

A SOCCER

**STADIUM**

FOR THE

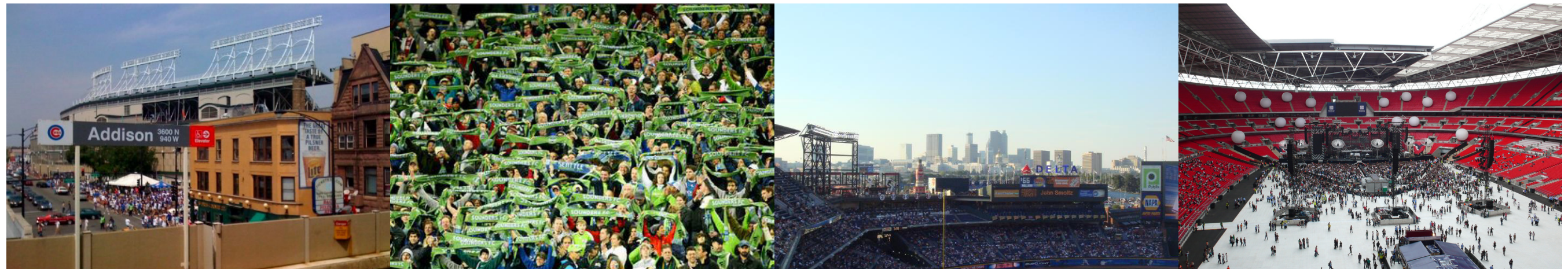
**COMMUNITY**

OF PHOENIX

VICTOR SMITH



# ARGUMENT



## Functionality + Community

In fact, aside from truly public spaces (such as libraries and parks), architecture (including semi-public buildings) too often serves the primary function to an extent where it does not interact with the community. It may consider or attempt to fit into the community, but buildings are rarely designed to connect with the community.

However, if designed appropriately, architecture can not only serve its primary function, but embrace and connect with the surrounding community.

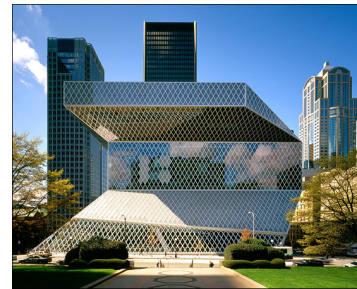


# Architecture...

serving single primary purpose



serving multiple mixed purposes



serving public



serving community



uniting community



uniting community and a primary purpose



## Uniting a Community

A good way to bring together people and unite a community is SPORTS



Chicago Bears football helmets on the Art Institute's lions



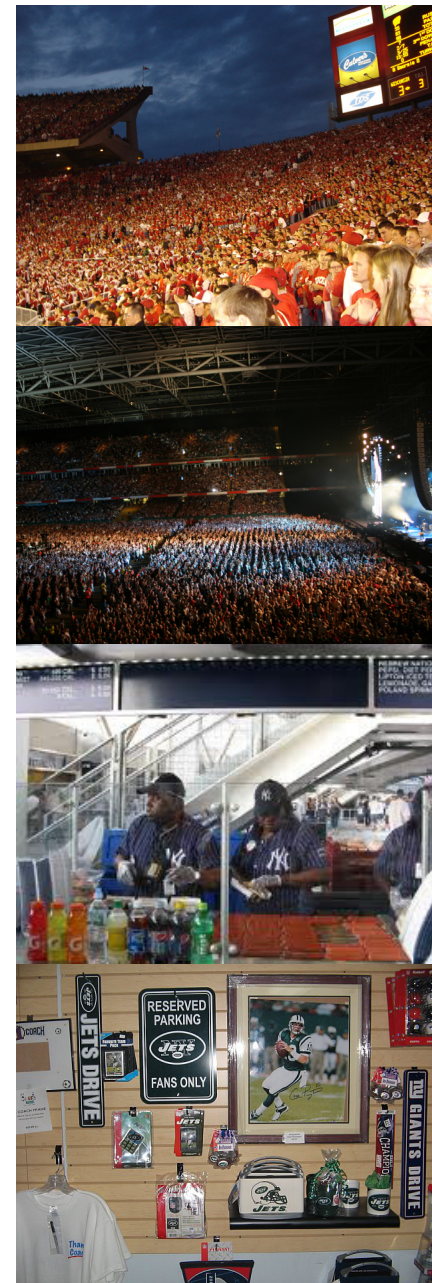
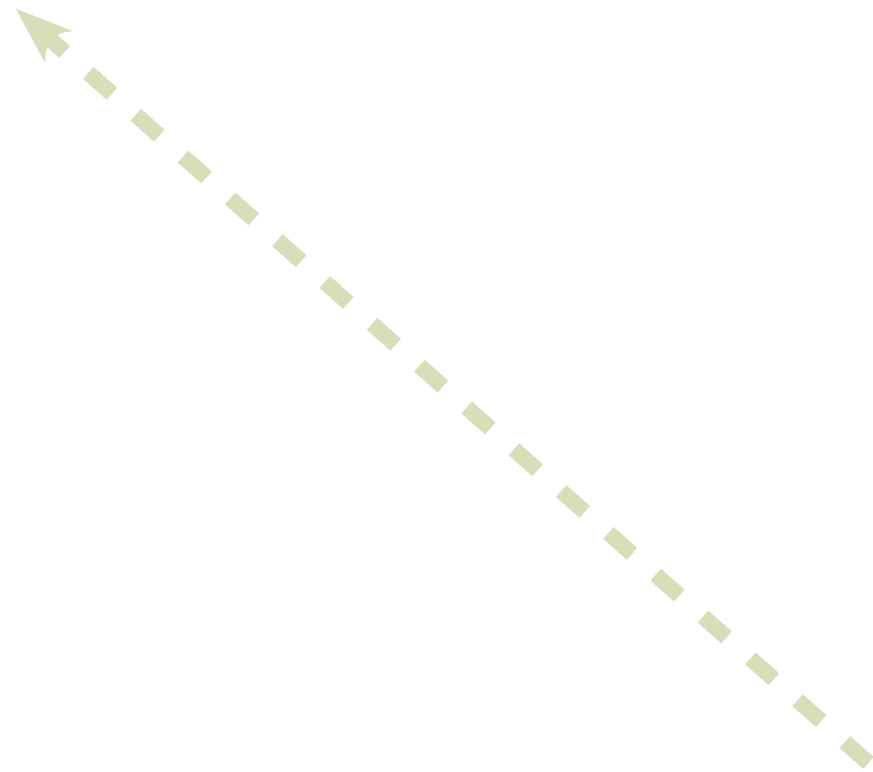
Famous sports couple baseball player Nomar Garciaparra and soccer star Mia Hamm



The self-proclaimed "Red Sox Nation"

Stadiums can be utilized to serve multiple purposes:

