/A	N/A	375
Jefferson Street Grounds	N/A	N/A	500	N/A	N/A
Hartford Baseball Grounds	360	405	495	360	320
Sportsman Park I	400	N/A	450	N/A	400
Sulphur Dell I	None	None	None	None	None
National League Park	360	405	495	360	320
Recreation Park I	None	None	None	None	None
Lake Front Grounds II	186	280	300	252	196
Riverside Park	210	420	410	420	210
Recreation Park I	280	N/A	400	N/A	280
Eclipse Park I	360	405	495	360	320
Sportsmans Park II	350	400	460	330	285
Lake Front Grounds III	186	280	300	252	196
Recreation Park I	N/A	N/A	N/A	N/A	400
Polo Grounds I East and West	None	None	None	None	None
Washington Park I	335	N/A	N/A	N/A	N/A
League Park I	360	N/A	420	N/A	360
Virginia Park	None	None	None	None	None
Robison Field I	470	N/A	500	N/A	290
West Side Grounds	340	N/A	560	N/A	340
West Side Park	216	N/A	N/A	N/A	216
Borchert Field	266	N/A	395	N/A	266
Athletic Park	286	N/A	N/A	N/A	261
National League Park II	410	N/A	420	N/A	410
Philadelphia Baseball Grounds I	500	N/A	310	N/A	N/A
South End Grounds II	250	N/A	440	N/A	255
Recreation Park II	N/A	N/A	N/A	N/A	400
Polo Grounds II	335	N/A	433	N/A	335

Continued

Table 3: Pre-modern ballpark dimensions in feet. N/A represents not available.

Table 3 continued

Olympic Park II	321	N/A	400	N/A	297
Washinton Park II	335	N/A	550	N/A	295
Congress Street Grounds	250	N/A	N/A	N/A	N/A
Brotherhood Park	345	N/A	450	N/A	380
Exposition Park II	400	413	450	413	440
Congress Street Grounds	250	N/A	N/A	N/A	N/A
Oriole Park II	300	N/A	N/A	N/A	350
Griffith Stadium I	407	N/A	421	N/A	328
Washington Park III	335	N/A	445	N/A	215
Polo Grounds III	277	N/A	500	N/A	258
League Park I	375	415	460	340	290
West Side Grounds	340	N/A	560	N/A	316
Sportsmans Park III	350	400	460	330	285
Robison Field II	380	400	435	330	290
League Park II	253	N/A	N/A	N/A	N/A
South End Grounds III	250	450	450	440	255
Vanderbeck Park I	N/A	300	N/A	300	N/A
Vanderbeck Park II	N/A	300	N/A	300	N/A
Philadelphia Baseball Grounds II	341.5	N/A	408	300	280.5
Nicollet Park I	334	N/A	432	330	279
Washington Park IV	335	500	445	295	215
Sportsmans' Park IV	350	400	460	330	285
Bennett Park II	373	N/A	392	N/A	345
Huntington Avenue Grounds	350	440	635	424	280
Palace of Fans	N/A	N/A	N/A	N/A	450
Sportsman Park V	368	N/A	430	N/A	335
Average	331.48	396.65	447.02	353.68	308.52

Name	City	Type/Sport	Estimated Lifespan/Usage
Elysian Fields	Hoboken, NJ	Baseball	1846-1873
St. George Cricket Grounds	New York City	Baseball	1846-1889
Worcester Driving Fields	Worcester, MA	Baseball	1853-1899
Fashion Race Course	New York City	Baseball	1858
Union Grounds	Brooklyn	Baseball	1862-1889
Hamilton Field I	Fort Wayne, IN	Baseball	1862-1871
Capitoline Grounds	Brooklyn	Baseball	1862-1876
Case Commons	Cleveland	Baseball	1865-1872
Athletic Park	St. Louis	Baseball	1866-1882
Olympic Grounds	Washington, D.C.	Baseball	1866-1875
Fairgrounds Park	Rockford, IL	Baseball	1866-1871
Dexter Park Racetrack	Chicago	Baseball	1867-1870
Rensselaer Park	Troy, NY	Baseball	1867-1880
Lincoln Park Grounds	Cincinnati	Baseball	1867-1876
South Street Park	Indianapolis	Baseball	1869-1878
Lake Park	Chicago	Baseball	1871-1881
South End Grounds I	Boston	Baseball	1871-1887
Lake Front Grounds I	Chicago	Baseball	1871-1877
National Association Grounds	Cleveland	Baseball	1871-1872
Hamilton Field II	Fort Wayne, IN	Baseball	1871-1940
Union Baseball Grounds	Chicago	Baseball	1871-1874
Haymaker's Grounds	Troy, NY	Baseball	1871-1881
Jefferson Street Grounds	Philadelphia	Multi-use	1871-1891
Bull's Head Tavern Field	Troy, NY	Baseball	1871-1872
Newington Park	Baltimore	Baseball	1872-1882
Fort Hill Grounds	Middletown, CT	Baseball	1872
Hartford Baseball Grounds	Hartford, CT	Baseball	1872-1877

Continued

Table 4: List of all major professional sport facilities, location, type of sport contested, and estimated usage of pre-modern era buildings

Table 4 continued

Madison Avenue Grounds	Baltimore	Baseball	1873-1884
Waverly Fairgrounds	Elizabeth, NJ	Baseball	1873
Star Park I	Syracuse	Baseball	1874-1879
23rd St. Grounds	Chicago	Baseball	1874-1877
Perry Park	Keokuk, IO	Baseball	1874-1875
Sportsman Park I	St. Louis	Baseball	1875-1892
Brewster Park	New Haven, CT	Baseball	1875-1877
Red Stocking Baseball Park	St. Louis	Baseball	1875-1877
Avenue Grounds	Cincinnati	Baseball	1875-1879
Sulphur Dell I	Nashville, TN	Baseball	1876-1926
Palace Park of America I	St. Louis	Baseball	1876-1884
National League Park	Louisville, KY	Baseball	1876-1877
Recreation Park I	Pittsburgh	Baseball	1876-1887
Lake Front Grounds II	Chicago	Baseball	1878-1883
Milwaukee Baseball Grounds	Milwaukee	Baseball	1878
Exposition Park I	Pittsburgh	Baseball	1878-1884
Messer Street Grounds	Providence	Baseball	1878-1885
Riverside Park	Buffalo	Baseball	1879-1883
National League Park I	Cleveland	Baseball	1879
Putnam Grounds	Troy, NY	Baseball	1879
Recreation Park I	Detroit	Multi-use	1879-1881
Bank Street Grounds	Cincinnati	Baseball	1880-1884
Recreation Park II	Detroit	Baseball	1881-1888
Eclipse Park I	Louisville, KY	Baseball	1882-1893
Oakdale Park	Philadelphia	Baseball	1882
Troy Ball Club Grounds	Troy, NY	Baseball	1882
Oriole Park I	Baltimore	Baseball	1882-1891
Union Park I	Baltimore	Baseball	1882-1889
Sportsmans Park II	St. Louis	Baseball	1882-1891
Lake Front Grounds III	Chicago	Baseball	1883-1884
Swinney Park	Fort Wayne, IN	Baseball	1883
Recreation Park I	Columbus, OH	Baseball	1883-1900

Continued

Table 4 continued

Polo Grounds I East and West	New York City	Baseball	1883-1888
Recreation Park	Philadelphia	Baseball	1883-1886
Washington Park I	Brooklyn	Baseball	1883-1889
Ridgewood Park	Brooklyn	Baseball	1883-1890
Metropolitan Park	New York City	Baseball	1884
Belair Lot	Baltimore	Baseball	1884
Union Park	Boston	Baseball	1884
League Park I	Cincinnati	Baseball	1884-1893
Columbia Park	Altoona, PA	Baseball	1884
Dartmouth Street Grounds	Boston	Baseball	1884
Olympic Park I	Buffalo	Baseball	1884-1885
South Side Park I	Chicago	Baseball	1884-1890
Bruce Park	Indianapolis	Baseball	1884-1887
Athletic Park	Kansas City	Baseball	1884-1885
Wright Street Grounds	Milwaukee	Baseball	1884-1888
Keystone Park	Philadelphia	Baseball	1884
Virginia Park	Richmond, VA	Baseball	1884
Palace Park of America II	St. Louis	Baseball	1884-1885
League Park	Toledo, OH	Baseball	1884
Capital Grounds	Washington, D.C.	Baseball	1884-1889
Union Association Grounds	Wilmington, DE	Baseball	1884
Athletic Park	Washington, D.C.	Baseball	1884
Vandeventer Lot I	St. Louis	Baseball	1885-1886
Robison Field I	St. Louis	Baseball	1885-1893
West Side Grounds	Chicago	Baseball	1885-1915
West Side Park	Chicago	Baseball	1885-1891
Association Grounds I	Kansas City	Baseball	1886-1888
Swampoodle Grounds	Washington, D.C.	Baseball	1886-1889
Star Park II	Syracuse	Baseball	1886-1890
Jersey Street Park	Washington, D.C.	Baseball	1886-1889
Culver Field I	Rochester, NY	Baseball	1886-1892
Recreation Park II	Pittsburgh	Baseball	1887-1890
Borchert Field	Milwaukee	Baseball	1887-1954
Athletic Park	Indianapolis	Baseball	1887-1889
National League Park II	Cleveland	Baseball	1887-1890

Continued

Table 4 continued

Philadelphia Baseball Grounds I	Philadelphia	Baseball	1887-1894
South End Grounds II	Boston	Baseball	1888-1894
Recreation Park II	Columbus, OH	Baseball	1889-1891
Polo Grounds II	New York City	Baseball	1889-1890
Olympic Park II	Buffalo	Baseball	1889-1923
Association Grounds II	Kansas City	Baseball	1889-1892
Exposition Park	Kansas City	Baseball	1889-1902
Washinton Park II	Brooklyn	Baseball	1889-1891
Congress Street Grounds	Boston	Baseball	1890-1894
Brotherhood Park	Cleveland	Baseball	1890
Brotherhood Park	Philadelphia	Baseball	1890-1891
Exposition Park II	Pittsburgh	Multi-use	1890-1915
Eastern Park	Brooklyn	Multi-use	1890-1897
Speranza Park	Toledo, OH	Baseball	1890-1903
Congress Street Grounds	Boston	Baseball	1890-1894
South Side Park II	Chicago	Baseball	1890-1893
Mahaffey Park	Canton, OH	Multi-use	1890-1926
Athletic Park	St. Paul, MN	Baseball	1891-1896
Oriole Park II	Baltimore	Baseball	1891-1894
Boundary Field	Washington, D.C.	Baseball	1891-1899
Pendleton Park	Cincinnati	Baseball	1891
Griffith Stadium I	Washington, D.C.	Baseball	1891-1901
Washington Park III	Brooklyn	Baseball	1891-1898
Polo Grounds III	New York City	Baseball	1891-1905
League Park I	Cleveland	Baseball	1891-1909
West Side Grounds	Chicago	Baseball	1893-1915
Sportsmans Park III	St. Louis	Baseball	1893-1898
Robison Field II	St. Louis	Baseball	1893-1909
South Side Park III	Chicago	Baseball	1893-1900
Eclipse Park II	Louisville, KY	Baseball	1893-1899
League Park II	Cincinnati	Baseball	1894-1901
South End Grounds III	Boston	Baseball	1894-1914
Vanderbeck Park I	Detroit	Baseball	1894-1895
Oriole Park III	Baltimore	Baseball	1894-1899
Vanderbeck Park II	Detroit	Baseball	1895
Franklin Field I	Philadelphia	Baseball	1895-1922
Philadelphia Baseball Grounds II	Philadelphia	Multi-use	1895-1938
Nicollet Park I	Minneapolis	Baseball	1896-1940

Continued

Table 4 continued

Bennett Park I	Detroit	Baseball	1896-1900
Athletic Park	Latrobe, PA	Football	1895
Greensburg Athletic Field	Greensburg, PA	Football	1895
Pittsburgh Athletic Club Park	Pittsburgh	Football	1895
Washington Park IV	Brooklyn	Baseball	1898-1915
Sportsmans' Park IV	St. Louis	Baseball	1898-1902
Neil Park	Columbus, OH	Multi-use	1900-1905
South Side Park IV	Chicago	Baseball	1900-1940
Burns Park	Detroit	Baseball	1901-1910
Bennett Park II	Detroit	Baseball	1901-1908
Lloyd Street Grounds	Milwaukee	Baseball	1901
Columbia Park I	Philadelphia	Multi-use	1901-1905
Oriole Park IV	Baltimore	Baseball	1901-1914
Huntington Avenue Grounds	Boston	Multi-use	1901-1911
Griffith Stadium II	Washington, D.C.	Baseball	1901-1903
Palace of Fans	Cincinnati	Baseball	1902-1911
Sportsman Park V	St. Louis	Baseball	1902-1908

APPENDIX B
EARLY MODERN ERA

League	Year	Games Played	Total	Average
Union League	1884	422	411,000	974
Players League	1890	525	980,887	1,868
American Association	1882	233	400,000	1,717
American Association	1883	389	1,005,000	2,584
American Association	1884	640	1,079,000	1,686
American Association	1885	444	817,000	1,840
American Association	1886	544	1,116,563	2,137
American Association	1887	536	1,312,397	2,449
American Association	1888	524	968,606	1,848
American Association	1889	546	1,229,690	2,252
American Association	1890	511	803,200	1,572
American Association	1891	547	1,173,000	2,144
Average		488.4166667	941,362	1,923

Table 1: Union League, Players League, and American Association total and average game attendance figures

League	Year	Games Played	Total	Average
National	1876	257	267,441	1,041
National	1877	177	204,700	1,156
National	1878	180	223,606	1,242
National	1879	316	251,783	797
National	1880	332	256,428	772
National	1881	334	301,236	902
National	1882	334	404,348	1,211
National	1883	390	611,154	1,567
National	1884	447	616,328	1,379
National	1885	442	713,807	1,615
National	1886	480	959,744	1,999
National	1887	492	1,401,686	2,849
National	1888	532	1,273,180	2,393
National	1889	518	1,352,555	2,611
National	1890	471	728,564	1,547
National	1891	481	1,200,730	2,496
National	1892	615	1,329,632	2,162
National	1893	528	1,808,069	3,424
National	1894	532	1,817,573	3,416
National	1895	532	2,208,271	4,151
National	1896	525	2,143,525	4,083
National	1897	540	2,202,308	4,078
National	1898	611	1,945,947	3,185
National	1899	613	2,217,751	3,618
National	1900	569	1,829,490	3,215
National	1901	561	1,920,031	3,423
National	1902	562	1,683,012	2,995
National	1903	560	2,390,362	4,269
National	1904	623	2,664,271	4,277
National	1905	620	2,734,310	4,410
National	1906	615	2,781,213	4,522
National	1907	616	2,640,220	4,286
National	1908	622	3,512,108	5,646
National	1909	620	3,496,420	5,639
National	1910	621	2,935,758	4,727
National	1911	623	3,231,768	5,187
National	1912	613	2,735,759	4,463

Continued

Table 2: National League average and total attendance from 1876 to 2004

Table 2 continued

National	1913	620	2,831,531	4,567
National	1914	625	1,707,397	2,732
National	1915	624	2,430,142	3,894
National	1916	622	3,051,634	4,906
National	1917	625	2,361,136	3,778
National	1918	508	1,372,127	2,701
National	1919	558	2,878,203	5,158
National	1920	617	4,036,575	6,542
National	1921	613	3,986,984	6,504
National	1922	620	3,941,820	6,358
National	1923	617	4,069,817	6,596
National	1924	614	4,340,644	7,069
National	1925	612	4,353,704	7,114
National	1926	618	4,920,399	7,962
National	1927	617	5,309,917	8,606
National	1928	614	4,881,097	7,950
National	1929	616	4,925,713	7,996
National	1930	618	5,446,532	8,813
National	1931	618	4,583,815	7,417
National	1932	618	3,841,334	6,216
National	1933	618	3,162,821	5,118
National	1934	608	3,200,105	5,263
National	1935	617	3,657,309	5,928
National	1936	620	3,903,691	6,296
National	1937	617	4,204,228	6,814
National	1938	610	4,560,827	7,477
National	1939	616	4,707,177	7,642
National	1940	617	4,389,693	7,115
National	1941	622	4,777,647	7,681
National	1942	613	4,353,353	7,102
National	1943	621	3,769,342	6,070
National	1944	623	3,974,588	6,380
National	1945	618	5,260,703	8,512
National	1946	621	8,902,107	14,335
National	1947	620	10,388,470	16,756
National	1948	619	9,770,743	15,785
National	1949	622	9,484,718	15,249
National	1950	618	8,320,616	13,464
National	1951	622	7,244,002	11,646
National	1952	618	6,339,148	10,258