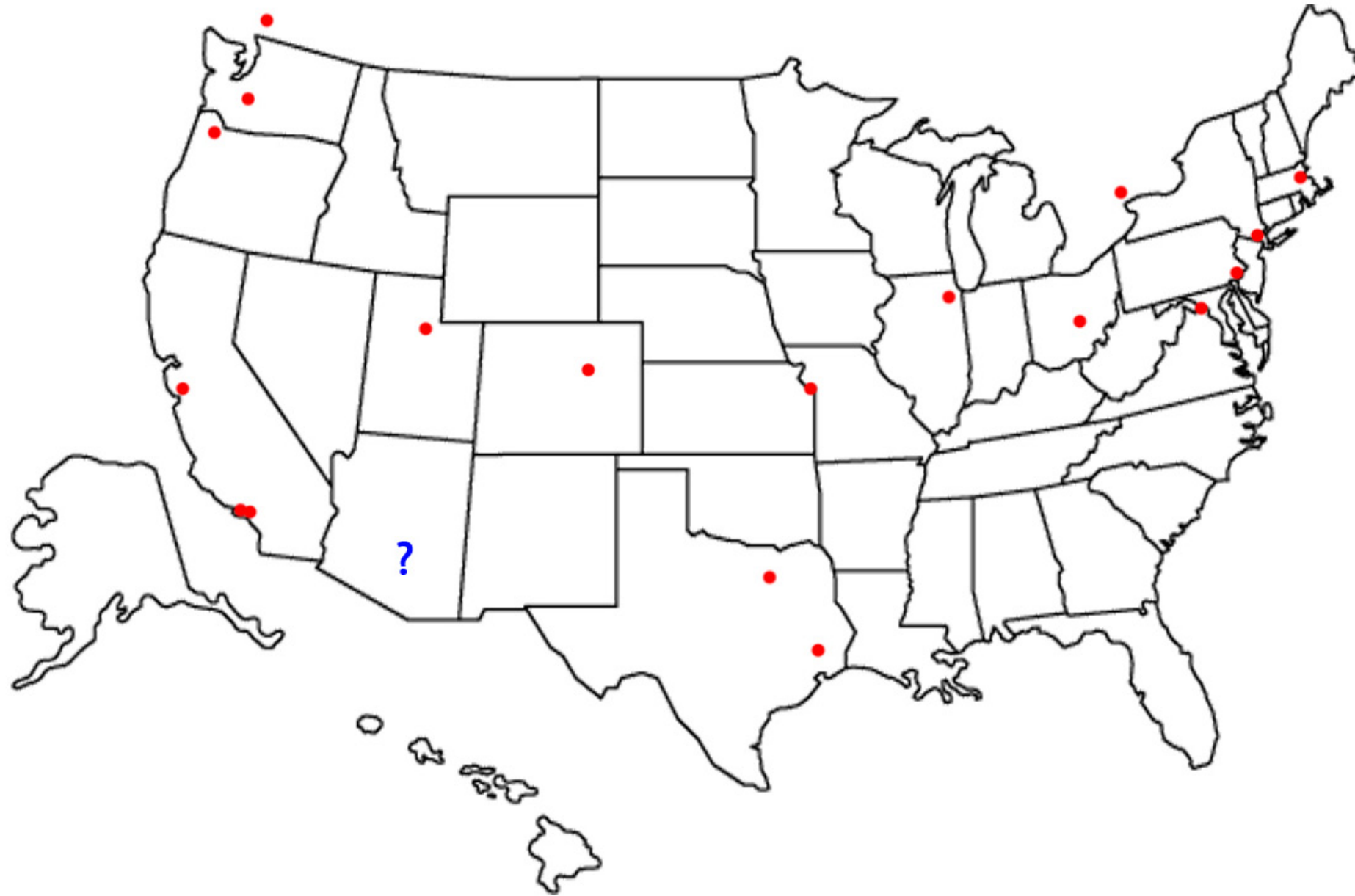
- Sports entertainment
- Music/other entertainment
- Food and beverage
- Marketing and Retail



These things can express a neighborhood's culture and create new jobs!

## Choosing a Sport

In the United States, most major cities already have several sports teams. And most sports have already grown to become huge successes in the U.S. But one sport still has the potential to grow and impact communities across the U.S...







.....SOCCER!



# PRECEDENTS



## Five Generations of Stadia

(Based on the philosophies of Rod Sheard)

### The First Stadium:

Large bowls that were intended to fit in as many spectators as possible, before the age of television.

### The Equipped Stadium:

With the invention of television, sports fans could now watch games comfortably from their own homes. Because of this, stadiums added more comfortable facilities, such as seats, restrooms, and food and beverage outlets. Additionally, stadiums began adding lights for night games and improved facilities to broadcast events.

### The Commercial Stadium:

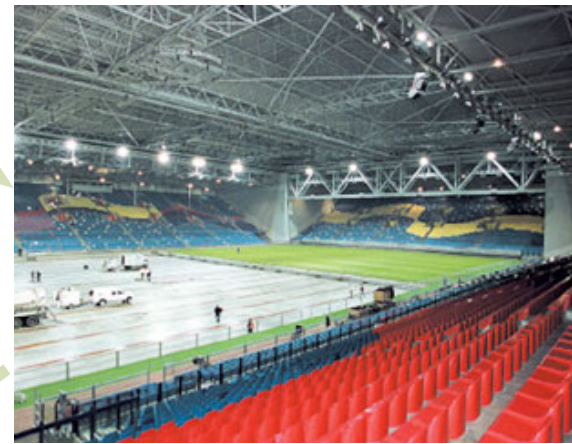
As a progression from the age of television, stadiums began adding aspects that would bring in corporate sponsors and generate increased revenue. This included museums, restaurants, retail stores, and box seats. Also, following a fire at an older wooden soccer event, stadiums began increasing their safety features, providing an additional comfort to the spectator.

### The Flexible Stadium:

As the commercial stadium proved profitable, owners sought out new ways to make money. Stadiums no longer were merely places to watch sports events, but were built to support a number of events and functions. Mobile roofs, stands and fields were introduced to stadium design, allowing the stadium to provide for conventions and concerts as well.

### The Urban Icon:

The most current form of stadium. In the age of the internet and worldwide media, stadia are no longer just places to view events. They now act as both global and local symbols, acting as icons for social, economical, and athletic progress.



## Piazza Del Campo and Piazza Santa Croce

Built in 1349

Located in Siena, Italy

Built Pre-15th Century

Located in Florence, Italy

Piazza Del Campo is a Medieval piazza in Siena, Italy. Piazza Santa Croce is a Renaissance piazza in Florence, Italy. The two piazzas are defined by a church and several multi-purpose (mostly residential and eateries) buildings that have been around for hundreds of years.

Piazza Del Campo is the primary public space in Siena. Santa Croce is one of a few major Piazzas in the city center of Florence. Over their long histories, they have been used for just about everything, including social gatherings, sports activities, tourist attractions, and most notably (in Siena), a semi-annual horse race. What makes these piazzas unique is that rather than having someone build a space dedicated for a single activity, a space is created out of the voids in a city, where its surroundings dictate its multiple purposes. During the Renaissance sports became re-popularized since Roman times, but there were no official places to play. Therefore, these large public piazzas became the venues that held the games and housed the fans. Although piazzas are more associated with parks in today's society, they are still historical places that fulfill multiple functions, including sporting events.



## Franklin Field

Permanently built 1905

Located in Philadelphia, PA

Designed by Frank Miles Day & Brother

Seats 52,593

This stadium is the oldest known American football stadium in the United States (built in 1895). It is home to essentially all outdoor athletics for the University of Pennsylvania, with its primary tenant being UPenn Football. Also, between 1958-1970, it was the stadium used for the NFL's Philadelphia Eagles. During that time, Franklin Field became the first NFL stadium to use artificial turf. With exception to the field's surface, the stadium has been relatively untouched architecturally since 1925.

This stadium was designed specifically for multiple college sports. It is renowned for holding the Penn relays, the oldest (and some consider most prestigious) relay race in the world. Given its age, there is little written about the design intent of the structure. But, by analyzing its architecture, it was clearly meant to fit in with the Ivy League buildings that once surrounded it. The brick building at the west end zone provides the appearance that the stadium is part of its neighborhood. Furthermore, as both a building engrained in history and part of academia (kind of), it has a large following for Philadelphians and students at Penn. This building is unique because it addresses its historical context in a truly intimate way.

Note: This is the stadium where upset Eagles fans booed Santa Claus during a halftime Christmas game and the stereotype that Philly fans are brutally mean was born.



## Palazzetto dello Sport

Built in 1957

Located in Piazza Apollodoro, Rome, Italy

Designed by Annibale Vitellozzi

Engineered by Pier Luigi Nervi

Seats 3,500

Palazzetto dello Sport, also known as the PalaTiziano and PalaFlaminio, is an indoor athletic facility used primarily for volleyball and basketball. During the 1960 Olympics in Rome, the arena was host to basketball and other Olympic games. Following the Olympics, the arena hosted the Lottomatica Roma basketball team until the 1980s. Currently, it is home to M. Roma Volley, the Roman volleyball team.

What makes this arena so fascinating is the 61 meter pre-fabricated concrete shell dome, braced by flying buttresses. The dome was built in 40 days, fabricating "rhomboid hollow flat blocks" on the ground of the site and then carrying each block to a metal scaffold. This process allowed the building to be constructed in 14 months. The engineering and construction was superior for its time, making the building economical, lightweight, and a technologically creative way to utilize pre-fabricated concrete and steel.





## Toyota Park

Built in 2006

Located in Bridgeview, IL

Designed by Rosetti Architects

Costs \$100 million to build

Seats 22,000 for games

Seats 28,000 for concerts

Toyota Park is the current stadium that holds soccer games for the Chicago Fire and Lingerie Football games for the Chicago Bliss. It is also the venue for several concerts, including the annual B-96 summer bash. Its design was inspired by the older European football stadiums and contains "Section8," a portion of seating where all die-hard fire fans stand and lead the stadium in chants for entire games.