Continued

Table 2 continued

National	1953	622	7,419,721	11,929
National	1954	616	8,013,519	13,009
National	1955	616	7,674,412	12,458
National	1956	621	8,649,567	13,928
National	1957	619	8,819,601	14,248
National	1958	616	10,164,596	16,501
National	1959	620	9,994,525	16,120
National	1960	619	10,684,963	17,262
National	1961	619	8,731,502	14,106
National	1962	812	11,360,159	13,990
National	1963	811	11,382,227	14,035
National	1964	812	12,045,190	14,834
National	1965	813	13,581,136	16,705
National	1966	809	15,015,471	18,561
National	1967	810	12,971,430	16,014
National	1968	813	11,785,358	14,496
National	1969	973	15,094,946	15,514
National	1970	971	16,662,198	17,160
National	1971	972	17,324,857	17,824
National	1972	930	15,529,730	16,699
National	1973	971	16,675,322	17,173
National	1974	972	16,978,314	17,467
National	1975	971	16,600,490	17,096
National	1976	972	16,660,529	17,140
National	1977	972	19,070,228	19,620
National	1978	971	20,106,921	20,707
National	1979	971	21,178,419	21,811
National	1980	973	21,124,084	21,710
National	1981	644	12,478,390	19,376
National	1982	972	21,507,425	22,127
National	1983	974	21,549,285	22,125
National	1984	971	20,781,436	21,402
National	1985	971	22,292,154	22,958
National	1986	969	22,333,471	23,048
National	1987	971	24,734,155	25,473
National	1988	969	24,499,268	25,283
National	1989	973	25,323,834	26,027
National	1990	972	24,491,508	25,197
National	1991	970	24,696,172	25,460
National	1992	972	24,111,135	24,806

Continued

Table 2 continued

National	1993	1,135	36,924,573	32,533
National	1994	803	25,807,819	32,139
National	1995	1,007	25,110,248	24,936
National	1996	1,134	30,379,288	26,789
National	1997	1,134	31,885,368	28,118
National	1998	1,297	38,426,784	29,627
National	1999	1,295	38,322,848	29,593
National	2000	1,297	39,683,109	30,596
National	2001	1,296	39,727,374	30,654
National	2002	1,277	36,721,009	28,756
National	2003	1,281	36,723,411	28,688
National	2004	1,279	40,203,041	31,433

League	Year	Games Played	Total	Average
American	1901	549	1,683,584	3,067
American	1902	553	2,206,454	3,990
American	1903	554	2,344,888	4,233
American	1904	626	3,024,028	4,831
American	1905	617	3,120,752	5,058
American	1906	613	2,938,076	4,793
American	1907	617	3,398,764	5,509
American	1908	622	3,611,366	5,806
American	1909	620	3,739,870	6,032
American	1910	628	3,270,689	5,208
American	1911	614	3,339,514	5,439
American	1912	619	3,263,631	5,272
American	1913	614	3,526,805	5,744
American	1914	631	2,747,591	4,354
American	1915	621	2,434,684	3,921
American	1916	625	3,451,885	5,523
American	1917	622	2,858,858	4,596
American	1918	508	1,707,999	3,362
American	1919	560	3,654,236	6,525
American	1920	617	5,084,300	8,240
American	1921	616	4,620,328	7,501
American	1922	618	4,874,355	7,887
American	1923	616	4,602,589	7,472
American	1924	617	5,255,439	8,518
American	1925	616	5,186,851	8,420
American	1926	616	4,912,583	7,975
American	1927	619	4,612,951	7,452
American	1928	617	4,221,188	6,841
American	1929	613	4,662,470	7,606
American	1930	616	4,685,730	7,607
American	1931	618	3,883,292	6,284
American	1932	615	3,133,232	5,095
American	1933	608	2,926,210	4,813
American	1934	615	3,763,606	6,120
American	1935	611	3,688,007	6,036
American	1936	618	4,178,922	6,762
American	1937	622	4,735,835	7,614
American	1938	613	4,445,684	7,252
American	1939	615	4,270,602	6,944

Continued

Table 3: American League average and total attendance from 1901 to 2004

Table 3 continued

American	1940	619	5,433,791	8,778
American	1941	622	4,911,956	7,897
American	1942	611	4,200,216	6,874
American	1943	617	3,696,569	5,991
American	1944	619	4,798,158	7,751
American	1945	612	5,580,420	9,118
American	1946	621	9,621,182	15,493
American	1947	623	9,486,069	15,226
American	1948	618	11,150,099	18,042
American	1949	618	10,730,647	17,364
American	1950	620	9,142,361	14,746
American	1951	617	8,882,674	14,397
American	1952	621	8,293,896	13,356
American	1953	618	6,964,076	11,269
American	1954	621	7,922,364	12,757
American	1955	618	8,942,971	14,471
American	1956	618	7,893,683	12,773
American	1957	616	8,196,218	13,306
American	1958	619	7,296,034	11,787
American	1959	618	9,149,454	14,805
American	1960	617	9,226,526	14,954
American	1961	811	10,163,016	12,531
American	1962	809	10,015,056	12,380
American	1963	808	9,094,847	11,256
American	1964	814	9,235,151	11,345
American	1965	810	8,860,764	10,939
American	1966	806	10,166,738	12,614
American	1967	810	11,336,923	13,996
American	1968	812	11,317,387	13,938
American	1969	973	12,134,720	12,471
American	1970	973	12,085,135	12,420
American	1971	966	11,868,560	12,286
American	1972	929	11,438,538	12,313
American	1973	972	13,433,604	13,821
American	1974	973	13,047,294	13,409
American	1975	963	13,189,423	13,696
American	1976	967	14,657,802	15,158
American	1977	1,131	19,639,551	17,365
American	1978	1,131	20,529,965	18,152
American	1979	1,128	22,371,979	19,833

Continued

Table 3 continued

American	1980	1,132	21,890,052	19,338
American	1981	750	14,065,986	18,755
American	1982	1,135	23,080,449	20,335
American	1983	1,135	23,991,053	21,137
American	1984	1,134	23,961,427	21,130
American	1985	1,132	24,532,225	21,672
American	1986	1,134	25,172,732	22,198
American	1987	1,134	27,277,351	24,054
American	1988	1,131	28,499,636	25,199
American	1989	1,133	29,849,262	26,345
American	1990	1,133	30,332,260	26,772
American	1991	1,134	32,117,588	28,322
American	1992	1,134	31,759,331	28,006
American	1993	1,134	33,333,365	29,395
American	1994	797	24,202,197	30,367
American	1995	1,010	25,358,988	25,108
American	1996	1,133	29,718,093	26,230
American	1997	1,132	31,283,321	27,635
American	1998	1,133	32,174,363	28,397
American	1999	1,133	31,816,532	28,082
American	2000	1,132	31,675,798	27,982
American	2001	1,133	32,853,727	28,997
American	2002	1,120	30,669,065	27,383
American	2003	1,130	30,907,148	27,351
American	2004	1,121	32,765,912	29,229

Name	Left Field	Left Center	Center Field	Right Center	Right Field	Backstop
Hilltop Park	365	378	542	424	400	91
Shibe Park I	360	393	515	393	360	90
Forbes Field I	360	462	422	416	376	110
Swayne Field I	472	N/A	482	N/A	327	72
Comiskey Park I	363	382	420	382	363	98
League Park II	385	415	420	400	290	76
Mack Field	N/A	N/A	N/A	N/A	325	N/A
Griffith Stadium IV	407	391	421	378	328	61
Polo Grounds IV	279	455	483	440	257	N/A
Fenway Park I	321	388	488	374	314	68
Redland Field I	360	380	420	383	360	38
Tiger Stadium I	345	365	467	370	370	54
Ebbets Field I	421	365	450	500	301	64
Braves Field I	402	N/A	550	N/A	402	75
Wrigley Field I	310	364	440	364	356	62
Oriole Park III	305	N/A	450	N/A	335	N/A
Federal Field	290	N/A	400	N/A	300	N/A
Federal League Park	375	N/A	400	N/A	310	N/A
Handlan's Park	325	N/A	375	N/A	300	N/A
Harrison Park	375	N/A	450	N/A	375	N/A
Kentucky Fairgrounds	340	N/A	410	N/A	300	N/A

Continued

Table 4: Dimensions of new constructed ballparks in feet

Table 4 continued

Nash Employees' Ath. Field	315	N/A	400	N/A	335	N/A
Parkway Field	331	N/A	512	N/A	350	N/A
Offerman Stadium	321	345	400	365	297	21
Yankee Stadium I	301	457	461	429	295	82
Muehlebach Field	350	408	450	382	350	N/A
Sportsman's Park VII	353	375	450	354	310	75
Wrigley Field	340	345	412	345	339	56
Davids Stadium	305	N/A	410	N/A	305	N/A
Civic Stadium	302	N/A	393	N/A	336	N/A
Sulpher Dell II	334	N/A	421	N/A	262	N/A
Redwing Stadium	322	445	410	360	315	N/A
Seals Stadium I	365	N/A	410	400	355	55.4
Cleveland Municipal Stadium I	322	435	470	435	322	60
Red Bird Stadium	415	N/A	450	337	315	N/A
Fenway Park II	312	379	389	405	334	60
Gilmore Stadium	335	385	407	385	335	34
War Memorial Stadium I	350	N/A	410	N/A	310	N/A
Roosevelt Stadium	330	397	411	397	330	N/A
Sick's Stadium I	305	345	408	345	320	N/A
Mile High Stadium I	348	395	420	400	366	N/A
Memorial Stadium I	309	446	445	446	309	78
Average	344.51	395.8	437.66	392.93	329.5	67.29

Name	Cost	Cost in 2005
Harvard Stadium I	\$295,000	\$6,221,550
Hilltop Park	\$275,000	\$5,799,750
Columbia Park II	\$40,000	\$843,600
Luna Park	\$15,000	\$316,350
Shibe Park I	\$315,249	\$6,648,601
Forbes Field I	\$2,000,000	\$42,180,000
Comiskey Park I	\$750,000	\$15,817,500
Fenway Park I	\$650,000	\$12,701,000
Redland Field I	\$225,000	\$4,396,500
Tiger Stadium I	\$500,000	\$9,770,000
Ebbets Field I	\$750,000	\$14,655,000
Yale Bowl	\$750,000	\$14,655,000
Braves Field I	\$800,000	\$15,632,000
Wrigley Field I	\$250,000	\$4,885,000
Oriole Park III	\$82,000	\$1,602,280
Federal Field	\$130,000	\$2,540,200
Federal League Park	\$100,000	\$1,954,000
Harrison Park	\$100,000	\$1,954,000
Husky Stadium I	\$600,000	\$6,114,000
Franklin Field II	\$798,342	\$8,135,105
Vanderbilt Stadium I	\$314,000	\$3,199,660
Titan Stadium	\$200,000	\$2,038,000
Parkway Field	\$100,000	\$1,019,000
Municipal Stadium I	\$458,000	\$4,667,020
Shaw Stadium	\$80,000	\$815,200
Offerman Stadium	\$256,000	\$2,608,640
Yankee Stadium I	\$2,500,000	\$25,475,000
Muehlebach Field	\$400,000	\$4,076,000
Memorial Stadium I	\$1,700,000	\$17,323,000
Los Angeles Memorial Coliseum I	\$954,873	\$9,730,156
Memorial Stadium	\$700,000	\$7,133,000
Soldier Field I	\$7,900,000	\$80,501,000
Pitt Stadium	\$2,100,000	\$21,399,000
Sportsman's Park VII	\$500,000	\$5,095,000
Wrigley Field	\$1,100,000	\$11,209,000
Kezar Stadium I	\$300,000	\$3,057,000
Legion Field I	\$439,000	\$4,473,410
Tulane Stadium I	\$300,000	\$3,057,000
Davids Stadium	\$500,000	\$5,095,000
Sesquicentennial Stadium	\$3,000,000	\$30,570,000
Redwing Stadium	\$400,000	\$4,076,000
Skelly Stadium I	\$275,000	\$2,827,000

Continued

Table 5: Construction cost of new constructions in early modern era

Table 5 continued

Seals Stadium I	\$600,000	\$6,168,000
Cleveland Municipal Stadium I	\$2,844,000	\$29,236,320
Red Bird Stadium	\$450,000	\$4,626,000
Cotton Bowl I	\$328,000	\$3,371,840
Fenway Park II	\$1,250,000	\$12,850,000
Orange Bowl I	\$340,000	\$3,495,200
War Memorial Stadium I	\$3,000,000	\$30,840,000
Sick's Stadium I	\$350,000	\$3,598,000
Jeppessen Stadium I	\$650,000	\$8,235,500
Memorial Stadium I	\$125,000	\$1,586,750
Mile High Stadium I	\$300,000	\$3,801,000
Memorial Stadium I	\$6,500,000	\$47,970,000
Byrd Stadium I	\$1,000,000	\$7,380,000
Average	\$938,899	\$10,716,802

Name	Original Capacity
Harvard Stadium I	30,000
Hilltop Park	16,000
Archbold Stadium I	20,000
Agathon Field	6,000
Columbia Park II	13,600
Luna Park	4,600
Shibe Park I	20,000
Forbes Field I	25,000
Swayne Field I	10,000
Comiskey Park I	32,000
League Park II	21,414
Mack Field	6,000
Griffith Stadium IV	27,400
Polo Grounds IV	34,000
Fenway Park I	27,000
Redland Field I	20,000
Tiger Stadium I	23,000
Ebbets Field I	25,000
Yale Bowl	50,000
Braves Field I	40,000
Wrigley Field I	14,000
Gordon and Koppel Field	12,000
Oriole Park III	15,000
Federal Field	20,000
Federal League Park	20,000
Handlan's Park	20,000
Harrison Park	21,000
Staley Field	2,000
Balboa Stadium I	23,000
Hagemeister Park	1,200
Armory Park	3,500
Massilon Driving Park	5,000
Triangle Stadium	4,000
Husky Stadium I	30,000
Kinsley Park	9,000
Evansville Field	5,000
Franklin Field II	54,000
Vanderbilt Stadium I	21,000
Kentucky Fairgrounds	20,000
Titan Stadium	20,000
Athletic Park II	4,000
Nash Employees' Athletic Field	3,500

Continued

Table 6: Seating capacity and average for newly constructed early modern era facilities

Table 6 continued

Frankford Stadium	35,000
Parkway Field	13,200
Municipal Stadium I	43,000
Shaw Stadium	9,400
Offerman Stadium	14,000
Bellevue Park	4,000
Yankee Stadium I	57,545
Muehlebach Field	17,476
Memorial Stadium I	67,000
Los Angeles Memorial Coliseum I	74,000
Memorial Stadium	50,000
Nippert Stadium I	12,000
Fawcett Stadium I	22,375
Soldier Field I	55,000
Luna Bowl	15,000
Pitt Stadium	56,150
Sportsman's Park VII	34,000
Wrigley Field	22,000
City Stadium I	5,389
Newark Schools Stadium	16,000
Kezar Stadium I	10,000
Gator Bowl I	7,600
Legion Field I	21,000
Tulane Stadium I	35,000
Davids Stadium	19,000
Sesquicentennial Stadium	100,000
Honolulu Stadium	25,000
Civic Stadium	30,000
Sulpher Dell II	7,000
Redwing Stadium	14,500
Skelly Stadium I	14,500
Universal Stadium	10,000
Seals Stadium I	16,500
Cleveland Municipal Stadium I	78,512
Red Bird Stadium	12,000
Cotton Bowl I	45,507
Fenway Park II	33,817
Orange Bowl I	23,330
Downing Stadium	25,000
Gilmore Stadium	11,000
War Memorial Stadium I	35,000
Roosevelt Stadium	26,000
Sick's Stadium I	12,000
Rubber Bowl	35,202