The Fire used to play their games in Soldier Field. However, that venue was better fit for American football, being too big and far away from the field for good soccer-viewing. Toyota Park is designed specifically for soccer games in the Chicago-area and can be easily manipulated to host concerts as well. Two primary features that promote this are the tensile coverings over the stands and the heated turf field.



## Chase Field

Located in Phoenix, AZ

Built in 1998

Designed by Ellerbe Becket

Cost \$354 million to build

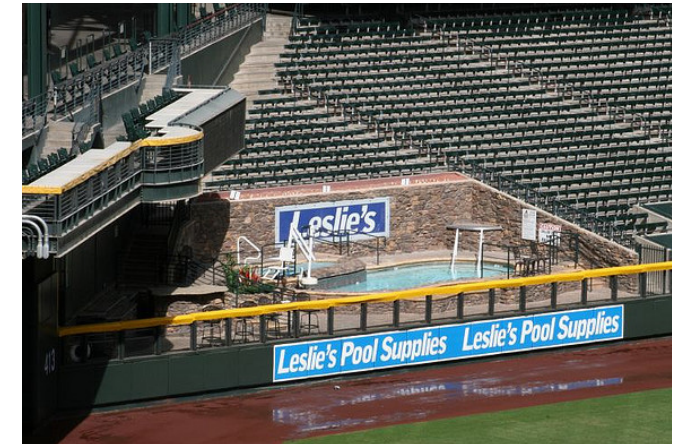
Seats 48,633

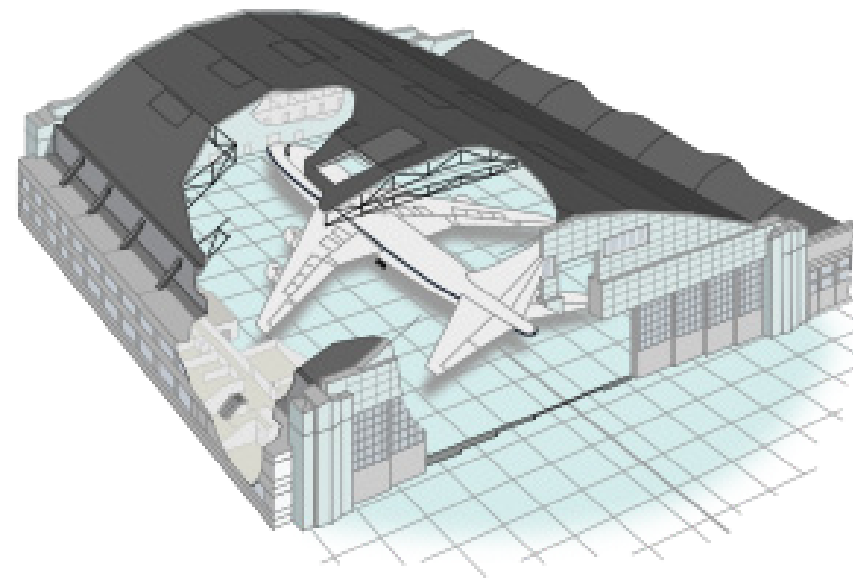
Chase Field houses the Major League Baseball team Arizona Diamondbacks. Although it is primarily used for baseball, events such as concerts, football games and even motocross tournaments have been held there. The stadium incorporates several unique features, including restaurants that offer in-game balcony views, special seats that offer all-you-can-eat buffets, and a swimming pool behind the outfield wall that fans can use during games.

However, the two most unique features of the ballpark relate to weather. One of these features is the retractable roof. It is the only professional stadium in the MLB to incorporate a natural grass field with a roof-enclosure capability. This is because the overhead roof uses a two 200 horsepower motors that run along six cable tracks to open and close within five minutes. This makes bad weather essentially a non-issue, while still providing the field the sunlight it requires.

The second weather-related feature is the cooling system of the ballpark. Because Phoenix often has 115 degree temperatures during the summer, the ballpark has air conditioners all around the park, making sure every seating area is properly cooled. This is done through cool water pipes that run underneath the park, into an 8,000 ton water cooler.

This field, although often considered more of a gymnasium than a ballpark, offers a unique solution to the problem of arid, hot environments that require sports activity. The roof structure is simple and effective, making the ballpark fun for fans and architecturally noteworthy.





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Many have compared Chase Field to that of an airplane hanger. The structure of each are very similar, appearing as barrel vaults, but using deep trusses. However, the roof of a hanger is immobile, whereas the roof of the ballpark moves inwards and outwards. It uses the motors and cable similar to a basic pulley system, pulling the roof farther and farther outward. The roof is able to maintain its compactness by layering each part of the roof within the former, appearing similar to how a telescope can be stretched farther and farther.



## Moses Mabhida Stadium

Built in 2006

Located in Stamford Hill, Durban, South Africa

Designed by Gerkan, Marg and Partners

Costs \$450 million to build

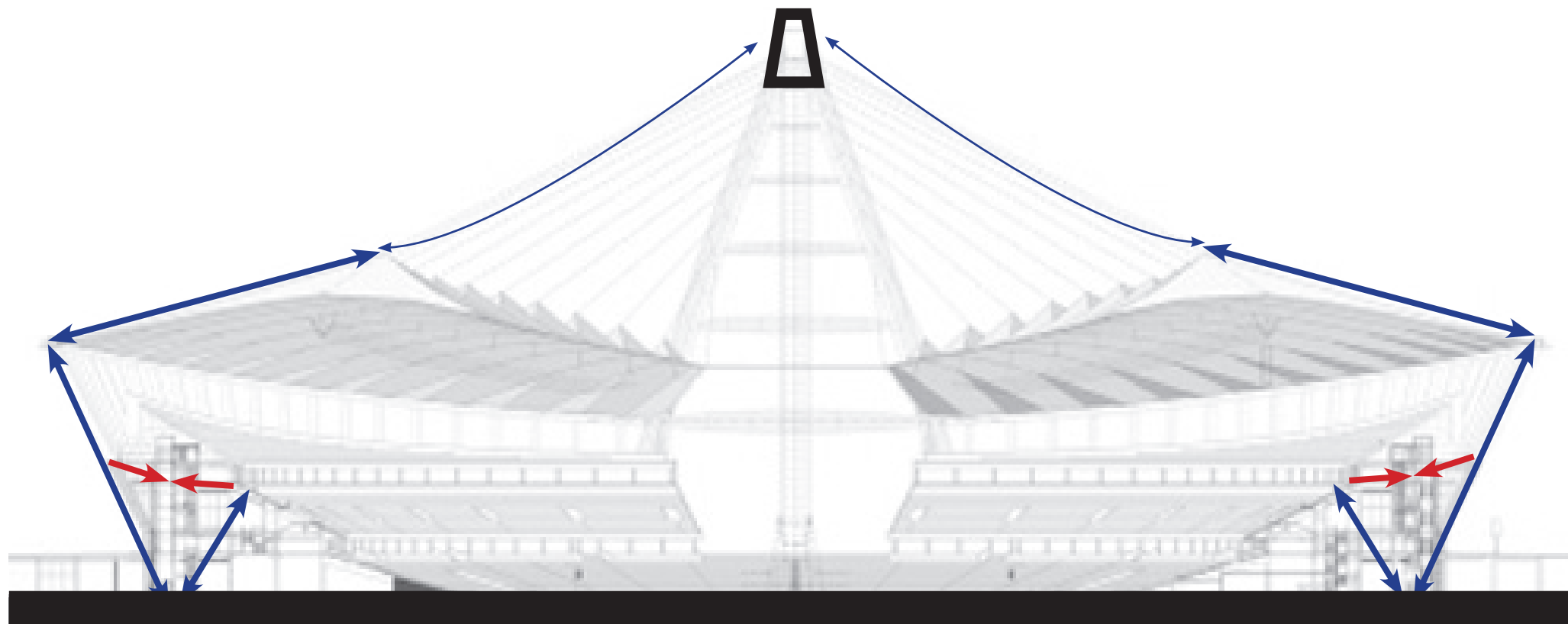
Seats 62,760 FIFA World Cup, 54,000 afterwards, and 69,000 Cricket

This structure is a large soccer stadium in South Africa that was designed to host games for the 2010 World Cup. Currently its tenant is AmaZulu football club. This building is part of a new trend of “super stadiums” that can hold lots of people and provide other forms of entertainment besides the game using state-of-the-art design.

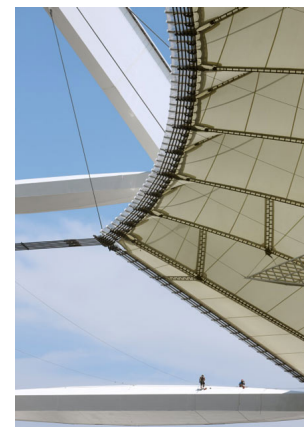
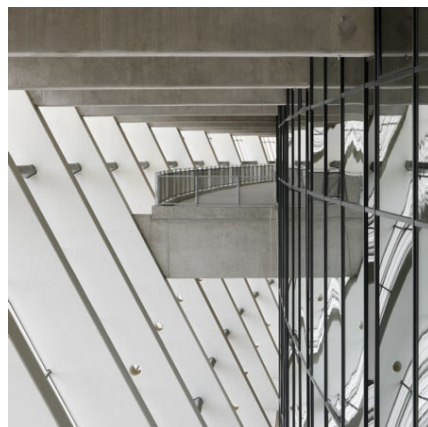
When South Africa won their bid to host the 2010 World Cup, FIFA had declared their stadiums unfit to handle the crowds that came with the event. So South Africa began a massive building project that included several new, contemporary soccer stadiums. Moses Mabhida, named after a famous African General Secretary, was one of these new stadiums. Located in a suburban part of Durban, it is part of a greater sport complex that includes three sports venues in the areas. However, the stadium itself is almost city-like. The stadium includes an adjoining indoor arena, soccer museum, sports institute, and a transmodal transport station. Additionally, it has several restaurants and retail shops, recreational parks at the foot of the stadium, a sightseeing tower (about 300 ft high) at the top of the stadium, a “skycar” leading up to the tower, a pathway from the top of tower down to the ground, and a bungee jumping space from the top. The Stadium has a 10,000 car parking garage under the stadium and plans for 70,000 car garage to be placed nearby the stadium. All of these elements not only made the stadium ready for the World Cup, but provided a space that had the potential as a tourist attraction and cultural center for the city of Durban in the future.

In contrast to the past, where the city created places to play sports in it's voids (such as piazzas), now cities are being developed within and around sporting venues. Stadiums now serve as the focal point and instigator of urban renewal.





abbreviated structural analysis



## Coors Field

Built in 1995

Located in Denver, CO

Designed by HOK Sport

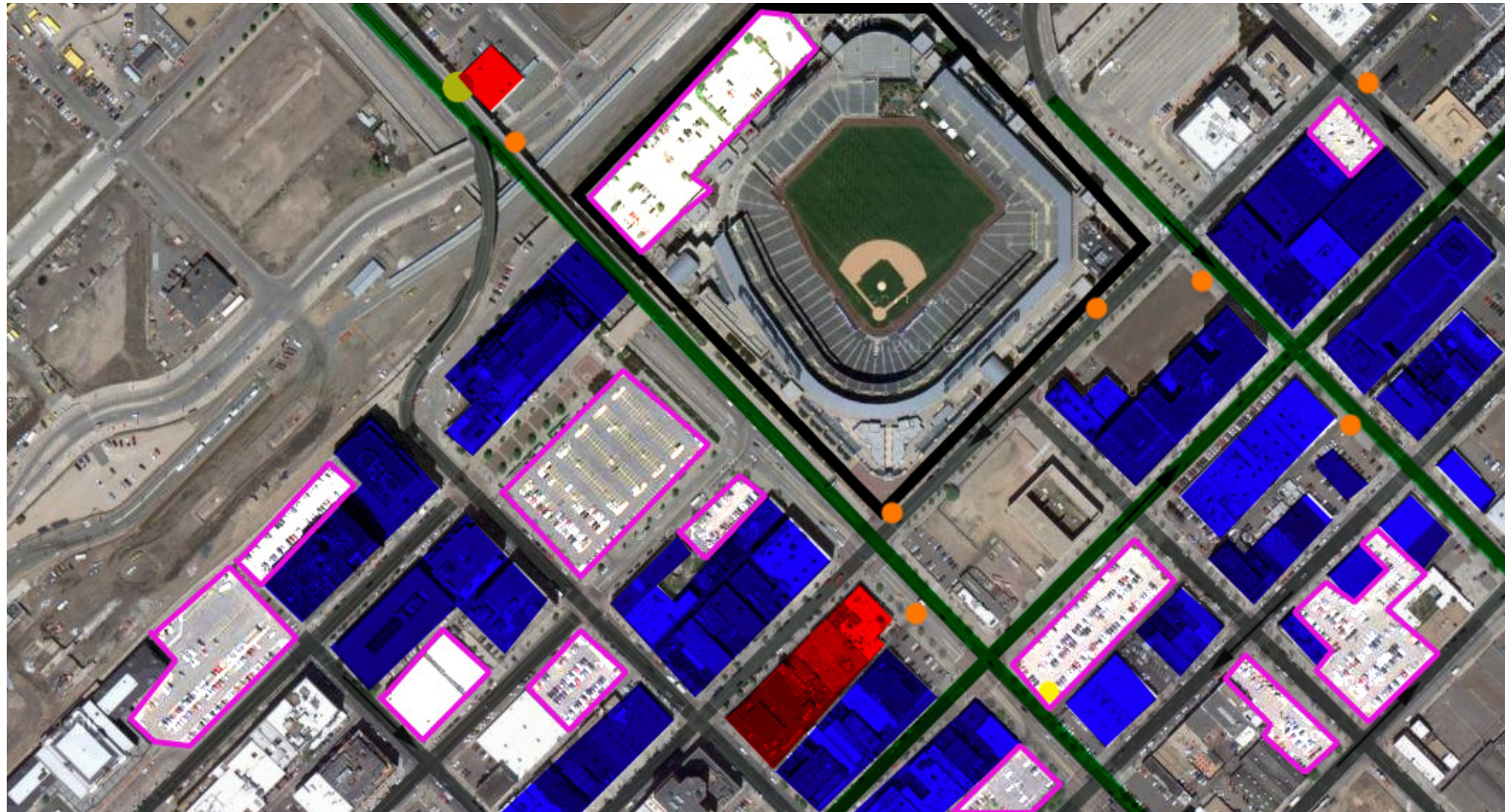
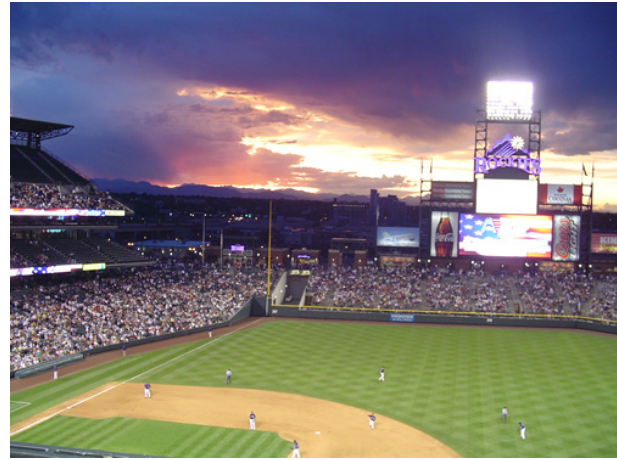
Cost \$215-\$300 million to build (depending on source)









Seats 50,200

Coors Field houses the Major League Baseball team Colorado Rockies. It is a baseball only park. The Denver Stadium was built with the nostalgic baseball stadiums in mind, such as Wrigley Field and Ebbots Field. It was the third stadium to do this in a short period of time, including Camden Yards and Jacobs Field. Though all three have been considered successes and have seen increases in attendance since being built, Coors Field has been the best at maintaining success and rehabilitating a neighborhood.

Coors Field was the initial project that was intended to revitalize the Lower Downtown area of Denver, also known as LoDO. Since being built in 1995 it has set regular season records for attendance (though it is not the park with highest capacity) and has frequently sold out games even when the team is in last place. The stadium itself includes unique features such as a "Rockies paradise" behind the outfield bleachers, a red line of seating at the mile-high mark, and a micro-brewery inside the ballpark. However, the thing that makes Coors field unique is what took place OUTSIDE the ballpark. Since the building of the stadium, residential unit costs in the area have gone up 800%, Hotel occupancy has gone up, crime has gone down, sales tax collections went up, and the amount of restaurants in the area have doubled.