Continued

Table 6 continued

Alamo Stadium	32,000
Jeppessen Stadium I	14,500
St. Xavier Stadium	10,000
Memorial Stadium I	20,000
Mile High Stadium I	17,000
Memorial Stadium I	31,000
Byrd Stadium I	34,680
Rice Stadium	72,000
Average	24,249

Name	Surface Area of New Construction in Acres
Harvard Stadium I	6
Hilltop Park	9.6
Archbold Stadium I	6.5
Shibe Park I	6
Forbes Field I	7
Comiskey Park I	13.77
Fenway Park I	7.9
Tiger Stadium I	10
Ebbets Field I	5.7
Yale Bowl	12.5
Braves Field I	13.17
Wrigley Field I	4
Husky Stadium I	9.62
Franklin Field II	6.38
Yankee Stadium I	10
Los Angeles Memorial Coliseum I	10
Skelly Stadium I	4.83X
Universal Stadium	3.33X
Seals Stadium I	5.5X
Cleveland Municipal Stadium I	13.22X
Red Bird Stadium	4X
Cotton Bowl I	15.17X
Orange Bowl I	7.78X
Downing Stadium	8.33X
Gilmore Stadium	3.67X
War Memorial Stadium I	11.67X
Roosevelt Stadium	8.67X
Sick's Stadium I	4X
Rubber Bowl	11.73X
Alamo Stadium	10.67X
Jeppessen Stadium I	4.83X
St. Xavier Stadium	3.33X
Memorial Stadium I	6.67X
Mile High Stadium I	5.67X
Memorial Stadium I	10.33X
Byrd Stadium I	11.56X
Rice Stadium	24X
Average	8.57

Table 7: Acreage size found and others marked with an X based on Serby's (1930) recommendation of one acre per 3,000 spectators

Name	Length of New Construction In Months
Harvard Stadium I	4.5
Hilltop Park	4
Archbold Stadium I	27
Shibe Park I	9
Forbes Field I	4
Comiskey Park I	5
Griffith Stadium IV	5
Polo Grounds IV	5
Fenway Park I	12
Redland Field I	16
Tiger Stadium I	12
Ebbets Field I	12
Oriole Park III	3
Husky Stadium I	7
Franklin Field II	5
Municipal Stadium I	12
Los Angeles Memorial Coliseum I	18
Soldier Field I	24
Wrigley Field	20
Kezar Stadium I	12
Skelly Stadium I	6
Seals Stadium I	15
Cleveland Municipal Stadium I	12
Cotton Bowl I	24
Fenway Park II	X
Orange Bowl I	12
Sick's Stadium I	15
Jeppessen Stadium I	17
Mile High Stadium I	12
Rice Stadium	9
Average	11.67

Table 8: Length of construction for early modern baseball and football facilities

Name	Cost	Cost in 2005
Washington Park III	\$22,000	\$463,980
Shibe Park II	\$76,000	\$1,485,040
Tiger Stadium II	\$500,000	\$5,095,000
Shibe Park III	\$300,000	\$3,057,000
Soldier Field II	\$13,000,000	\$132,470,000
Athletic Park III	\$40,000	\$407,600
Comiskey Park II	\$1,000,000	\$10,190,000
Los Angeles Memorial Coliseum II	\$1,750,000	\$17,990,000
Braves Field II	\$250,000	\$2,570,000
Redland Field III	\$50,000	\$514,000
Husky Stadium II	\$1,700,000	\$17,476,000
Wrigley Field V	\$200,000	\$2,056,000
Tiger Stadium IV	\$1,000,000	\$10,280,000
Ebbets Field III	\$200,000	\$2,056,000
Tulane Stadium III	\$550,000	\$5,654,000
Tulane Stadium IV	\$500,000	\$6,335,000
Sportsmans Park VIII	\$750,000	\$9,502,500
Shibe Park IV	\$300,000	\$3,801,000
Husky Stadium III	\$1,700,000	\$12,546,000
Average	\$1,257,263	\$12,839,427

Table 9: Cost of renovation to early modern professional baseball and football facilities

Name	Left Field	Left Center	Center Field	Right Center	Right Field	Backstop
Polo Grounds V	335	N/A	433	N/A	335	N/A
Bennett Park III	373	N/A	381	N/A	328	N/A
Sportsman's Park VI	368	379	430	354	335	60
Robison Field III	380	400	435	320	290	N/A
Bennett Park IV	336	N/A	383	N/A	328	N/A
Shibe Park II	378	393	468	390	340	90
Wrigley Field II	345	364	440	364	356	62
Griffith Stadium V	424	380	421	378	326	61
Polo Grounds V	279	455	483	440	257	N/A
Tiger Stadium II	367	365	467	370	370	N/A
Shibe Park III	312	393	468	393	307	N/A
Forbes Field II	360	457	435	375	300	110
Athletic Park III	266	N/A	395	N/A	296	N/A
Redland Field II	339	380	395	383	377	58
Comiskey Park II	352	382	440	382	363	71
Wrigley Field IV	345	364	440	364	356	62
Yankee Stadium II	301	490	487	429	295	82
Ebbets Field II	353	365	399	415	296	64
Braves Field II	337	N/A	390	N/A	319	N/A
Redland Field III	339	383	407	383	377	58

Continued

Table 10: Dimensions of renovated baseball and football facilities of the early modern era

Table 10 continued

Wrigley Field V	350	364	410	364	310	62
Yankee Stadium II	301	402	461	407	296	82
Tiger Stadium IV	340	365	450	370	315	54
Sulphur Dell III	334	N/A	421	N/A	262	N/A
Ebbets Field III	360	360	399	352	297	70
Redland Field IV	328	380	387	383	366	66
Forbes Field III	335	457	435	416	300	84
Fenway Park III	315	379	389	382	304	60
Nicollet Park II	334	N/A	432	330	279	88
Yankee Stadium IV	301	457	461	407	296	80
Sportsmans Park VIII	351	379	422	354	310	67
Average	339.94	395.5417	427.871	380.2	318.9032	71

Name	Capacity
Griffith Stadium III	10,000
Polo Grounds V	23,000
Bennett Park III	10,000
Washington Park III	20,000
Sportsman's Park VI	18,000
Robison Field III	21,000
Bennett Park IV	14,000
Shibe Park II	20,000
Wrigley Field II	18,000
Archbold Stadium II	40,000
Griffith Stadium V	32,000
Wrigley Field III	20,000
Polo Grounds V	55,000
Tiger Stadium II	30,000
Municipal Stadium II	80,000
Shibe Park III	33,000
Forbes Field II	25,000
Soldier Field II	100,000
Athletic Park III	14,000
Redland Field II	30,000
Comiskey Park II	46,552
Wrigley Field IV	38,396
Yankee Stadium II	82,000
Harvard Stadium II	30,898
Gator Bowl II	10,000
City Stadium II	18,500
Los Angeles Memorial Coliseum II	105,000
Ebbets Field II	32,000
Braves Field II	40,000
Redland Field III	30,000
Tiger Stadium III	36,000
Husky Stadium II	40,000
Nippert Stadium II	24,000
Wrigley Field V	38,396
Tulane Stadium II	49,000
Yankee Stadium II	70,000
Tiger Stadium IV	52,416
Sulphur Dell III	8,500
Swayne Field II	14,800
Ebbets Field III	32,000
Redland Field IV	33,000
Forbes Field III	35,000

Continued

Table 11: Seating capacity totals following renovation efforts on early modern professional baseball and football facilities

Table 11 continued

Tulane Stadium III	69,000
Fenway Park III	33,817
Nicollet Park II	8,500
Orange Bowl II	35,030
Yankee Stadium IV	70,000
Kezar Stadium II	59,942
Orange Bowl III	59,578
Skelly Stadium II	20,000
Tulane Stadium IV	74,000
Cotton Bowl II	67,000
Fenway Park IV	33,817
Sportsmans Park VIII	30,500
Gator Bowl III	16,000
Shibe Park IV	33,000
Cotton Bowl III	75,000
Husky Stadium III	55,000
Orange Bowl IV	64,552
Average	38,715

Name	City	Type/Sport	New Construction/Renovation	Estimated Lifespan
Harvard Stadium I	Cambridge, MA	Football	New Construction	1903-1929
Hilltop Park	New York City	Baseball	New Construction	1903-1914
Griffith Stadium III	Washington, D.C.	Baseball	Renovation	1904-1910
Archbold Stadium I	Syracuse	Football	New Construction	1905-1920
Agathon Field	Massillon, OH	Football	New Construction	1905
Columbia Park II	Philadelphia	Baseball	New Construction	1905-1908
Polo Grounds V	New York City	Baseball	Renovation	1905-1911
Luna Park	Cleveland	Baseball	New Construction	1905-1920
Eclipse Park III	Louisville, KY	Baseball	Renovation	1907-1922
Bennett Park III	Detroit	Baseball	Renovation	1908-1910
Washington Park III	Brooklyn	Baseball	Renovation	1908-1915
Bay Street Park	Rochester, NY	Multi-use	New Construction	1908-1928
Sportsman's Park VI	St. Louis	Multi-use	Renovation	1909-1925
Robison Field III	St. Louis	Baseball	Renovation	1909-1920
Shibe Park I	Philadelphia	Multi-use	New Construction	1909-1913
Forbes Field I	Pittsburgh	Baseball	New Construction	1909-1925
Swayne Field I	Toledo, OH	Multi-use	New Construction	1909-1938
Comiskey Park I	Chicago	Multi-use	New Construction	1910-1926
Bennett Park IV	Detroit	Baseball	Renovation	1910-1911
League Park II	Cleveland	Multi-use	New Construction	1910-1951
Mack Field	Detroit	Multi-use	New Construction	1910-1929
Griffith Stadium IV	Washington, D.C.	Baseball	New Construction	1911-1920
Polo Grounds IV	New York City	Baseball	New Construction	1911-1923
Fenway Park I	Boston	Baseball	New Construction	1912-1934
Redland Field I	Cincinnati	Baseball	New Construction	1912-1927
Tiger Stadium I	Detroit	Multi-use	New Construction	1912-1923
Shibe Park II	Philadelphia	Baseball	Renovation	1913-1925
Ebbets Field I	Brooklyn	Multi-use	New Construction	1913-1932

Continued

Table 12: List of renovated and new constructions for early modern football and baseball sport facilities

Table 12 continued

Yale Bowl	New Haven, CT	Football	New Construction	1914-present
Braves Field I	Boston	Multi-use	New Construction	1914-1934
Wrigley Field I	Chicago	Baseball	New Construction	1914-1915
Gordon and Koppel Field	Kansas City	Baseball	New Construction	1914-1915
Oriole Park III	Baltimore	Baseball	New Construction	1914-1944
Federal Field	Buffalo	Multi-use	New Construction	1914-1915
Federal League Park	Indianapolis	Baseball	New Construction	1914
Handlan's Park	St. Louis	Baseball	New Construction	1914
Harrison Park	Newark, NJ	Baseball	New Construction	1915-1924
Wrigley Field II	Chicago	Baseball	Renovation	1915-1923
Staley Field	Chicago	Football	New Construction	1915-1920
Balboa Stadium I	San Diego	Football	New Construction	1915-1960
Hagemeister Park	Green Bay, WI	Football	New Construction	1919-1923
Armory Park	Toledo, OH	Multi-use	New Construction	1920-1923
Walnut Street Stadium	Muncie, IN	Football	New Construction	1920-1921
Archbold Stadium II	Syracuse	Football	Renovation	1920-1979
Providence Cycledrome	Providence	Football	New Construction	1920-1931
Douglas Park	Rock Island, IL	Multi-use	New Construction	1920-1925
Racine Baseball Association Field	Racine, IL	Multi-use	New Construction	1920-1926
Mitchell Field	Pottsville, PA	Baseball	New Construction	1920
Massilon Driving Park	Massilon, OH	Football	New Construction	1920
Griffith Stadium V	Washington, D.C.	Multi-use	Renovation	1920-1965
Canisius Villa	Buffalo	Football	New Construction	1920-1923
Triangle Stadium	Dayton, OH	Football	New Construction	1920-1929
Husky Stadium I	Seattle	Football	New Construction	1920-1936
Edgerton Park	Rochester, NY	Baseball	New Construction	1920s
Kinsley Park	Providence	Football	New Construction	1920s
Evansville Field	Evansville, IN	Football	New Construction	1921

Continued

Table 12 continued

Franklin Field II	Philadelphia	Football	New Construction	1922-present
Vanderbilt Stadium I	Nashville, TN	Football	New Construction	1922-1981
Elks Field	Akron, OH	Baseball	New Construction	1922
Lincoln Fairgrounds	Marion, OH	Football	New Construction	1922
Kentucky Fairgrounds	Louisville, KY	Multi-use	New Construction	1922-1957
Titan Stadium	Detroit	Football	New Construction	1922-1939
Athletic Park II	Milwaukee	Multi-use	New Construction	1922-1927
Nash Employees' Athletic Field	Kenosha, WI	Football	New Construction	1922-1924
Frankford Stadium	Philadelphia	Football	New Construction	1923-1930
Athletic Park	Deluth, MN	Football	New Construction	1923-1927
Parkway Field	Louisville, KY	Baseball	New Construction	1923-1961
Municipal I	Baltimore	Football	New Construction	1923-1924
Shaw Stadium	Cleveland	Football	New Construction	1923-1938
Offerman Stadium	Buffalo	Multi-use	New Construction	1923-1960
Bellevue Park	Green Bay, WI	Football	New Construction	1923-1924
Wrigley Field III	Chicago	Baseball	Renovation	1923-1927
Yankee Stadium I	New York City	Multi-use	New Construction	1923-1928
Polo Grounds V	New York City	Multi-use	Renovation	1923-1961
Tiger Stadium II	Detroit	Baseball	Renovation	1923-1935
Muehlebach Field	Kansas City	Multi-use	New Construction	1923-1955
Memorial Stadium I	Champaign, IL	Football	New Construction	1923-1967
Los Angeles Memorial Coliseum I	Los Angeles	Football	New Construction	1923-1932
Memorial Stadium	Minneapolis	Football	New Construction	1924-
Nippert Stadium I	Cincinnati	Football	New Construction	1924-1936
Fawcett Stadium I	Canton, OH	Football	New Construction	1924-1997
Soldier Field I	Chicago	Football	New Construction	1924-1926
West Side Athletic Club	Columbus, OH	Baseball	New Construction	1924-1926

Continued

Table 12 continued

General Field	Akron, OH	Baseball	New Construction	1924-1926
Luna Bowl	Cleveland	Football	New Construction	1924-1997
Municipal Stadium II	Baltimore	Multi-use	Renovation	1925-1949
Pitt Stadium	Pittsburgh	Football	New Construction	1925-1999
Minersville Park	Pottsville, PA	Football	New Construction	1925-1928
Shibe Park III	Philadelphia	Multi-use	Renovation	1925-1949
Sportsman's Park VII	St. Louis	Baseball	New Construction	1925-1947
Wrigley Field	Los Angeles	Multi-use	New Construction	1925-1966
City Stadium I	Green Bay, WI	Football	New Construction	1925-1931
Newark Stadium	Newark, NJ	Multi-use	New Construction	1925-1930
Forbes Field II	Pittsburgh	Multi-use	Renovation	1925-1938
Kezar Stadium I	San Francisco	Football	New Construction	1925-1946
Gator Bowl I	Jacksonville, FL	Football	New Construction	1925-1929
Legion Field I	Birmingham, AL	Football	New Construction	1926-1953
Tulane Stadium I	New Orleans	Football	New Construction	1926-1937
Davids Stadium	Newark, NJ	Multi-use	New Construction	1926-1967
Sesquicent. Stadium	Philadelphia	Football	New Construction	1926-1994
Soldier Field II	Chicago	Football	Renovation	1926-1971
Honolulu Stadium	Honolulu, HA	Football	New Construction	1926-1974
East Hartford Velodrome	Hartford, CT	Football	New Construction	1926
Civic Stadium	Portland, OR	Multi-use	New Construction	1926-1985
Browning Field	Rockford, IL	Football	New Construction	1926
Sulphur Dell II	Nashville, TN	Multi-use	New Construction	1927-1938
Athletic Park III	Milwaukee	Baseball	Renovation	1927-1954
Redland Field II	Cincinnati	Baseball	Renovation	1927-1935
Comiskey Park II	Chicago	Multi-use	Renovation	1927-1960
Wrigley Field IV	Chicago	Multi-use	Renovation	1927-1937
Redwing Stadium	Rochester, NY	Multi-use	New Construction	1928-1967
Yankee Stadium II	New York City	Multi-use	Renovation	1928-1937

Continued

Table 12 continued

Harvard Stadium II	Cambridge, MA	Football	Renovation	1929-1970
Thompson's Stadium	New York City	Football	New Construction	1929-1932
Gator Bowl II	Jacksonville, FL	Football	Renovation	1929-1948
Knights of Columbus Field	Orange, NJ	Football	New Construction	1929
Skelly Stadium I	Tulsa, OK	Football	New Construction	1930-1947
Universal Stadium	Portsmouth, OH	Football	New Construction	1930-1934
City Stadium II	Green Bay, WI	Football	Renovation	1931-1956
Seals Stadium I	San Francisco	Baseball	New Construction	1931-1958
Cleveland Stadium I	Cleveland	Multi-use	New Construction	1931-1967
Red Bird Stadium	Columbus, OH	Multi-use	New Construction	1931-1989
Los Angeles Coliseum II	Los Angeles	Football	Renovation	1932-1958
Ebbets Field II	Brooklyn	Baseball	Renovation	1932-1938
Cotton Bowl I	Dallas	Football	New Construction	1932-1947
Braves Field II	Boston	Baseball	Renovation	1934-1952
Fenway Park II	Boston	Multi-use	New Construction	1934-1940
Orange Bowl I	Miami	Football	New Construction	1935-1944
Redland Field III	Cincinnati	Baseball	Renovation	1935-1938
Wisconsin State Fair Grounds	Milwaukee	Football	New Construction	1935-1951
Tiger Stadium III	Detroit	Baseball	Renovation	1935-1937
Husky Stadium II	Seattle	Football	Renovation	1936-1950
Nippert Stadium II	Cincinnati	Football	Renovation	1936-1954
Downing Stadium	Randalls Island, NY	Football	New Construction	1936-1975
Gilmore Stadium	Los Angeles	Football	New Construction	1937-1958

Continued

Table 12 continued

American Memorial Stadium	Charlotte, NC	Baseball	New Construction	1937-1975
Wrigley Field V	Chicago	Multi-use	Renovation	1937-1989
War Memorial Stadium I	Buffalo	Multi-use	New Construction	1937-1960
Tulane Stadium II	New Orleans	Football	Renovation	1937-1939
Yankee Stadium II	New York City	Multi-use	Renovation	1937-1946
Roosevelt Stadium	Jersey City, NJ	Baseball	New Construction	1937-1957
Tiger Stadium IV	Detroit	Multi-use	Renovation	1937-1977
Sick's Stadium I	Seattle	Baseball	New Construction	1938-1969
Sulphur Dell III	Nashville, TN	Multi-use	Renovation	1938-1960
Swayne Field II	Toledo, OH	Multi-use	Renovation	1938-1955
Ebbets Field III	Brooklyn	Baseball	Renovation	1938-1960
Turner Field	Hammond, IN	Football	New Construction	1938-1939
Dayton University Field	Dayton, OH	Football	New Construction	1938-1939
Redland Field IV	Cincinnati	Baseball	Renovation	1938-1957
Forbes Field III	Pittsburgh	Multi-use	Renovation	1938-1970
Tulane Stadium III	New Orleans	Football	Renovation	1939-1947
Fenway Park III	Boston	Baseball	Renovation	1940-1947
Nicollet Park II	Minneapolis	Multi-use	Renovation	1940-1955
Rubber Bowl	Akron, OH	Football	New Construction	1940-1952
Alamo Stadium	San Antonio	Football	New Construction	1940-present
Jeppessen Stadium I	Houston	Football	New Construction	1941-1960
St. Xavier Stadium	Cincinnati	Football	New Construction	1941
Memorial Stadium I	Clemson, SC	Football	New Construction	1942-1958
Orange Bowl II	Miami	Football	Renovation	1944-1947
Yankee Stadium IV	New York City	Multi-use	Renovation	1946-1975
Kezar Stadium II	San Francisco	Football	Renovation	1946-1989
Orange Bowl III	Miami	Football	Renovation	1947-1950

Continued

Table 12 continued

Skelly Stadium II	Tulsa, OK	Football	Renovation	1947-1965
Tulane Stadium IV	New Orleans	Football	Renovation	1947-1957
Cotton Bowl II	Dallas	Football	Renovation	1947-1949
Fenway Park IV	Boston	Multi-use	Renovation	1947-1976
Sportsmans Park VIII	St. Louis	Baseball	Renovation	1947-1966
Gator Bowl III	Jacksonville, FL	Football	Renovation	1948-1957
Mile High Stadium I	Denver	Multi-use	New Construction	1948-1963
Shibe Park IV	Philadelphia	Baseball	Renovation	1949-1954
Cotton Bowl III	Dallas	Football	Renovation	1949-1993
Husky Stadium III	Seattle	Football	Renovation	1950-1968
Orange Bowl IV	Miami	Football	Renovation	1950-1953
Memorial Stadium I	Baltimore	Multi-use	New Construction	1950-1954
Byrd Stadium I	College Park, MD	Football	New Construction	1950-1990
Rice Stadium	Houston	Football	New Construction	1950-1967

APPENDIX C
LATE MODERN ERA

League	Year	Games Played	Total	Average
AAFC	1946	56	1,381,901	24,677
AAFC	1947	56	1,828,964	32,660
AAFC	1948	56	1,611,379	28,775
AAFC	1949	42	1,110,435	26,439
Total		210	5,932,679	28,138
AFL IV	1960	56	924,654	16,512
AFL IV	1961	56	996,765	17,799
AFL IV	1962	56	1,147,203	20,486
AFL IV	1963	56	1,242,835	22,193
AFL IV	1964	56	1,439,800	25,711
AFL IV	1965	56	1,794,528	32,045
AFL IV	1966	63	2,156,225	34,226
AFL IV	1967	63	2,356,376	37,403
AFL IV	1968	70	2,737,961	39,114
AFL IV	1969	70	2,971,441	42,449
Total		602	17,767,788	29,515
WFL	1974		295,921	
WFL	1975		141,635	
Total			437,556	
USFL	1983	108	2,692,123	24,927
USFL	1984	162	4,389,304	27,094
USFL	1985	126	3,071,232	24,375
Total		396	10,152,659	25,465

Table 1: Rival but short-lived professional football league attendance

League	Year	Game Played	Total	Average
NFL	1934	60	492684	8211
NFL	1935	53	638178	12041
NFL	1936	54	816007	15111
NFL	1937	55	963039	17510
NFL	1938	55	937137	17039
NFL	1939	55	1071200	19476
NFL	1940	55	1063025	19328
NFL	1941	55	1108615	20157
NFL	1942	55	887920	16144
NFL	1943	40	969128	24228
NFL	1944	50	1019649	20393
NFL	1945	50	1270401	25408
NFL	1946	55	1732135	31493
NFL	1947	60	1837437	30624
NFL	1948	60	1525243	25421
NFL	1949	60	1391735	23196
NFL	1950	78	1977753	25356
NFL	1951	72	1913019	26570
NFL	1952	72	2052126	28502
NFL	1953	72	2164585	30064
NFL	1954	72	2190571	30425
NFL	1955	72	2521836	35026
NFL	1956	72	2551263	35434
NFL	1957	72	2836318	39393
NFL	1958	72	3006124	41752
NFL	1959	72	3140000	43611
NFL	1960	78	3128296	40106
NFL	1961	98	3986159	40675
NFL	1962	98	4003421	40851
NFL	1963	98	4163643	42486
NFL	1964	98	4563049	46562
NFL	1965	98	4634021	47286
NFL	1966	105	5337044	50829
NFL	1967	112	5938924	53026
NFL	1968	112	5882313	52521
NFL	1969	112	6096127	54430
NFL	1970	182	9533333	52381
NFL	1971	182	10076035	55363
NFL	1972	182	10445827	57395
NFL	1973	182	10730933	58961
NFL	1974	182	10236322	56244
NFL	1975	182	10213193	56116
NFL	1976	196	11070543	56482

Continued

Table 2: NFL attendance from 1934 to present

Table 2 continued

NFL	1977	196	11018632	56218
NFL	1978	224	12771800	57017
NFL	1979	224	13182039	58848
NFL	1980	224	13392230	59787
NFL	1981	224	13606990	60745
NFL	1982	126	7367438	58472
NFL	1983	224	13277222	59273
NFL	1984	224	13398112	59813
NFL	1985	224	13345047	59576
NFL	1986	224	13588551	60663
NFL	1987	210	11406166	54315
NFL	1988	224	13539848	60446
NFL	1989	224	13625662	60829
NFL	1990	224	13959896	62321
NFL	1991	224	13841459	61792
NFL	1992	224	13828887	61736
NFL	1993	224	13966843	62352
NFL	1994	224	14030435	62636
NFL	1995	240	15043562	62682
NFL	1996	240	14612417	60885
NFL	1997	240	14967314	62364
NFL	1998	240	15364873	64020
NFL	1999	248	16206640	65349
NFL	2000	248	16387289	66078
NFL	2001	248	16166258	65187
NFL	2002	256	16833310	65755
NFL	2003	256	17081873	66726
NFL	2004	256	17270486	67463

Name	Restrooms or Fixtures of New Construction
Lambeau Field I	616 Fixtures
Candlestick Park I	70 Restrooms
D.C. Stadium	45 Restrooms
Dodger Stadium I	32 Restrooms
Shea Stadium	54 Restrooms
San Diego Stadium I	74 Restrooms
Riverfront Stadium	50 Restrooms
Foxboro Stadium I	20 Restrooms
Veterans Stadium I	210 Fixtures
Ralph Wilson Stadium I	46 Restrooms
Louisiana Superdome I	32 Restrooms
Pontiac Silverdome	44 Restrooms
Giants Stadium	35 Restrooms
Kingdome	41 Restrooms
H.H. Humphrey Metrodome I	32 Restrooms
San Diego Stadium II	74 Restrooms
Hoosier Dome	32 Restrooms
Joe Robbie Stadium I	80 Restrooms
Tropicana Field I	32 Restrooms
U.S. Cellular Field I	32 Restrooms
Average	35.38

Table 3: Restroom number of late modern facilities.

Name	Concession Stands of New Construction
Milwaukee County Stadium I	36
Municipal Stadium I	35
Metropolitan Stadium I	18
Alumni Stadium I	32
Lambeau Field I	32
Sun Devil Stadium I	30
Nickerson Field	21
Candlestick Park I	40
D.C. Stadium	28
Frank Youell Stadium	22
Colt Stadium	33
Dodger Stadium I	56
Shea Stadium	51
Astrodome I	41
Arlington Stadium I	11
Liberty Bowl I	53
Anaheim Stadium I	43
Busch Stadium I	53
Atlanta Fulton County Stadium	57
Oakland Alameda County Coliseum I	45
Tampa Stadium I	47
Rynearson Stadium I	16
San Diego Stadium I	50
Riverfront Stadium	35
Three Rivers Stadium	54
Foxboro Stadium I	60
Veterans Stadium I	64
Sam Boyd Stadium I	15
Texas Stadium I	65
Arrowhead Stadium I	70
Ralph Wilson Stadium I	75
Royals Stadium I	40
Independence Stadium	43
Louisiana Superdome I	69
Pontiac Silverdome	80
Giants Stadium	40
New Yankee Stadium I	58
Kingdome	63
Vanderbilt Stadium II	41
H.H. Humphrey Metrodome I	60
Hoosier Dome	60
Alamo Stadium	32
Joe Robbie Stadium I	43
Tropicana Field I	48
U.S. Cellular Field I	44
Average	44.64444444

Table 4: Estimated concession stand numbers for late modern facilities

Name	Luxury Suites	Club Seats
Milwaukee County Stadium I	0	0
Orange Bowl V	1	300
Milwaukee County Stadium II	2	0
Orange Bowl VI	1	300
Lambeau Field I	0	0
Los Angeles Memorial Coliseum III	0	0
Sun Devil Stadium I	68	4,928
Nickerson Field	0	0
D.C. Stadium	0	Not Available
Lambeau Field II	0	0
Lambeau Field III	0	0
Shea Stadium	46	3,885
Astrodome I	55	0
Lambeau Field IV	0	0
Busch Stadium I	39	0
Atlanta Fulton County Stadium	60	0
Memorial Stadium II	0	0
Oakland Alameda County Coliseum I	0	0
Lambeau Field V	0	0
Riverfront Stadium	20	0
Three Rivers Stadium	110	100
Candlestick Park II	93	0
Foxboro Stadium I	42	0
Veterans Stadium I	89	0
Texas Stadium I	176	0
Memorial Stadium III	0	0
Arrowhead Stadium I	0	0
Royals Stadium I	19	0
Cleveland Municipal Stadium III	108	Not Available
Milwaukee County Stadium III	70	3,500
Pontiac Silverdome	102	7,384
Tampa Stadium II	59	0
Giants Stadium	119	124
New Yankee Stadium I	19	5,000
Memorial Stadium IV	0	0
Mile High Stadium IV	0	0

Continued

Table 5: Luxury and club seating numbers for late modern sport facilities

Table 5 continued

Kingdome	58	0
Tiger Stadium IV	0	0
Orange Bowl VII	1	300
Anaheim Stadium II	100	0
Arlington Stadium IV	121	5,386
Soldier Field IV	0	0
Candlestick III	85	6,900
Vanderbilt Stadium II	15	332
Tiger Stadium V	4	3,773
Fenway Park VI	43	600
Busch Stadium II	60	274
Soldier Field V	60	0
H.H. Humphrey Metrodome I	113	0
San Diego Stadium II	78	582
Ralph Wilson Stadium II	54	1,000
Fenway Park VII	43	606
Hoosier Dome	104	5,000
Texas Stadium II	294	0
Memorial Stadium V	0	0
Veterans Stadium II	89	0
Lambeau Field VI	72	0
Mile High Stadium V	77	0
Joe Robbie Stadium I	215	10,000
Soldier Field VI	116	0
Fenway Park VIII	53	606
Citrus Bowl II	30	Not Available
Astrodome II	119	100
Wrigley Field VI	67	0
Lambeau Field VII	152	1,900
U.S. Cellular Field I	102	1,800
Arrowhead Stadium II	80	10,000
Average	55.26865672	1166.875

Name	Surface Area of New Construction
Milwaukee County Stadium I	12- AE
Municipal Stadium I	13.37- AE
Metropolitan Stadium I	6.07- AE
Alumni Stadium I	5.5
Lambeau Field I	18.6
Sun Devil Stadium I	40
Candlestick Park I	14.9
D.C. Stadium	18.82- AE
Frank Youell Stadium	7.33- AE
Colt Stadium	10.87- AE
Dodger Stadium I	18.67- AE
Shea Stadium	18.53- AE
Astrodome I	9.5
Arlington Stadium I	3.53- AE
Liberty Bowl I	17.67- AE
Anaheim Stadium I	14.33- AE
Busch Stadium I	30
Atlanta Fulton County Stadium	19.4
Oakland Alameda County Coliseum I	15- AE
Tampa Stadium I	15.67- AE
Rynearson Stadium I	5.17- AE
San Diego Stadium I	16.67- AE
Riverfront Stadium	20
Three Rivers Stadium	19.86-AE
Foxboro Stadium I	7.9
Veterans Stadium I	14.5
Texas Stadium I	21.67- AE
Arrowhead Stadium I	23.33-AE
Ralph Wilson Stadium I	25.11-AE
Royals Stadium I	13.54-AE
Independence Stadium	14.33- AE
Louisiana Superdome I	52
Pontiac Silverdome	20
Giants Stadium	20.25
New Yankee Stadium I	10
Kingdome	23.9
H.H. Humphrey Metrodome I	10
Hoosier Dome	8
Alamo Stadium	10.67- AE
Joe Robbie Stadium I	11
Tropicana Field I	25.25
U.S. Cellular Field I	29.8
Average	16.97