One element that designers have pointed to as a large reason for this success was the decision to place only 5,000 parking spots available nearby the stadium. Although this made traffic less bearable on games days, it also forced people to either take public transportation (Union station is two blocks away) or park further from the stadium. What this gesture led to was people interacting with the neighborhood more often, increasing the business in the area. One downside to the success the ballpark and revitalization of LoDo was that high rent rates changes the dynamic of the community. Many art galleries could no longer afford the higher rent costs and were forced out. A lesson to be learned here is that although revitalizing a neighborhood is a good thing, there must be a sensitive balance in keeping the positive cultural aspects of the area while improving the rest.



- |   |  |  |
|---|--|--|
|  Lower Downtown District |  Privately-owned Building |  Bus Stop   |
|  Site                    |  Parking                  |  Train Stop |
|  Public Building         |  Main Road                |  |





# PROGRAM



## **Title**

This project will be a soccer stadium with the ability to additionally serve other community events.

## **Elevator Statement**

This project is about developing a closer relationship between the neighborhoods of Phoenix, the soccer fan base and a soccer organization from a single source of architecture.

## **Case Statement**

The project will be developed because, through public opinion, there is frequently a disconnect between the community, the fan base and the team/owner. Statistics have proven that attendance to athletic events is higher if the team is playing well . Also, statistics and public opinion have shown that if the surrounding area is considered dangerous, or if the architecture is unappealing and outdated, attendance to these sporting events do not reach maximum capacity. However, through a well designed sporting venue, there is an opportunity to engage the surrounding neighborhood that will bring in those who enjoy watching sports and those merely looking for an enjoyable experience.

By understanding the elements that make for good stadium design and choosing a fitting site, the stadium will provide a better experience for those visiting and living in the neighborhood. It is through this integration of community and sporting venue that the social atmosphere of the surrounding neighborhoods will be improved, creating a culture that benefits fans, neighbors, and the athletic organization.

GOAL:

To create a venue for entertainment sports that people enjoy visiting, regardless of the success of the team.

GOAL:

The idea is important because having a common love for a sports team can bring a community together.

GOAL:

To provide an opportunity for a struggling or up-and-coming neighborhood to enhance its social and economic well-being.



(Barcelona "Football" Culture)

## Primary Stakeholders

Owner:

This is the person/corporation who is paying the designer and is taking the most risk.

Fans:

Their acceptance of the new sports venue is a major part of measuring the success of the architecture.

Team/Staff:

They are the people who will most frequently use the sports venue.

Neighborhood/Community:

They are the people who will improve the atmosphere around the venue. They have a major impact in the year-round success of the venue.



Mark Cuban, Dallas Mavericks:

Though all owners are interested in their team's sport, some are more fanatical than others. This billionaire owner sits amongst the fans and cheers on his team, the reigning world champions of basketball.

## Guiding Principles

Identity:

The venue represents (maybe even exudes) the spirit of the fans, the sport and the city.

Community:

The venue's architecture interacts with the surrounding community and contributes to the social environment in a positive way.

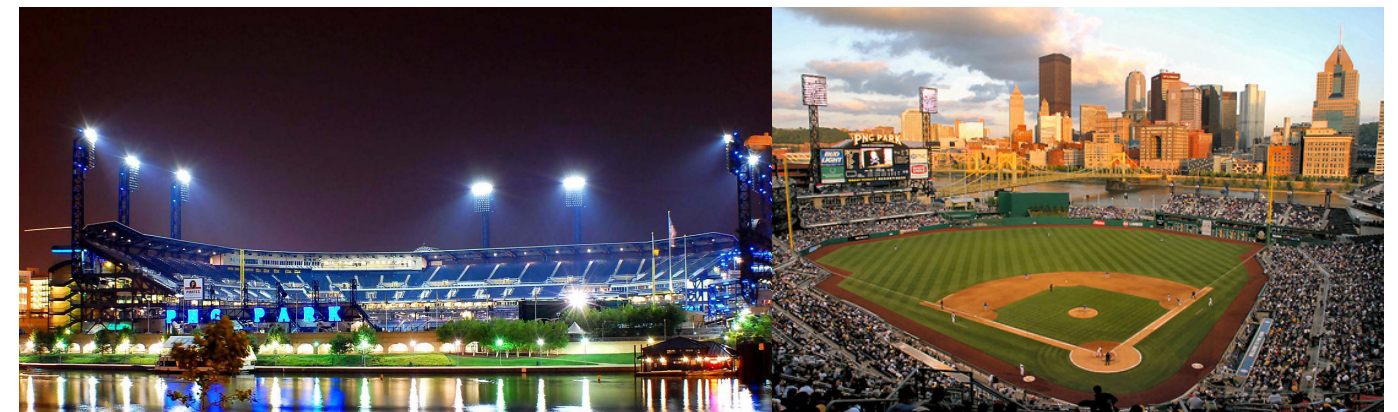
Maintenance and Care:

The venue creates an environment that is conducive to fun and safe sporting events.

The venue can easily be maintained and used for multiple functions/events.

Sustainability:

The venue has a long-lasting appeal to the fans and neighboring community. Also, the stadium structurally and architecturally remains in top-condition for a long period of time.



PNC Park, Pittsburgh PA:

The park highlights the downtown, the three rivers and the Clemente Bridge (named after famed baseball player Roberto Clemente). It is also a smaller, more exposed ballpark, alluding to the blue collar association with the "Steel City" and the classic ballparks during the 1970s -- the last time the Pirates were actually good!

## Qualitative Parameters

### Project:

The stadium will be a fun and exciting place to watch soccer games with fellow fans.

### Site:

The stadium site will be intertwined with the surrounding neighborhood, inviting the community onto the site and reaching out to the character of the area.

### View:

The stadium seating will provide excellent views to everyone, allowing the intense fan and the tame spectator equal comfort.

### Additional Features:

The other features (concessions, restaurant, museum, other...) will integrate the local flavor of the surrounding area, stimulating soccer-lovers beyond the realm of sports.

### Structure:

The stadium structure will be integrated into the architecture, serving as an aesthetic, shading device, heating/cooling mechanism, and technology for keeping the building standing.

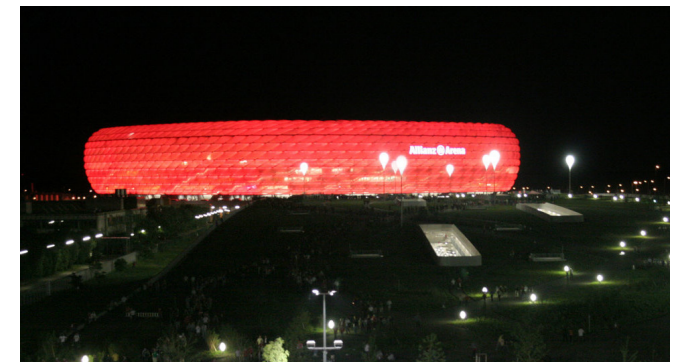
Allianz Arena, located in Munich, Germany, is the home of two local soccer teams and the national soccer team. The 2,874 inflated ETFE foil panels serve not only as the skin of the stadium, but also as a marketing ploy, telling everyone who passes by which team is playing based on the color of the “ring of fire”.



Pittsburgh Steelers fans unite as they wave their “terrible towels” and root for their home town American football team.



As part of the construction of Camden Yards, a historical warehouse of Baltimore was restored and incorporated as part of a streetscape located inside the stadium.