Table 6: Site size of late modern sport facilities in acres. AE mark denotes estimated with the help of Serby (1930)

Name	On Site Parking
Milwaukee County Stadium I	11,000
Orange Bowl V	4,000
Tulane Stadium IV	Limited
Legion Field II	3,000
Milwaukee County Stadium II	11,000
Nippert Stadium III	Limited
Memorial Stadium II	5,500
Orange Bowl VI	4,000
Municipal Stadium I	4,500
Metropolitan Stadium I	Vast
Tulane Stadium V	Limited
Alumni Stadium I	Limited
Redland Field V	Limited
Lambeau Field I	5,800
Los Angeles Memorial Coliseum III	8,200
Seals Stadium II	Limited
Sun Devil Stadium I	3,500
Nickerson Field	Limited
Gator Bowl V	Vast
Candlestick Park I	8,000
War Memorial Stadium II	2,000
D.C. Stadium	13,500
Metropolitan Stadium II	Vast
Lambeau Field II	5,800
Frank Youell Stadium	2,100
Memorial Stadium III	5,500
Colt Stadium	Vast
Dodger Stadium I	16,000
Mile High Stadium II	9,010
Lambeau Field III	5,800
Metropolitan Stadium III	Vast
Shea Stadium	10,000
Astrodome I	24,000
Memorial Stadium IV	5,500
Arlington Stadium I	2,500
Lambeau Field IV	5,800
Gator Bowl VI	Vast
Anaheim Stadium I	12,000
Busch Stadium I	5,000
Atlanta Fulton County Stadium	10,000
Gator Bowl VII	Vast
Memorial Stadium II	7,000
Oakland Alameda County Coliseum I	9,600

Continued

Table 7: On site parking offered by the late modern professional sport facility

Table 7 continued

Tampa Stadium I	10,000
Cleveland Municipal Stadium II	Vast
Mile High Stadium III	9,010
San Diego Stadium I	18,000
Lambeau Field V	5,800
Riverfront Stadium	2,500
Three Rivers Stadium	5,086
Arlington Stadium II	2,500
Candlestick Park II	10,000
Foxboro Stadium I	13,800
Soldier Field III	6,000
Veterans Stadium I	16,000
Municipal Stadium II	4,500
Sam Boyd Stadium I	6,000
Texas Stadium I	15,000
Memorial Stadium III	7,000
Arlington Stadium III	2,500
Arrowhead Stadium I	26,000
Ralph Wilson Stadium I	11,000
Royals Stadium I	22,000
Louisiana Superdome I	5,000
Cleveland Municipal Stadium III	Vast
Metropolitan Stadium IV	Vast
Milwaukee County Stadium III	11,000
Pontiac Silverdome	12,774
Tampa Stadium II	Vast
Giants Stadium	24,800
New Yankee Stadium I	6,900
Sun Devil Stadium II	13,50
Fenway Park V	Limited
Memorial Stadium IV	7,000
Mile High Stadium IV	9,010
Kingdome	4,200
Tiger Stadium IV	0
Orange Bowl VII	4,000
Los Angeles Memorial Coliseum IV	8,200
Anaheim Stadium II	16,000
Arlington Stadium IV	2,500
Soldier Field IV	6,000
Candlestick III	10,000
Tiger Stadium V	0
Fenway Park VI	Limited
Busch Stadium II	5,000
Soldier Field V	Limited

Continued

Table 7 continued

H.H. Humphrey Metrodome I	500
San Diego Stadium II	18,000
Memorial Stadium V	5,000
Ralph Wilson Stadium II	11,000
Fenway Park VII	Limited
Hoosier Dome	9,000
Texas Stadium II	15,000
Memorial Stadium V	7,000
Veterans Stadium II	16,000
Lambeau Field VI	6,800
Mile High Stadium V	9,010
Joe Robbie Stadium I	15,000
Sun Devil Stadium III	13,500
Soldier Field VI	8,000
Fenway Park VIII	Limited
Citrus Bowl II	3,830
Astrodome II	24,000
Wrigley Field VI	2,000
Lambeau Field VII	5,525
Tropicana Field I	7,000
U.S. Cellular Field I	7,000
Arrowhead Stadium II	26,000
Average	8,869

Name	Type of Construction	Left Field	Left Center	Center Field	Right Center	Right Field	Back.
Milwaukee County Stadium I	New Construction	320	355	404	355	320	60
Milwaukee County Stadium II	Renovation	315	362	410	362	315	60
Nippert Stadium III	Renovation	X	X	X	X	X	X
Memorial Stadium II	Renovation	309	405	425	405	309	58
Shibe Park V	Renovation	312	468	393	307	N/A	X
Municipal Stadium I	New Construction	312	382	430	382	347	60
Metropolitan Stadium I	New Construction	329	365	412	365	329	60
Redland Field V	Renovation	328	383	383	383	366	78
Los Angeles Memorial Coliseum III	Renovation	250	320	425	440	301	60
Seals Stadium II	Renovation	365	375	404	410	355	55.4
Candlestick Park I	New Construction	330	397	420	397	330	73
Comiskey Park III	Renovation	352	440	382	363	71	X
D.C. Stadium	New Construction	335	385	410	385	335	60
Metropolitan Stadium II	Renovation	329	365	412	365	329	60
Polo Grounds VI	Renovation	279	455	483	440	257	N/A
Memorial Stadium III	Renovation	309	405	425	405	309	58
Colt Stadium	New Construction	360	395	420	395	360	60
Dodger Stadium I	New Construction	330	380	410	380	330	65

Continued

Table 8: Dimensions of late modern facilities in feet.

Table 8 continued

Met Stadium III	Renovation	344	360	430	373	330	60
Shea Stadium	New Construction	341	371	410	371	341	80
Astrodome I	New Construction	340	375	406	375	340	60.5
Memorial Stadium IV	Renovation	309	370	410	370	309	54
Arlington Stadium I	New Construction	330	380	400	380	330	60
Anaheim Stadium I	New Construction	333	375	406	375	333	55
Busch Stadium I	New Construction	330	386	414	386	330	64
Atlanta Fulton County Stadium	New Construction	325	385	402	385	325	60
Oakland Alameda County Coliseum I	New Construction	330	375	400	375	330	90
Cleveland Municipal Stadium II	Renovation	320	390	407	385	320	60
Sick's Stadium II	Renovation	305	345	400	345	325	54
San Diego Stadium I	New Construction	330	370	420	370	330	75
Riverfront Stadium	New Construction	330	375	404	375	330	51
Three Rivers Stadium	New Construction	340	385	410	385	340	60
Arlington Stadium II	Renovation	330	380	400	380	330	N/A
Candlestick Park II	Renovation	335	365	400	365	335	55
Veterans Stadium I	New Construction	330	371	408	371	330	60
Municipal Stadium II	Renovation	369	408	421	382	338	70
Arlington Stadium III	Renovation	330	380	400	380	330	60

Continued

Table 8 continued

Royals Stadium I	New Construction	330	375	410	375	330	60
Cleveland Municipal Stadium III	Renovation	320	395	415	385	320	60
Met Stadium IV	Renovation	330	350	410	370	330	60
Milwaukee Stadium III	Renovation	315	362	410	362	315	60
New Yankee Stadium I	New Construction	312	387	417	385	310	84
Fenway Park V	Renovation	315	379	389	380	302	60
Mile High Stadium IV	Renovation	335	N/A	423	400	375	N/A
Kingdome	New Construction	315	375	405	375	315	63
Tiger Stadium IV	Renovation	340	365	440	370	325	66
Anaheim Stadium II	Renovation	333	370	404	370	333	55
Arlington Stadium IV	Renovation	330	383	400	383	330	60
Candlestick III	Renovation	335	365	400	365	335	55
Tiger Stadium V	Renovation	340	365	440	370	325	66
Fenway Park VI	Renovation	315	379	389	380	302	60
Busch Stadium II	Renovation	330	383	414	383	330	50
H.H. Humphrey Metro I	New Construction	344	385	404	367	326	60
San Diego Stadium II	Renovation	330	370	405	370	327	75
Fenway Park VII	Renovation	315	379	389	380	302	60
Mile High Stadium V	Renovation	335	N/A	420	N/A	370	N/A
Fenway Park VIII	Renovation	315	379	389	380	302	60

Continued

Table 8 continued

Astrodome II	Renovation	325	375	400	375	325	67
Wrigley Field VI	Renovation	355	368	400	368	353	60
Tropicana Field I	New Construction	315	370	404	370	322	50
U.S. Cellular Field I	New Construction	347	375	400	375	335	60
Average	New Const.	331	378	409	377	331	64
	Renovation	328.17	375.91	411.2	378.6	325.4	60.55

Name	Original Capacity (Football)	Original Capacity (Baseball)
Milwaukee County Stadium I	X	36,011
Orange Bowl V	67,129	X
Tulane Stadium IV	80,985	X
Legion Field II	76,000	X
Milwaukee County Stadium II	X	43,394
Nippert Stadium III	28,000	X
Memorial Stadium II	46,000	47,855
Shibe Park V	X	33,000
Orange Bowl VI	80,010	X
Municipal Stadium I	40,104	30,296
Metropolitan Stadium I	18,200	18,200
Tulane Stadium V	80,985	X
Alumni Stadium I	32,500	X
Redland Field V	X	30,274
Lambeau Field I	32,150	X
Gator Bowl IV	45,000	X
Los Angeles Memorial Coliseum III	73,999	X
Seals Stadium II	X	23,500
Sun Devil Stadium I	30,000	X
Nickerson Field	21,000	X
Gator Bowl V	50,000	X
Candlestick Park I	X	43,765
War Memorial Stadium II	45,748	X
Balboa Stadium II	40,000	X
Jeppesen Stadium II	36,000	X
Comiskey Park III	X	46,552
D.C. Stadium	56,454	45,016
Metropolitan Stadium II	40,000	30,637
Lambeau Field II	38,669	X
Polo Grounds VI	55,000	55,000
Frank Youell Stadium	22,000	X
Memorial Stadium III	60,714	54,000
Colt Stadium	X	32,601
Dodger Stadium I	X	56,000
Mile High Stadium II	34,000	X
Lambeau Field III	42,327	X
Metropolitan Stadium III	48,000	40,000
Shea Stadium	45,919	55,601

Continued

Table 9: Seating capacities for late modern era

Table 9 continued

Skelly Stadium III	40,235	X
Astrodome I	X	42,217
Memorial Stadium IV	65,000	52,184
Arlington Stadium I	X	10,600
Liberty Bowl I	53,000	X
Lambeau Field IV	50,858	X
Gator Bowl VI	65,000	X
Anaheim Stadium I	X	43,000
Busch Stadium I	60,000	46,068
Atlanta Fulton County Stadium	60,700	52,710
Gator Bowl VII	80,200	X
Memorial Stadium II	70,904	X
Oakland Alameda County Coliseum I	45,000	45,000
Tampa Stadium I	47,000	X
Cleveland Municipal Stadium II	78,000	74,483
Mile High Stadium III	50,000	X
Husky Stadium IV	59,000	X
Rynearson Stadium I	15,500	X
Sick's Stadium II	X	25,420
San Diego Stadium I	50,000	50,000
Lambeau Field V	56,267	X
Riverfront Stadium	60,389	52,952
Three Rivers Stadium	59,594	47,971
Arlington Stadium II	X	21,000
Candlestick Park II	69,843	58,000
Foxboro Stadium I	60,292	X
Soldier Field III	57,000	X
Veterans Stadium I	65,352	62,382
Municipal Stadium II	40,104	35,561
Sam Boyd Stadium I	15,000	X
Texas Stadium I	65,000	X
Memorial Stadium III	70,904	X
Arlington Stadium III	X	35,694
Arrowhead Stadium I	70,000	X
Ralph Wilson Stadium I	75,339	X
Royals Stadium I	X	40,625
Rynearson Stadium II	22,227	X
Independence Stadium	43,000	X
Louisiana Superdome I	69,082	X
Cleveland Municipal Stadium III	78,000	74,483

Continued

Table 9 continued

Metropolitan Stadium IV	45,919	45,919
Milwaukee County Stadium III	53,192	53,192
Pontiac Silverdome	80,311	X
Tampa Stadium II	72,000	X
Giants Stadium	78,741	X
New Yankee Stadium I	X	57,545
Sun Devil Stadium II	70,000	X
Fenway Park V	X	33,536
Memorial Stadium IV	70,904	X
Mile High Stadium IV	76,273	76,123
Kingdome	66,000	59,856
Tiger Stadium IV	X	52,416
Orange Bowl VII	75,500	X
Los Angeles Memorial Coliseum IV	92,488	X
Anaheim Stadium II	70,500	64,593
Arlington Stadium IV	X	41,097
Skelly Stadium IV	40,385	X
Soldier Field IV	66,000	X
Candlestick III	62,000	58,000
Vanderbilt Stadium II	41,000	X
Tiger Stadium V	X	52,400
Fenway Park VI	34,218	X
Busch Stadium II	60,000	46,068
Soldier Field V	66,030	X
H.H. Humphrey Metrodome I	64,035	55,883
San Diego Stadium II	60,794	59,700
Memorial Stadium V	86,400	X
Ralph Wilson Stadium II	80,290	X
Fenway Park VII	X	33,583
Hoosier Dome	60,272	X
Alamo Stadium	32,000	X
Texas Stadium II	65,675	X
Memorial Stadium V	70,904	X
Veterans Stadium II	65,352	62,623
Lambeau Field VI	56,000	X
Mile High Stadium V	76,273	76,123
Husky Stadium V	72,500	X
Liberty Bowl II	62,380	X
Joe Robbie Stadium I	80,024	X
Sun Devil Stadium III	73,379	X
Soldier Field VI	66,946	X

Continued

Table 9 continued

Fenway Park VIII	X	34,218
Citrus Bowl II	70,188	X
Husky Stadium VI	72,500	X
Astrodome II	62,439	54,816
Wrigley Field VI	X	38,900
Lambeau Field VII	59,543	X
Tropicana Field I	X	48,000
U.S. Cellular Field I	X	44,321
Arrowhead Stadium II	79,451	X
Average	51,929	44,859
Renovation	60,293	48,024