Major League Soccer Criteria:

-- Fan Support

-- Made-for-soccer stadium

Team	2011	2010	Stadium	Capacity
Seattle Sounders FC	38,496	36,173	CenturyLink Field*	35,700
Los Angeles Galaxy	23,335	21,437	The Home Depot Center	27,000
Vancouver Whitecaps FC	20,412	--	BC Place*	22,000
Toronto FC	20,267	20,453	BMO Field	21,800
New York Red Bulls	19,691	18,441	Red Bull Arena	25,189
Portland Timbers	18,827	--	Jeld-Wen Field	18,627
Philadelphia Union	18,259	19,254	PPL Park	18,500
Sporting Kansas City	17,810	10,287	Livestrong Sporting Park	18,467
Houston Dynamo	17,694	17,310	Robertson Stadium*	32,000
Real Salt Lake	17,594	17,095	Rio Tinto Stadium	20,008
D.C. United	15,181	14,532	RFK Stadium*	46,000
Colorado Rapids	14,838	14,329	Dick's Sporting Goods Park	18,086
Chivas USA	14,830	14,576	The Home Depot Center	27,000
Chicago Fire	14,274	15,814	Toyota Park	20,000
New England Revolution	13,222	12,987	Gillette Stadium*	22,385
FC Dallas	12,861	10,815	Pizza Hut Park	21,193
Columbus Crew	12,185	14,642	Columbus Crew Stadium	20,455
San Jose Earthquakes	11,858	9,659	Buck Shaw Stadium	10,300

Notes:

\* Denotes having a non soccer-specific stadium

Seattle has the fan base to support having something larger than a soccer-specific stadium.

Vancouver and Portland had their inaugural season in 2011, which typically displays elevated attendance numbers.

San Jose has 115% attendance, despite having a poor 2011 season and the lowest average attendance per game. This supports the idea that a smaller stadium can still reach a fan base and that maximum capacity likely provides a better experience than having a larger stadium half-full.



The Seattle Sounders have the highest average attendance in the league, the loudest stadium, and is considered to have the strongest fan base of any in the nation.



The San Jose Earthquakes, despite having the smallest stadium in the league, received an over 100% attendance average for the 2011 season. The fans in fact are addicted to the game of soccer and their local team.

# Program

## Field and Fans

- Field and sidelines
- Spectator Seating
- Private Seating
- Entry Area
- Public Restrooms
- Concessions/Ticketing
- Restaurant
- Bar
- Retail
- Museum

## Facilities

- Administration Offices
- Board Room
- Stadium Control Room
- Groundsmen Room
- Equipment Rooms
- Police/Security Office
- First Aid Office
- Locker Rooms
- Referee Rooms
- Laundry
- First Aid for Players

## Press Box

- Radio/TV commentating rooms
- Media seating
- Media reception/check-in
- Press work room
- Toilets

## Media Center

- Interview Rooms
- Mixed Zone
- TV Studio
- Press lounge/bar
- TV Control Room
- Toilets
- Phone/Quiet Room

## Transport

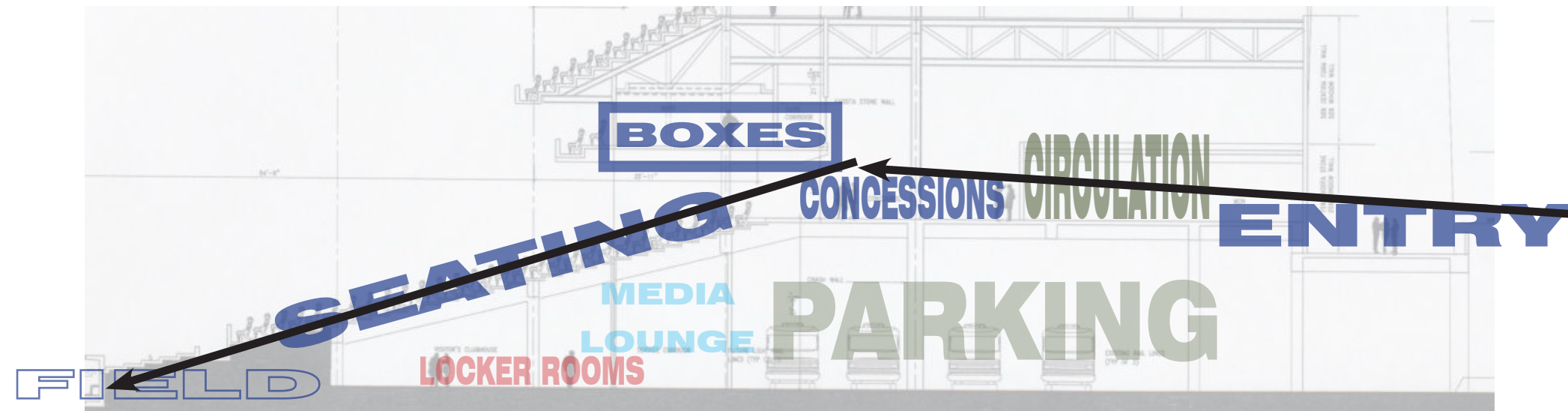
- Circulation
- Mechanical
- Media Parking
- Player/Staff Parking
- Public Parking





<b>Field and Fans</b>	<b>66%</b>
<b>Facilities</b>	<b>3%</b>
<b>Press Box</b>	<b>.02%</b>
<b>Media Center</b>	<b>1.8%</b>
<b>Transport</b>	<b>29%</b>

(not including public parking)



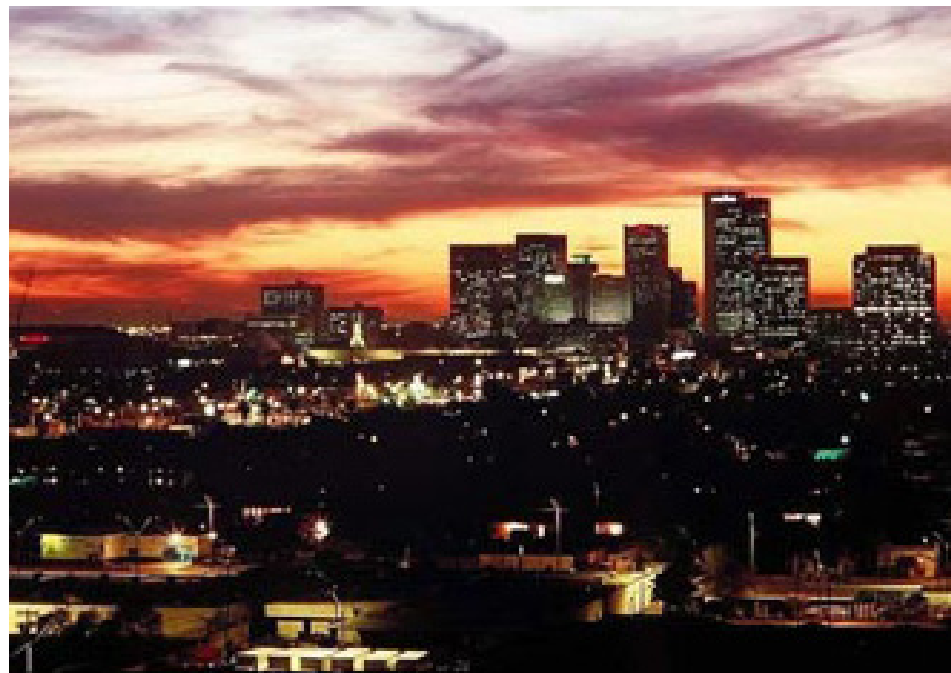


# S I T E



## Site Criteria

- Located near city with large population
- Mid-Large Hispanic population (demand for soccer)
- Near up-and-coming neighborhood or area that potentially could improve
- Has other professional sports teams (proven demand for sports)
- Has a need for soccer team/soccer stadium
- Public transportation system available



**Careful** decisions about how to incorporate the team and its stadium must be made...

Near a strong fan base...

MLB Team	Home Att %	Road Att %	W-L	Notes
Chicago Cubs	90.5	76.4	71-91	Play in historical monument
Minnesota Twins	99.0	68.5	63-99	Play in newly built stadium



Near a weak fan base....

MLB Team	Home Att %	Road Att %	W-L	Notes
Tampa Bay Rays	55.4	65.1	91-71	Seeking funding for new stadium
Chicago White Sox	60.8	68.2	79-83	Play in 20-year-old stadium



Near a strong fan base...

NFL Team	Home Att %	Road Att %	W-L	Notes
Indianapolis Colts	106.3	97.1	10-6	Play in recently built stadium
Seattle Seahawks	100.0	88.0	7-9	LOUDEST stadium in NFL



Near a weak fan base....

NFL Team	Home Att %	Road Att %	W-L	Notes
Tampa Bay Buccaneers	75.1	93.6	10-6	Lack of diehard fan base
Washington Redskins	90.7	94.7	6-10	Field located in DANGEROUS area



FORTUNATELY...