Name	Cost	Cost in 2005
Milwaukee County Stadium I	\$5,000,000	\$36,900,000
Tulane Stadium IV	\$500,000	\$3,690,000
Memorial Stadium II	\$7,500,000	\$55,350,000
Shibe Park V	\$400,000	\$2,952,000
Municipal Stadium I	\$2,500,000	\$18,450,000
Metropolitan Stadium I	\$478,899	\$3,534,275
Tulane Stadium V	\$168,000	\$1,239,840
Alumni Stadium I	\$250,000	\$1,845,000
Lambeau Field I	\$960,000	\$7,084,800
Los Angeles Memorial Coliseum III	\$958,294	\$7,072,210
Sun Devil Stadium I	\$1,000,000	\$7,380,000
Nickerson Field	\$300,000	\$1,809,000
Candlestick Park I	\$15,000,000	\$90,450,000
Jeppesen Stadium II	\$250,000	\$1,507,500
D.C. Stadium	\$20,000,000	\$120,600,000
Metropolitan Stadium II	\$8,500,000	\$51,255,000
Polo Grounds VI	\$250,000	\$1,507,500
Frank Youell Stadium	\$400,000	\$2,412,000
Memorial Stadium III	\$162,000	\$976,860
Colt Stadium	\$2,000,000	\$12,060,000
Dodger Stadium I	\$27,700,000	\$167,031,000
Metropolitan Stadium III	\$600,000	\$3,618,000
Shea Stadium	\$28,500,000	\$171,855,000
Skelly Stadium III	\$1,250,000	\$7,537,500
Astrodome I	\$35,000,000	\$211,050,000
Arlington Stadium I	\$1,900,000	\$11,457,000
Liberty Bowl I	\$3,700,000	\$22,311,000
Anaheim Stadium I	\$25,000,000	\$150,750,000
Busch Stadium I	\$55,000,000	\$331,650,000
Atlanta Fulton County Stadium	\$18,000,000	\$108,540,000
Memorial Stadium II	\$509,805	\$3,074,124
Oakland Alameda County Coliseum I	\$25,500,000	\$153,765,000
Tampa Stadium I	\$4,600,000	\$27,738,000
Cleveland Municipal Stadium II	\$5,000,000	\$30,150,000
Rynearson Stadium I	\$1,400,000	\$8,442,000
San Diego Stadium I	\$27,500,000	\$165,825,000
Riverfront Stadium	\$55,000,000	\$264,000,000
Three Rivers Stadium	\$55,000,000	\$264,000,000

Continued

Table 10: Construction and renovation costs during late modern era

Table 10 continued

Arlington Stadium II	\$6,333,333	\$30,399,998
Candlestick Park II	\$16,100,000	\$77,280,000
Foxboro Stadium I	\$20,000,000	\$96,000,000
Veterans Stadium I	\$63,000,000	\$302,400,000
Sam Boyd Stadium I	\$3,500,000	\$16,800,000
Texas Stadium I	\$35,000,000	\$168,000,000
Memorial Stadium III	\$1,000,000	\$4,800,000
Arlington Stadium III	\$6,333,333	\$30,399,998
Arrowhead Stadium I	\$53,000,000	\$254,400,000
Ralph Wilson Stadium I	\$23,000,000	\$110,400,000
Royals Stadium I	\$70,000,000	\$336,000,000
Louisiana Superdome I	\$168,000,000	\$806,400,000
Cleveland Municipal Stadium III	\$10,000,000	\$48,000,000
Pontiac Silverdome	\$55,700,000	\$267,360,000
Tampa Stadium II	\$13,000,000	\$62,400,000
Giants Stadium	\$78,000,000	\$374,400,000
New Yankee Stadium I	\$100,000,000	\$480,000,000
Sun Devil Stadium II	\$21,000,000	\$100,800,000
Fenway Park V	\$1,300,000	\$6,240,000
Mile High Stadium IV	\$25,000,000	\$120,000,000
Kingdome	\$67,000,000	\$321,600,000
Tiger Stadium IV	\$5,000,000	\$24,000,000
Los Angeles Memorial Coliseum IV	\$9,500,000	\$45,600,000
Arlington Stadium IV	\$6,333,334	\$30,400,003
Skelly Stadium IV	\$350,000	\$1,680,000
Candlestick III	\$32,000,000	\$77,440,000
Vanderbilt Stadium II	\$10,100,000	\$24,442,000
Tiger Stadium V	\$13,100,000	\$31,702,000
H.H. Humphrey Metrodome I	\$80,000,000	\$193,600,000
San Diego Stadium II	\$6,400,000	\$1,588,000
Memorial Stadium V	\$13,500,000	\$32,670,000
Hoosier Dome	\$82,000,000	\$198,440,000
Memorial Stadium V	\$7,000,000	\$16,940,000
Veterans Stadium II	\$10,000,000	\$24,200,000
Husky Stadium V	\$13,000,000	\$31,460,000
Liberty Bowl II	\$19,500,000	\$47,190,000
Joe Robbie Stadium I	\$145,000,000	\$350,900,000
Sun Devil Stadium III	\$8,900,000	\$2,153,800
Soldier Field VI	\$18,000,000	\$43,560,000
Citrus Bowl II	\$30,000,000	\$72,600,000
Husky Stadium VI	\$3,700,000	\$8,954,000

Continued

Table 10 continued

Astrodome II	\$67,000,000	\$162,140,000
Wrigley Field VI	\$5,000,000	\$12,100,000
Lambeau Field VII	\$8,263,000	\$11,733,460
Tropicana Field I	\$138,000,000	\$195,960,000
U.S. Cellular Field I	\$167,000,000	\$237,140,000
Average	\$43,502,750	\$172,412,929
Renovation	\$9,857,588	\$31,502,623

Name	City	Type/Sport	New Construction/Renovation	Dome/Out
Milwaukee County Stadium I	Milwaukee	Multi-use	New Construction	Outdoor
Orange Bowl V	Miami	Football	Renovation	Outdoor
Tulane Stadium IV	New Orleans	Football	Renovation	Outdoor
Legion Field II	Birmingham, AL	Football	Renovation	Outdoor
Milwaukee Stadium II	Milwaukee	Multi-use	Renovation	Outdoor
Nippert Stadium III	Cincinnati	Football	Renovation	Outdoor
Memorial Stadium II	Baltimore	Multi-use	Renovation	Outdoor
Shibe Park V	Philadelphia	Baseball	Renovation	Outdoor
Orange Bowl VI	Miami	Football	Renovation	Outdoor
Municipal Stadium I	Kansas City	Multi-use	New Construction	Outdoor
Metropolitan Stadium I	Bloomington, MN	Multi-use	New Construction	Outdoor
Tulane Stadium V	New Orleans	Football	Renovation	Outdoor
Alumni Stadium I	Boston	Football	New Construction	Outdoor
Redland Field V	Cincinnati	Baseball	Renovation	Outdoor
Lambeau Field I	Green Bay, WI	Football	New Construction	Outdoor
Gator Bowl IV	Jacksonville, FL	Football	Renovation	Outdoor
Los Angeles Coliseum III	Los Angeles	Multi-use	Renovation	Outdoor
Seals Stadium II	San Francisco	Baseball	Renovation	Outdoor
Sun Devil Stadium I	Tempe, AZ	Football	New Construction	Outdoor
Nickerson Field	Boston	Football	Renovation	Outdoor
Gator Bowl V	Jacksonville, FL	Football	Renovation	Outdoor

Continued

Table 11: List of late modern renovations and new constructions

Table 11 continued

Candlestick Park I	San Francisco	Baseball	New Construction	Outdoor
War Memorial Stadium II	Buffalo	Football	Renovation	Outdoor
Balboa Stadium II	San Diego	Football	Renovation	Outdoor
Jeppesen Stadium II	Houston	Football	Renovation	Outdoor
Comiskey Park III	Chicago	Baseball	Renovation	Outdoor
D.C. Stadium	Washington, D.C.	Multi-use	New Construction	Outdoor
Metropolitan Stadium II	Bloomington, MN	Multi-use	Renovation	Outdoor
Lambeau Field II	Green Bay, WI	Football	Renovation	Outdoor
Polo Grounds VI	New York City	Multi-use	Renovation	Outdoor
Frank Youell Stadium	Oakland	Football	New Construction	Outdoor
Memorial Stadium III	Baltimore	Multi-use	Renovation	Outdoor
Colt Stadium	Houston	Baseball	New Construction	Outdoor
Dodger Stadium I	Los Angeles	Baseball	New Construction	Outdoor
Mile High Stadium II	Denver	Football	Renovation	Outdoor
Lambeau Field III	Green Bay, WI	Football	Renovation	Outdoor
Metropolitan Stadium III	Bloomington, MN	Multi-use	Renovation	Outdoor
Shea Stadium	New York City	Multi-use	New Construction	Outdoor
Skelly Stadium III	Tulsa, OK	Football	Renovation	Outdoor
Astrodome I	Houston	Multi-use	New Construction	Dome
Memorial Stadium IV	Baltimore	Multi-use	Renovation	Outdoor
Arlington Stadium I	Arlington, TX	Baseball	New Construction	Outdoor
Liberty Bowl I	Memphis, TN	Football	New Construction	Outdoor
Lambeau Field IV	Green Bay, WI	Football	Renovation	Outdoor
Gator Bowl VI	Jacksonville, FL	Football	Renovation	Outdoor

Continued

Table 11 continued

Anaheim Stadium I	Anaheim, CA	Baseball	New Construction	Outdoor
Busch Stadium I	St. Louis	Multi-use	New Construction	Outdoor
Atlanta Fulton County Stadium	Atlanta	Multi-use	New Construction	Outdoor
Gator Bowl VII	Jacksonville, FL	Football	Renovation	Outdoor
Memorial Stadium II	Champaign, IL	Football	Renovation	Outdoor
Oakland Alameda Coliseum I	Oakland	Multi-use	New Construction	Outdoor
Tampa Stadium I	Tampa	Football	New Construction	Outdoor
Cleveland Stadium II	Cleveland	Multi-use	Renovation	Outdoor
Mile High Stadium III	Denver	Football	Renovation	Outdoor
Husky Stadium IV	Seattle	Football	Renovation	Outdoor
Rynearson Stadium I	Ypsilanti, MI	Football	New Construction	Outdoor
Sick's Stadium II	Seattle	Baseball	Renovation	Outdoor
San Diego Stadium I	San Diego	Multi-use	New Construction	Outdoor
Lambeau Field V	Green Bay, WI	Football	Renovation	Outdoor
Riverfront Stadium	Cincinnati	Multi-use	New Construction	Outdoor
Three Rivers Stadium	Pittsburgh	Multi-use	New Construction	Outdoor
Arlington Stadium II	Arlington, TX	Baseball	Renovation	Outdoor
Candlestick Park II	San Francisco	Multi-use	Renovation	Outdoor
Foxboro Stadium I	Foxboro, MA	Football	New Construction	Outdoor
Soldier Field III	Chicago	Football	Renovation	Outdoor
Veterans Stadium I	Philadelphia	Multi-use	New Construction	Outdoor

Continued

Table 11 continued

Municipal Stadium II	Kansas City	Multi-use	Renovation	Outdoor
Sam Boyd Stadium I	Las Vegas	Football	New Construction	Outdoor
Texas Stadium I	Irving, TX	Football	New Construction	Outdoor
Memorial Stadium III	Champaign, IL	Football	Renovation	Outdoor
Arlington Stadium III	Arlington, TX	Baseball	Renovation	Outdoor
Arrowhead Stadium I	Kansas City	Football	New Construction	Outdoor
Ralph Wilson Stadium I	Buffalo	Football	New Construction	Outdoor
Royals Stadium I	Kansas City	Baseball	New Construction	Outdoor
Rynearson Stadium II	Ypsilanti, MI	Football	Renovation	Outdoor
Independ. Stadium	Shreveport, LA	Football	New Construction	Outdoor
Louisiana Superdome I	New Orleans	Football	New Construction	Dome
Cleveland Stadium III	Cleveland	Multi-use	Renovation	Outdoor
Metropolitan Stadium IV	Bloomington, MN	Multi-use	Renovation	Outdoor
Milwaukee County Stadium III	Milwaukee	Multi-use	Renovation	Outdoor
Pontiac Silverdome	Pontiac, MI	Football	New Construction	Dome
Tampa Stadium II	Tampa	Football	Renovation	Outdoor
Giants Stadium	East Rutherford, NJ	Football	New Construction	Outdoor
New Yankee Stadium I	New York City	Baseball	New Construction	Outdoor
Sun Devil Stadium II	Tempe, AZ	Football	Renovation	Outdoor
Fenway Park V	Boston	Baseball	Renovation	Outdoor
Memorial Stadium IV	Champaign, IL	Football	Renovation	Outdoor

Continued

Table 11 continued

Mile High Stadium IV	Denver	Football	Renovation	Outdoor
Kingdome	Seattle	Multi-use	New Construction	Dome
Tiger Stadium IV	Detroit	Baseball	Renovation	Outdoor
Orange Bowl VII	Miami	Football	Renovation	Outdoor
Los Angeles Coliseum IV	Los Angeles	Football	Renovation	Outdoor
Anaheim Stadium II	Anaheim, CA	Multi-use	Renovation	Outdoor
Arlington Stadium IV	Arlington, TX	Baseball	Renovation	Outdoor
Skelly Stadium IV	Tulsa, OK	Football	Renovation	Outdoor
Soldier Field IV	Chicago	Football	Renovation	Outdoor
Candlestick III	San Francisco	Multi-use	Renovation	Outdoor
Vanderbilt Stadium II	Nashville, TN	Football	Renovation	Outdoor
Tiger Stadium V	Detroit	Baseball	Renovation	Outdoor
Fenway Park VI	Boston	Baseball	Renovation	Outdoor
Busch Stadium II	St. Louis	Multi-use	Renovation	Outdoor
Soldier Field V	Chicago	Football	Renovation	Outdoor
H.H. Humphrey Metrodome I	Minneapolis	Multi-use	New Construction	Dome
San Diego Stadium II	San Diego	Multi-use	Renovation	Outdoor
Memorial Stadium V	Clemson, SC	Football	Renovation	Outdoor
Ralph Wilson Stadium II	Buffalo	Football	Renovation	Outdoor
Fenway Park VII	Boston	Baseball	Renovation	Outdoor
Hoosier Dome	Indianapolis	Football	New Construction	Dome
Alamo Stadium	San Antonio	Football	New Construction	Outdoor

Continued

Table 11 continued

Texas Stadium II	Irving, TX	Football	Renovation	Outdoor
Memorial Stadium V	Champaign, IL	Football	Renovation	Outdoor
Veterans Stadium II	Philadelphia	Multi-use	Renovation	Outdoor
Lambeau Field VI	Green Bay, WI	Football	Renovation	Outdoor
Mile High Stadium V	Denver	Multi-use	Renovation	Outdoor
Husky Stadium V	Seattle	Football	Renovation	Outdoor
Liberty Bowl II	Memphis, TN	Football	Renovation	Outdoor
Joe Robbie Stadium I	Miami	Football	New Construction	Outdoor
Sun Devil Stadium III	Tempe, AZ	Football	Renovation	Outdoor
Soldier Field VI	Chicago	Football	Renovation	Outdoor
Fenway Park VIII	Boston	Baseball	Renovation	Outdoor
Citrus Bowl II	Orlando, FL	Football	Renovation	Outdoor
Husky Stadium VI	Seattle	Football	Renovation	Outdoor
Astrodome II	Houston	Multi-use	Renovation	Dome
Wrigley Field VI	Chicago	Baseball	Renovation	Outdoor
Lambeau Field VII	Green Bay, WI	Football	Renovation	Outdoor
Tropicana Field I	St. Petersburg, FL	Baseball	New Construction	Dome
U.S. Cellular Field I	Chicago	Baseball	New Construction	Outdoor
Arrowhead Stadium II	Kansas City	Football	Renovation	Outdoor

APPENDIX D
POST MODERN ERA

Name	Restrooms or Fixtures of New Construction	Consession Stands or Points of Sale of New Construction
Oriole Park at Camdem Yards I	32 Restrooms	19 Stands
Georgia Dome I	Numerous	75 Stands
Jacobs Field	40 Restrooms	Numerous
Americquest Field in Arlington	32 Restrooms	75 Stands
Alltel Stadium I	52 Restrooms	Numerous
Coors Field	32 Restrooms	35 Stands
Edward Jones Dome I	32 Restrooms	Numerous
Oakland Alameda County Coliseum II	39 Restrooms	Numerous
Bank of America Stadium I	95 Restrooms	412 Points of Sale
Anaheim Stadium III	57 Restrooms	Numerous
Jack Kent Cooke Stadium I	800 Fixtures	38 Stands
Turner Field	32 Restrooms	55 Stands
Bank One Ballpark	40 Restrooms	212 Points of Sale
M & T Bank Stadium I	67 Restrooms	45 Stands
Raymond James Stadium	88 Restrooms	600 Points of Sale
Cleveland Browns Stadium	83 Restrooms	112 Points of Sale
The Coliseum	66 Restrooms	42 Stands
Safeco Field	11 Restrooms	62 Stands
Minute Maid Park	66 Restrooms	212 Points of Sale
Paul Brown Stadium I	76 Restrooms	400 Points of Sale
Comerica Park	57 Restrooms	320 Points of Sale
Pac Bell Park	54 Restrooms	194 Points of Sale
Miller Park	32 Restrooms	36 Stands
PNC Park	495 Fixtures	17 Stands
Heinz Field I	50 Restrooms	32 Stands
Invesco Field	32 Restrooms	400 Points of Sale
Gillette Stadium	60 Restrooms	46 Stands
Reliant Stadium I	56 Restrooms	124 Points of Sale
Ford Field	105 Restrooms	94 Stands
Qwest Field	63 Restrooms	48 Stands
New Soldier Field	52 Restrooms	400 Points of Sale
Great American Ballpark	40 Restrooms	27 Stands
Lambeau Field IX	971 Fixtures	Numerous
Lincoln Financial Field I	84 Restrooms	308 Points of Sale
Citizens Bank Park	62 Restrooms	36 Stands
Petco Park	56 Restrooms	Numerous
Average	61.44	52.03