# PHOENIX WANTS A SOCCER TEAM! (and stadium)

## Major League Soccer Can Succeed In The Valley

by Jose Romero • Mar 9, 2011 8:45 PM MST

"I believed MLS would not and could not survive in Phoenix. And then, three things happened over the last month or so that totally changed my mind....

The first was the amount of MLS teams that descended upon this state for preseason training and games... The second thing that happened was a conversation I recently had with a friend. We talked about soccer briefly, and he said that a Mexican team should be added in Phoenix. Then I thought, did he mean adding a team for the Mexican league, or an MLS team with strong ties to a Mexican club?...

Which brings me to the third event that gave me hope: The match on Tuesday night between Atlas of Mexico and the New York Red Bulls. The Coyotes were across the street playing. Spring training is every day right now. Yet the Suns were at home. The Coyotes were across the street playing. Spring training is every day right now. Yet the Suns were at home.

13,644 people had tickets to the soccer match, and they were undaunted by traffic at the freeway exits to the West-gate area where the stadium and Jobing.com Arena are...

## MLS Seeks Stadium Site

Jose L. Garcia The Arizona Republic Mar. 8, 2007 12:00 AM

Dana Gagnon recently announced the formation PHX Soccer Development, which is talking with Valley cities to gauge support for a privately funded \$150 million retractable-roof soccer stadium with 25,000 seats.

The facility would need to sustain itself year-round with other events. Gagnon has heard it can't be done in the Valley, which is home to stadiums and arenas that compete for events.

"I disagree," Gagnon said. "I think there are some areas in the entertainment arena that haven't been fully tapped."

Gagnon's vision for professional soccer in the Valley unexpectedly gained momentum when the Valley hosted two soccer events that attracted more than 100,000 fans.

More than 60,000 went to University of Phoenix Stadium to see the U.S. play Mexico, and more than 40,000 saw Mexico's top professional clubs, Chivas and America, play at the stadium last year. Gagnon knows he needs to tap into the Valley's Latino community to attract a strong customer base.

## Inside Look at MLS Pre-Season in Arizona

Jonah Freedman MLSSoccer.com  
Moving. Spring training is every day right now. Yet the Suns were at home. The Coyotes were across the street playing. Spring training is every day right now. Yet the Suns were at home.

Arizona phenomenon, however, is the new wild card. Twelve teams have spent time in the Grand Canyon State this winter, the most ever. Like America's Pastime, local governments in the Phoenix and Tucson area are reaching out to try to attract MLS teams to new and soon-to-be-built soccer complexes that dot the sprawling desert landscape. And costs are much, much lower than, say, flying an entire team and its staff to Argentina.

It makes a lot of sense for the Midwest's eastern and West Coast teams to gather here," Sporting Kansas City team administrator Rick Dressel told MLSSoccer.com over the phone from Phoenix, where the club is currently based for its entire preseason...

While Salt Lake are the first club to plant down roots in Arizona, with their academy based in Casa Grande, 50 miles south of Phoenix. That's given MLS another semi-permanent base in the desert, thanks to the work of former RSL Academy chief (and current Chivas USA assistant coach) Greg Vanney, an Arizona native....

Rodriguez was quick to point out the league is in the early stages, but it's entirely possible MLS could require all teams to check in at one of the pre-established facilities in Phoenix for a minimum set period during preseason.

## If You Build It, They Will Come

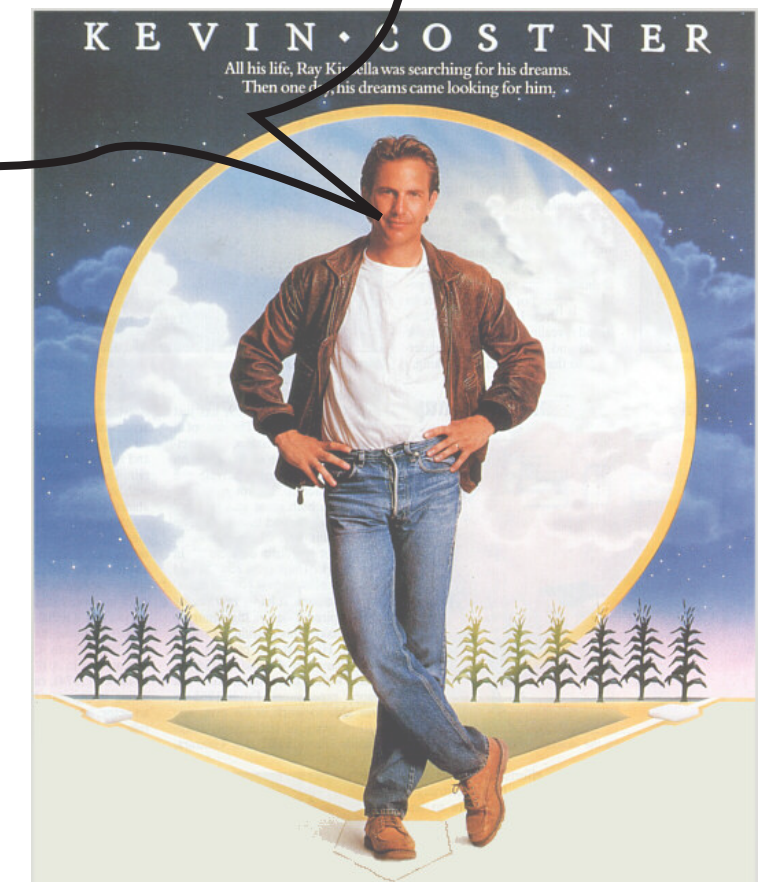
Phoenix MLS Soccer Stadium

Garfield, Phoenix, AZ

(At Van Buren and 16th)

- Located in fast growing, high Hispanic population
- Currently most MLS teams go to Phoenix for spring training, but no team exists
- One primary reason for no team is lack of quality soccer-only facilities
- Warm climate and strong potential to be used year-round
- Already have baseball, basketball, football and hockey teams

When I built my field, my dreams came true. It could happen to Phoenix and soccer too!



## Demographics

Population in July 2009: 1,601,587

Population change since 2000: +21.2%

White alone - 725,457 (45.5%)

Hispanic - 688,939 (43.2%)

Black alone - 84,975 (5.3%)

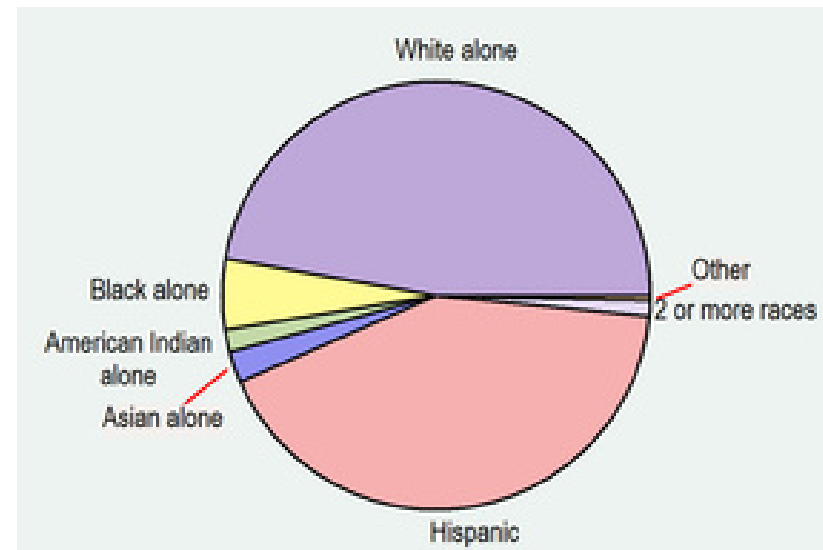
Asian alone - 44,134 (2.8%)

American alone - 23,597 (1.5%)

Two or more races - 21,296 (1.3%)

Other race alone - 3,552 (0.2%)

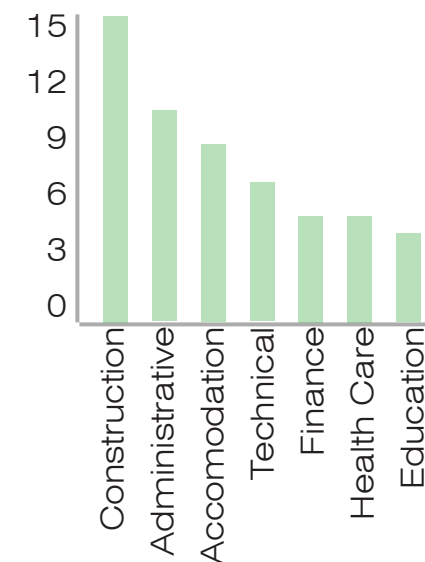
Native Hawaiian and Other Pacific Islander alone - 1,708 (0.1%)