Table 1: Concessions and restroom numbers for post modern era. Information taken from team websites via mlb.com or nfl.com

Name	Disabled Seating of New Construction
Oriole Park at Camden Yards I	480
Georgia Dome I	800
Jacobs Field	868
Americquest Field in Arlington	475
Alltel Stadium I	1476
Coors Field	1004
Edward Jones Dome I	1308
Bank of America Stadium I	1466
Jack Kent Cooke Stadium I	1604
Turner Field	1002
Bank One Ballpark	1172
M & T Bank Stadium I	700
Raymond James Stadium	600
Cleveland Browns Stadium	1,436
The Coliseum	400
Safeco Field	1,010
Minute Maid Park	411
Paul Brown Stadium I	1,000
Comerica Park	800
Pac Bell Park	820
Miller Park	860
PNC Park	768
Heinz Field I	1300
Invesco Field	1,524
Gillette Stadium	1,360
Reliant Stadium I	1390
Ford Field	800
Qwest Field	1,400
New Soldier Field	1260
Great American Ballpark	961
Lambeau Field IX	733
Lincoln Financial Field I	660
Citizens Bank Park	1260
Petco Park	860
Average	999.0588235

Table 2: Disabled seating for new late modern era sport facilities

Name	Luxury Suites	Club Seats
Oriole Park at Camden Yards I	72	3,800
Georgia Dome I	203	5,600
Sun Devil Stadium IV	68	4,928
Memorial Stadium VI	0	0
Foxboro Stadium II	44	0
Texas Stadium III	363	0
Tiger Stadium VI	4	3,773
Los Angeles Memorial Coliseum V	0	0
Memorial Stadium VII	0	0
Busch Stadium III	68	1,233
Jacobs Field	122	2,064
Americquest Field in Arlington	122	2,710
Joe Robbie Stadium II	215	10,209
Los Angeles Memorial Coliseum VI	0	0
H.H. Humphrey Metrodome II	113	0
Alltel Stadium I	88	11,000
Coors Field	63	4,500
Edward Jones Dome I	124	6,500
Lambeau Field VIII	198	1920
Los Angeles Memorial Coliseum VII	0	0
Oakland Alameda County Coliseum II	143	9,000
Bank of America Stadium I	158	11,358
Texas Stadium IV	379	0
San Diego Stadium III	113	7,882
Anaheim Stadium III	104	5,075
Jack Kent Cooke Stadium I	280	15,044
Turner Field	62	5,580
Bank One Ballpark	76	2,674
M & T Bank Stadium I	108	7,904
Raymond James Stadium	195	12,332
Louisiana Superdome II	137	14,077
Tropicana Field II	65	2,776
Oriole Park at Camden Yards II	108	5,600
Cleveland Browns Stadium	151	8,600

Continued

Table 3: Luxury seating from late modern period. Baseball and football facilities were separated for specific numbers.

Table 3 continued

Wrigley Field VII	66	0
Ralph Wilson Stadium III	88	6,878
The Coliseum	156	11,800
Sam Boyd Stadium II	16	Not Available
Jack Kent Cooke Stadium II	280	15,000
Safeco Field	77	4,677
Royals Stadium II	19	2,733
Bank of America Stadium II	160	10,998
Dodger Stadium II	33	600
New Yankee Stadium II	28	6,600
Minute Maid Park	60	4,853
Paul Brown Stadium I	114	7,620
Comerica Park	116	7,600
Pac Bell Park	63	5,200
Miller Park	70	3,300
PNC Park	69	2,800
Heinz Field I	127	6,600
Invesco Field	106	8,500
Gillette Stadium	80	6,000
Reliant Stadium I	166	7,700
Ford Field	232	8,641
Qwest Field	116	10,000
New Soldier Field	133	8,600
Great American Ballpark	138	3,380
U.S. Cellular Field II	84	1,883
Fenway Park IX	53	606
Lambeau Field IX	167	6,260
Wrigley Field VIII	65	3,498
Lincoln Financial Field I	172	10,828
Citizens Bank Park	72	7,764
Petco Park	58	6,000
Reliant Stadium II	166	7,700
Alltel Stadium II	88	11,000
Lincoln Financial Field II	172	10,828
Candlestick Park IV	85	6,900
Edward Jones Dome II	124	6,500
Jack Kent Cooke Stadium III	290	15,000
Georgia Dome II	203	5,600
M & T Bank Stadium II	113	7,904
Paul Brown Stadium II	114	7,620
Heinz Field II	127	6,600
Average	119.46	6,994
Football	147.76	9,070
Baseball	95.21	4,658

Name	Surface Area of New Construction
Oriole Park at Camden Yards I	23
Georgia Dome I	16.19
Jacobs Field	12
Americquest Field in Arlington	32.14
Alltel Stadium I	11
Coors Field	44
Edward Jones Dome I	14
Bank of America Stadium I	26
Jack Kent Cooke Stadium I	26.71- R
Turner Field	20
Bank One Ballpark	21.9
M & T Bank Stadium I	36.73
Raymond James Stadium	19.2
Tropicana Field II	32.58
Cleveland Browns Stadium	31
The Coliseum	22.33- R
Safeco Field	19.59
Minute Maid Park	25
Paul Brown Stadium I	40
Comerica Park	13.33- R
Pac Bell Park	12.8
Miller Park	10.5
PNC Park	22.27
Heinz Field I	34.2
Invesco Field	39
Gillette Stadium	17.3
Reliant Stadium I	39
Ford Field	25
Qwest Field	34.44
New Soldier Field	21- R
Great American Ballpark	22
Lambeau Field IX	38.92
Lincoln Financial Field I	15
Citizens Bank Park	21
Petco Park	18
Average	24.96

Table 4: Surface size of new construction in acres. Numbers with R next to them denote estimation through use of Serby's (1930) recommendation of one acre per 3,000 spectators

Name	New Construction/Renovation	Cost
Oriole Park at Camden Yards I	New Construction	\$235,000,000
Georgia Dome I	New Construction	\$210,000,000
Sun Devil Stadium IV	Renovation	\$11,900,000
Memorial Stadium VI	Renovation	\$18,000,000
Foxboro Stadium II	Renovation	\$10,000,000
Texas Stadium III	Renovation	Not Available
Tiger Stadium VI	Renovation	\$8,000,000
Los Angeles Memorial Coliseum V	Renovation	\$15,000,000
Memorial Stadium VII	Renovation	\$18,000,000
Busch Stadium III	Renovation	Not Available
Jacobs Field	New Construction	\$175,000,000
Americquest Field in Arlington	New Construction	\$191,000,000
Joe Robbie Stadium II	Renovation	\$10,000,000
Los Angeles Memorial Coliseum VI	Renovation	\$93,000,000
H.H. Humphrey Metrodome II	Renovation	\$20,000,000
Alltel Stadium I	New Construction	\$134,000,000
Coors Field	New Construction	\$215,000,000
Edward Jones Dome I	New Construction	\$280,000,000
Lambeau Field VIII	Renovation	Not Available
Los Angeles Memorial Coliseum VII	Renovation	\$6,000,000
Oakland Alameda County Coliseum II	Renovation	\$100,000,000
Bank of America Stadium I	New Construction	\$248,000,000
Texas Stadium IV	Renovation	Not Available
San Diego Stadium III	Renovation	\$78,000,000
Anaheim Stadium III	Renovation	\$118,000,000
Jack Kent Cooke Stadium I	New Construction	\$250,500,000
Turner Field	New Construction	\$235,000,000
Bank One Ballpark	New Construction	\$411,000,000
M & T Bank Stadium I	New Construction	\$220,000,000
Raymond James Stadium	New Construction	\$168,500,000
Louisiana Superdome II	Renovation	\$22,800,000
Tropicana Field II	Renovation	\$85,000,000
Oriole Park at Camden Yards II	Renovation	Not Available

Continued

Table 5: Construction and renovation costs to professional sport facilities during post modern era

Table 5 continued

Cleveland Browns Stadium	New Construction	\$314,000,000
Wrigley Field VII	Renovation	Not Available
Ralph Wilson Stadium III	Renovation	\$63,000,000
The Coliseum	New Construction	\$290,000,000
Sam Boyd Stadium II	Renovation	\$18,000,000
Jack Kent Cooke Stadium II	Renovation	\$35,000,000
Safeco Field	New Construction	\$517,600,000
Royals Stadium II	Renovation	\$11,200,000
Bank of America Stadium II	Renovation	Not Available
Dodger Stadium II	Renovation	\$50,000,000
New Yankee Stadium II	Renovation	Not Available
Minute Maid Park	New Construction	\$265,000,000
Paul Brown Stadium I	New Construction	\$453,200,000
Comerica Park	New Construction	\$300,000,000
Pac Bell Park	New Construction	\$255,000,000
Miller Park	New Construction	\$400,000,000
PNC Park	New Construction	\$237,000,000
Heinz Field I	New Construction	\$230,000,000
Invesco Field	New Construction	\$364,200,000
Gillette Stadium	New Construction	\$397,000,000
Reliant Stadium I	New Construction	\$449,000,000
Ford Field	New Construction	\$500,000,000
Qwest Field	New Construction	\$360,000,000
New Soldier Field	New Construction	\$365,000,000
Great American Ballpark	New Construction	\$297,000,000
U.S. Cellular Field II	Renovation	\$28,000,000
Fenway Park IX	Renovation	Not Available
Lambeau Field IX	New Construction	\$295,000,000
Wrigley Field VIII	Renovation	Not Available
Lincoln Financial Field I	New Construction	\$512,000,000
Citizens Bank Park	New Construction	\$346,000,000
Petco Park	New Construction	\$285,000,000
Reliant Stadium II	Renovation	\$5,700,000
Alltel Stadium II	Renovation	\$13,000,000
Lincoln Financial Field II	Renovation	\$3,000,000
Candlestick Park IV	Renovation	\$4,000,000
Edward Jones Dome II	Renovation	\$2,000,000
Jack Kent Cooke Stadium III	Renovation	\$12,000,000
Georgia Dome II	Renovation	\$1,500,000
M & T Bank Stadium II	Renovation	\$1,000,000
Paul Brown Stadium II	Renovation	\$3,000,000
Heinz Field II	Renovation	\$1,000,000
Average		\$306,029,412
Renovation		\$28,646,667

Name	Original Capacity (Football)	Original Capacity (Baseball)
Oriole Park at Camden Yards I	X	48,262
Georgia Dome I	71,228	X
Sun Devil Stadium IV	73,379	X
Memorial Stadium VI	70,904	X
Foxboro Stadium II	60,292	X
Texas Stadium III	65,846	X
Tiger Stadium VI	X	52,400
Los Angeles Memorial Coliseum V	92,488	X
Memorial Stadium VII	70,904	X
Busch Stadium III	X	49,676
Jacobs Field	X	43,345
Americquest Field in Arlington	X	49,200
Joe Robbie Stadium II	75,235	47,662
Los Angeles Memorial Coliseum VI	92,488	X
H.H. Humphrey Metrodome II	65,000	55,883
Alltel Stadium I	73,800	X
Coors Field	X	50,200
Edward Jones Dome I	65,321	X
Lambeau Field VIII	60,789	X
Los Angeles Memorial Coliseum VII	94,159	X
Oakland Alameda County Coliseum II	63,026	48,219
Bank of America Stadium I	73,248	X
Texas Stadium IV	65,846	X
San Diego Stadium III	71,294	67,544
Anaheim Stadium III	X	45,050
Jack Kent Cooke Stadium I	80,116	X
Turner Field	X	50,062
Bank One Ballpark	X	48,569
M & T Bank Stadium I	68,915	X
Raymond James Stadium	65,647	X
Louisiana Superdome II	72,968	X
Tropicana Field II	X	45,000
Oriole Park at Camden Yards II	X	48,262

Continued

Table 6: Seating capacity of professional baseball and football facilities during post modern era

Table 6 continued

Cleveland Browns Stadium	72,000	X
Wrigley Field VII	X	38,900
Ralph Wilson Stadium III	75,339	X
The Coliseum	67,000	X
Sam Boyd Stadium II	40,000	X
Jack Kent Cooke Stadium II	82,000	X
Safeco Field	X	46,621
Royals Stadium II	X	40,793
Bank of America Stadium II	73,248	X
Dodger Stadium II	X	56,000
New Yankee Stadium II	X	57,746
Minute Maid Park	X	40,950
Paul Brown Stadium I	66,500	X
Comerica Park	X	40,000
Pac Bell Park	X	41,000
Miller Park	X	43,000
PNC Park	X	38,365
Heinz Field I	65,000	X
Invesco Field	76,125	X
Gillette Stadium	68,000	X
Reliant Stadium I	69,500	X
Ford Field	65,000	X
Qwest Field	67,000	X
New Soldier Field	63,000	X
Great American Ballpark	X	42,036
U.S. Cellular Field II	X	41,000
Fenway Park IX	X	34,500
Lambeau Field IX	71,000	X
Wrigley Field VIII	X	39,100
Lincoln Financial Field I	68,532	X
Citizens Bank Park	X	43,000
Petco Park	X	46,000
Reliant Stadium II	75,000	X
Alltel Stadium II	73,800	X
Lincoln Financial Field II	68,532	X
Candlestick Park IV	62,000	X
Edward Jones Dome II	65,321	X
Jack Kent Cooke Stadium III	85,000	X
Georgia Dome II	71,228	X
M & T Bank Stadium II	68,915	X
Paul Brown Stadium II	66,500	X
Heinz Field II	65,000	X
Average	70,488	46,398

Name	City	Type/Sport	New Construction/Renovation	Dome/Out
Oriole Park at Camden Yards I	Baltimore	Baseball	New Construction	Outdoor
Georgia Dome I	Atlanta	Football	New Construction	Dome
Sun Devil Stadium IV	Tempe, AZ	Football	Renovation	Outdoor
Memorial Stadium VI	Champaign, IL	Football	Renovation	Outdoor
Foxboro Stadium II	Foxboro, MA	Football	Renovation	Outdoor
Texas Stadium III	Irving, TX	Football	Renovation	Outdoor
Tiger Stadium VI	Detroit	Baseball	Renovation	Outdoor
Los Angeles Memorial Coliseum V	Los Angeles	Football	Renovation	Outdoor
Memorial Stadium VII	Champaign, IL	Football	Renovation	Outdoor
Busch Stadium III	St. Louis	Baseball	Renovation	Outdoor
Jacobs Field	Cleveland	Baseball	New Construction	Outdoor
Americquest Field in Arlington	Arlington, TX	Baseball	New Construction	Outdoor
Joe Robbie Stadium II	Miami	Multi-use	Renovation	Outdoor
Los Angeles Memorial Coliseum VI	Los Angeles	Football	Renovation	Outdoor
H.H. Humphrey Metrodome II	Minneapolis	Multi-use	Renovation	Outdoor
Alltel Stadium I	Jacksonville, FL	Football	New Construction	Outdoor
Coors Field	Denver	Baseball	New Construction	Outdoor
Edward Jones Dome I	St. Louis	Football	New Construction	Dome
Lambeau Field VIII	Green Bay, WI	Football	Renovation	Outdoor

Continued

Table 7: List of new constructions and renovations during post modern era

Table 7 continued

Los Angeles Coliseum VII	Los Angeles	Football	Renovation	Outdoor
Oakland Alameda Coliseum II	Oakland	Multi-use	Renovation	Outdoor
Bank of America Stadium I	Charlotte, NC	Football	New Construction	Outdoor
Texas Stadium IV	Irving, TX	Football	Renovation	Outdoor
San Diego Stadium III	San Diego	Multi-use	Renovation	Outdoor
Anaheim Stadium III	Anaheim, CA	Baseball	Renovation	Outdoor
Jack Kent Cooke Stadium I	Washington, D.C.	Football	New Construction	Outdoor
Turner Field	Atlanta	Baseball	New Construction	Outdoor
Bank One Ballpark	Phoenix, AZ	Baseball	New Construction	Retractable Roof
M & T Bank Stadium I	Baltimore	Football	New Construction	Outdoor
Raymond James Stadium	Tampa, FL	Football	New Construction	Outdoor
Louisiana Superdome II	New Orleans	Football	Renovation	Dome
Tropicana Field II	St. Petersburg, FL	Baseball	Renovation	Dome
Oriole Park at Camden Yards II	Baltimore	Baseball	Renovation	Outdoor
Cleveland Browns Stadium	Cleveland	Football	New Construction	Outdoor
Wrigley Field VII	Chicago	Baseball	Renovation	Outdoor
Ralph Wilson Stadium III	Buffalo	Football	Renovation	Outdoor
The Coliseum	Nashville, TN	Football	New Construction	Outdoor
Sam Boyd Stadium II	Las Vegas	Football	Renovation	Outdoor

Continued

Table 7 continued

Jack Kent Cooke Stadium II	Washington, D.C.	Football	Renovation	Outdoor
Safeco Field	Seattle	Baseball	New Construction	Retractable Roof
Royals Stadium II	Kansas City	Baseball	Renovation	Outdoor
Bank of America II	Charlotte, NC	Football	Renovation	Outdoor
Dodger Stadium II	Los Angeles	Baseball	Renovation	Outdoor
New Yankee Stadium II	New York City	Baseball	Renovation	Outdoor
Minute Maid Park	Houston	Baseball	New Construction	Retractable Roof
Paul Brown Stadium I	Cincinnati	Football	New Construction	Outdoor
Comerica Park	Detroit	Baseball	New Construction	Outdoor
Pac Bell Park	San Francisco	Baseball	New Construction	Outdoor
Miller Park	Milwaukee	Baseball	New Construction	Retractable Roof
PNC Park	Pittsburgh	Baseball	New Construction	Outdoor
Heinz Field I	Pittsburgh	Football	New Construction	Outdoor
Invesco Field	Denver	Football	New Construction	Outdoor
Gillette Stadium	Foxboro, MA	Football	New Construction	Outdoor
Reliant Stadium I	Houston	Football	New Construction	Retractable Roof
Ford Field	Detroit	Football	New Construction	Dome
Qwest Field	Seattle	Football	New Construction	Outdoor
New Soldier Field	Chicago	Football	New Construction	Outdoor
Great Ballpark	Cincinnati	Baseball	New Construction	Outdoor
U.S. Cellular Field II	Chicago	Baseball	Renovation	Outdoor
Fenway Park IX	Boston	Baseball	Renovation	Outdoor
Lambeau Field IX	Green Bay, WI	Football	New Construction	Outdoor
Wrigley Field VIII	Chicago	Baseball	Renovation	Outdoor
Lincoln Field I	Philadelphia	Football	New Construction	Outdoor

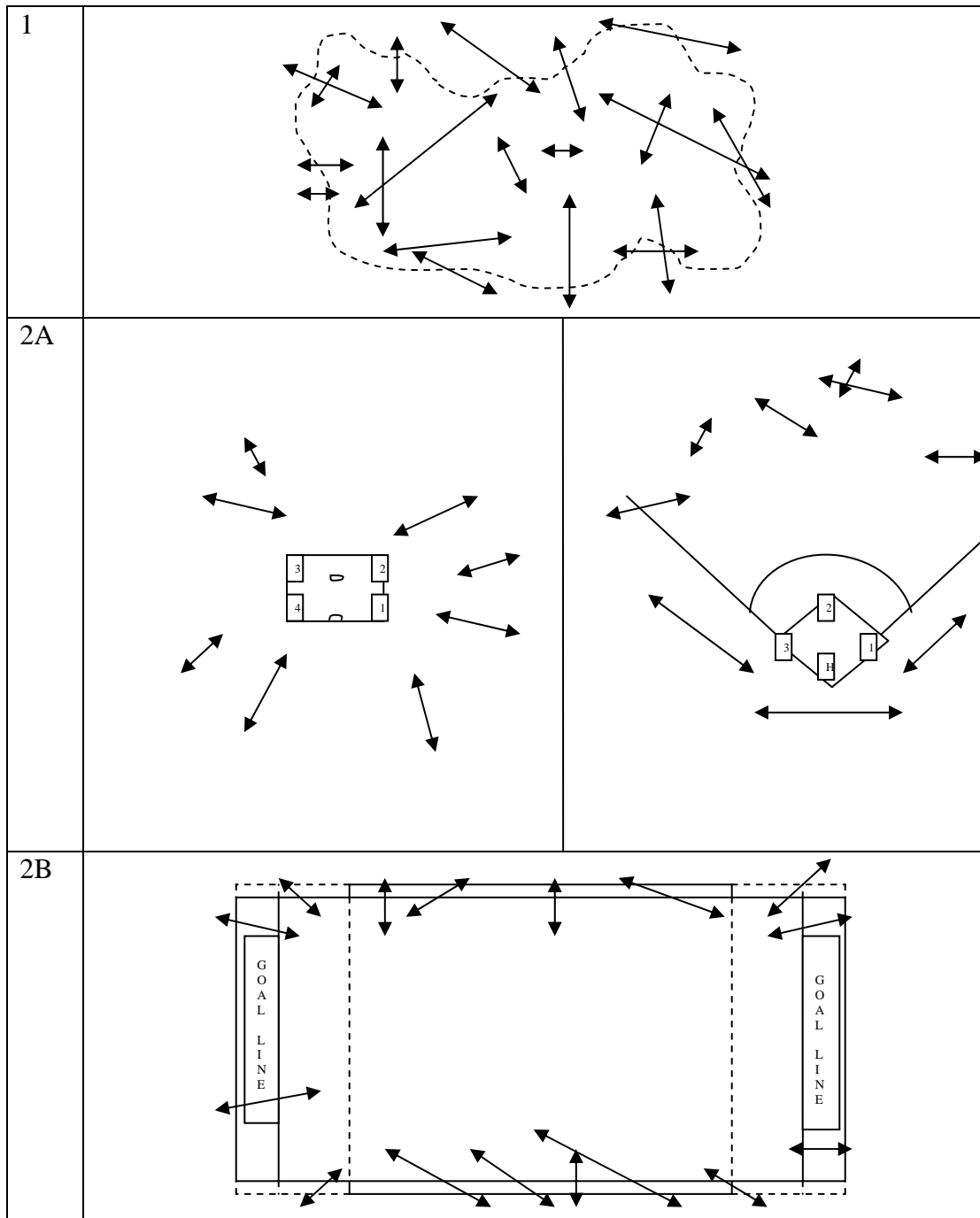
Continued

Table 7 continued

Citizens Park	Philadelphia	Baseball	New Construction	Outdoor
Petco Park	San Diego	Baseball	New Construction	Outdoor
Reliant Stadium II	Houston	Football	Renovation	Retractable Roof
Alltel Stadium II	Jacksonville, FL	Football	Renovation	Outdoor
Lincoln Field II	Philadelphia	Football	Renovation	Outdoor
Candle IV	San Francisco	Football	Renovation	Outdoor
Edward Jones II	St. Louis	Football	Renovation	Dome
Jack Kent Stadium III	Washington, D.C.	Football	Renovation	Outdoor
Georgia Dome II	Atlanta	Football	Renovation	Dome
M & T Bank Stadium II	Baltimore	Football	Renovation	Outdoor
Paul Brown Stadium II	Cincinnati	Football	Renovation	Outdoor
Heinz Field II	Pittsburgh	Football	Renovation	Outdoor

APPENDIX E

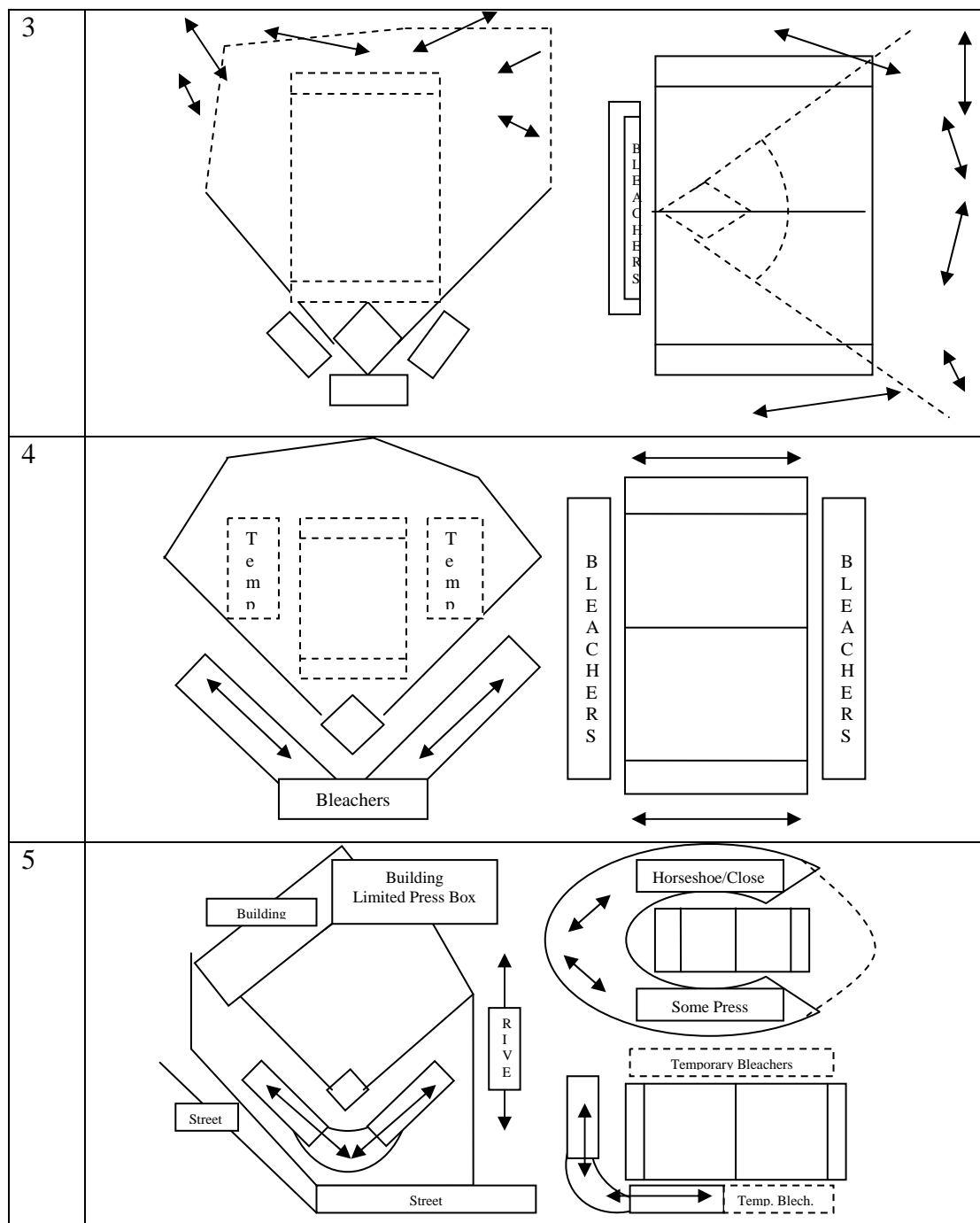
EIGHT STAGE IDEAL-TYPE FOR EVOLUTION OF PROFESSIONAL
BASEBALL AND FOOTBALL MID-19TH CENTURY TO PRESENT



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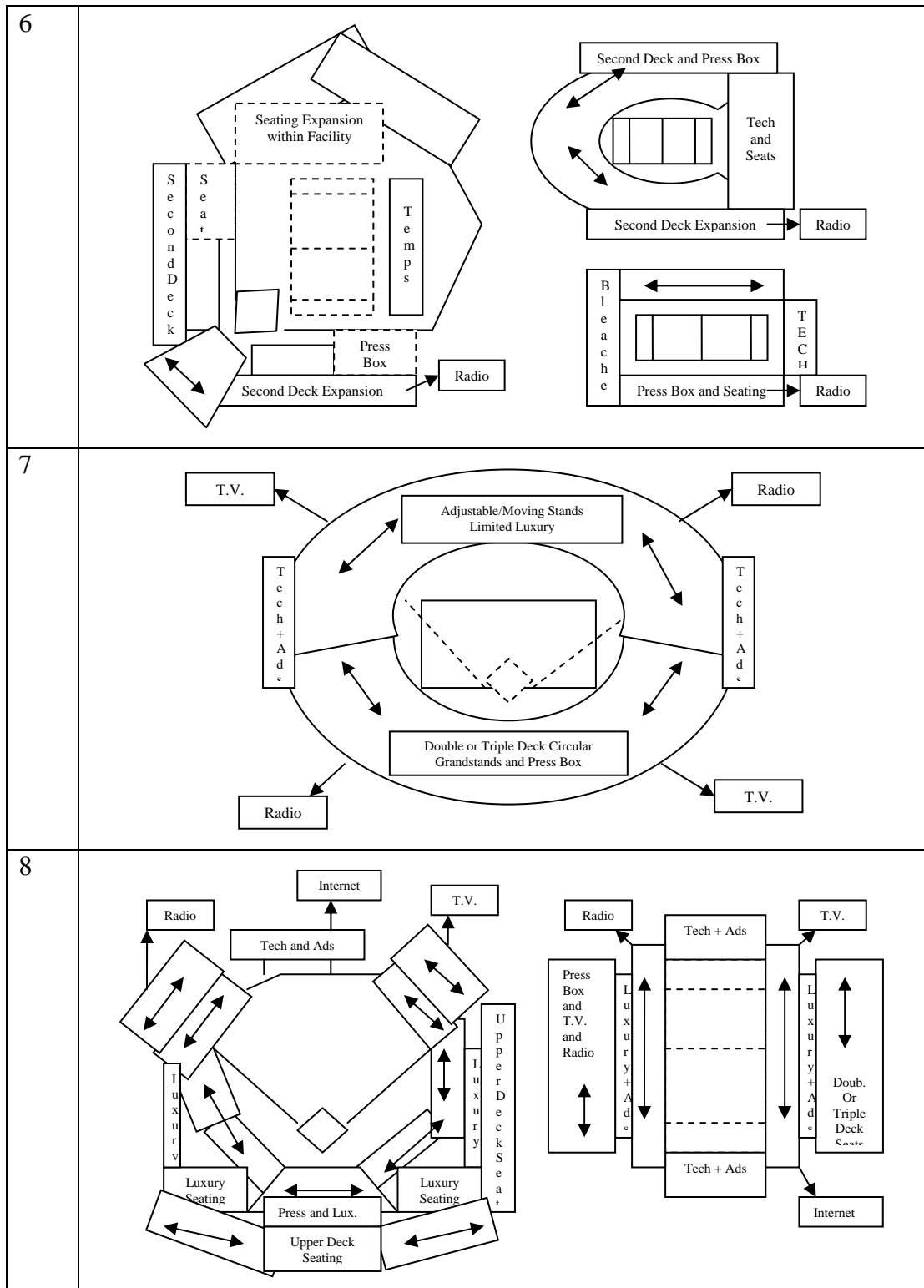
Figure E.1: Eight-stage ideal-type for American professional baseball and football

Figure E.1 continued



Continued

Figure E.1 continued



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