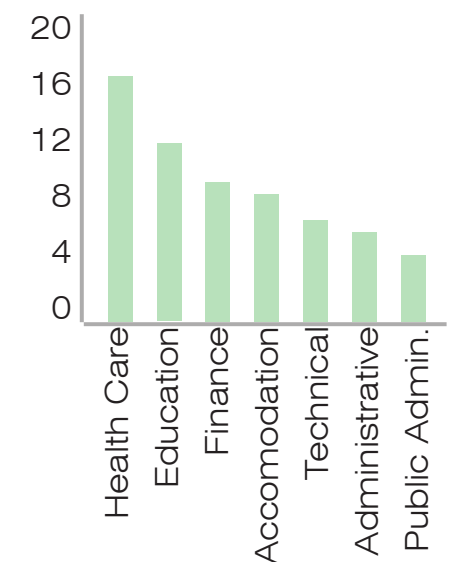
City-data.com crime index (higher means more crime):

Year:	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Index:	638.8	601.8	629.1	624.3	623.5	588.9	594.3	574.0	561.1	495.4	396.0	378.0

Most common industries in 2009 (%) for males



Most common industries in 2009 (%) for females

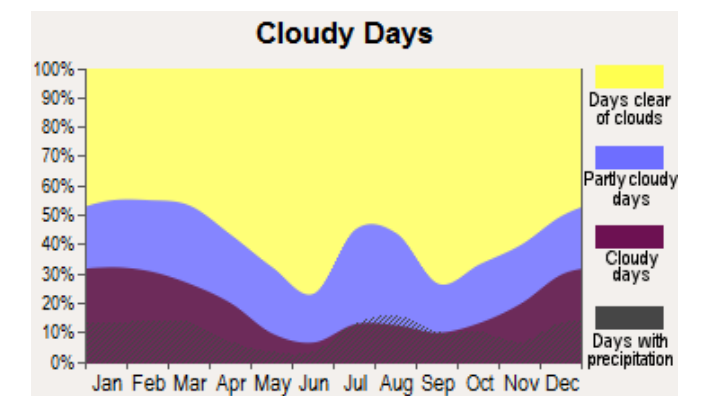
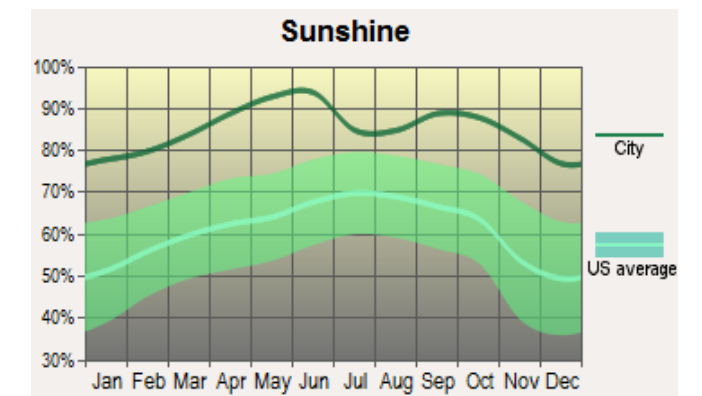
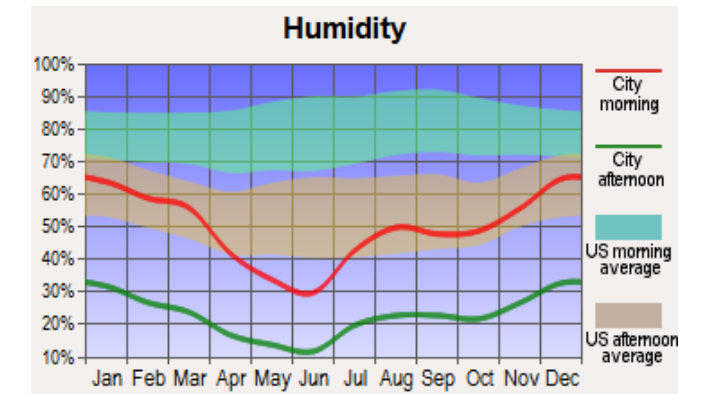
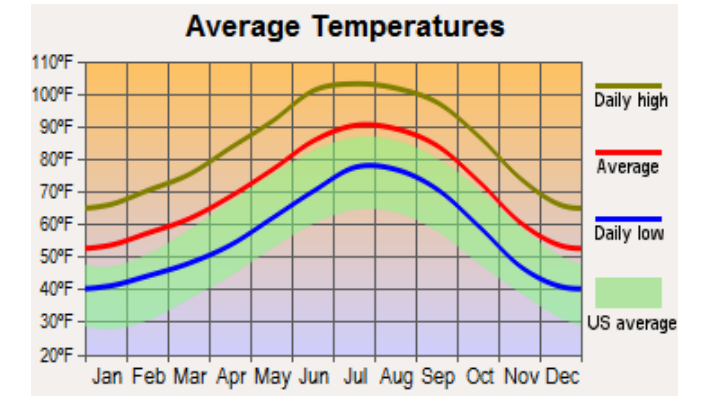
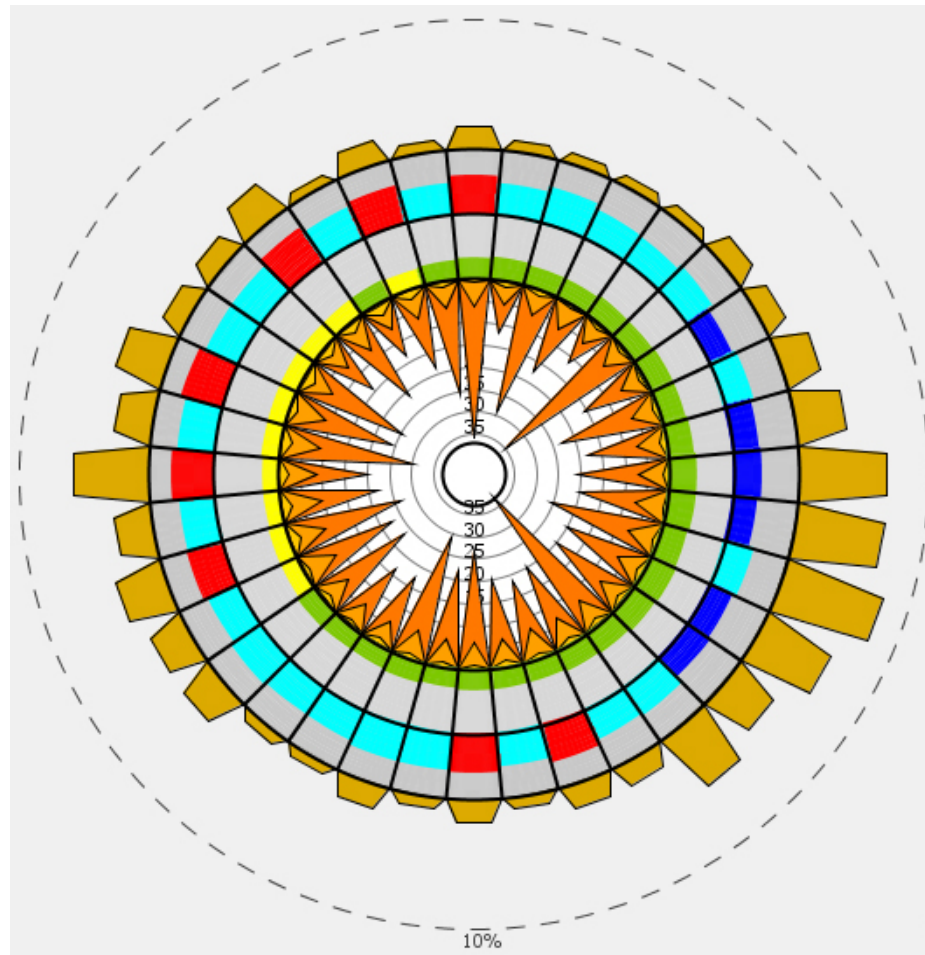




# Weather Data

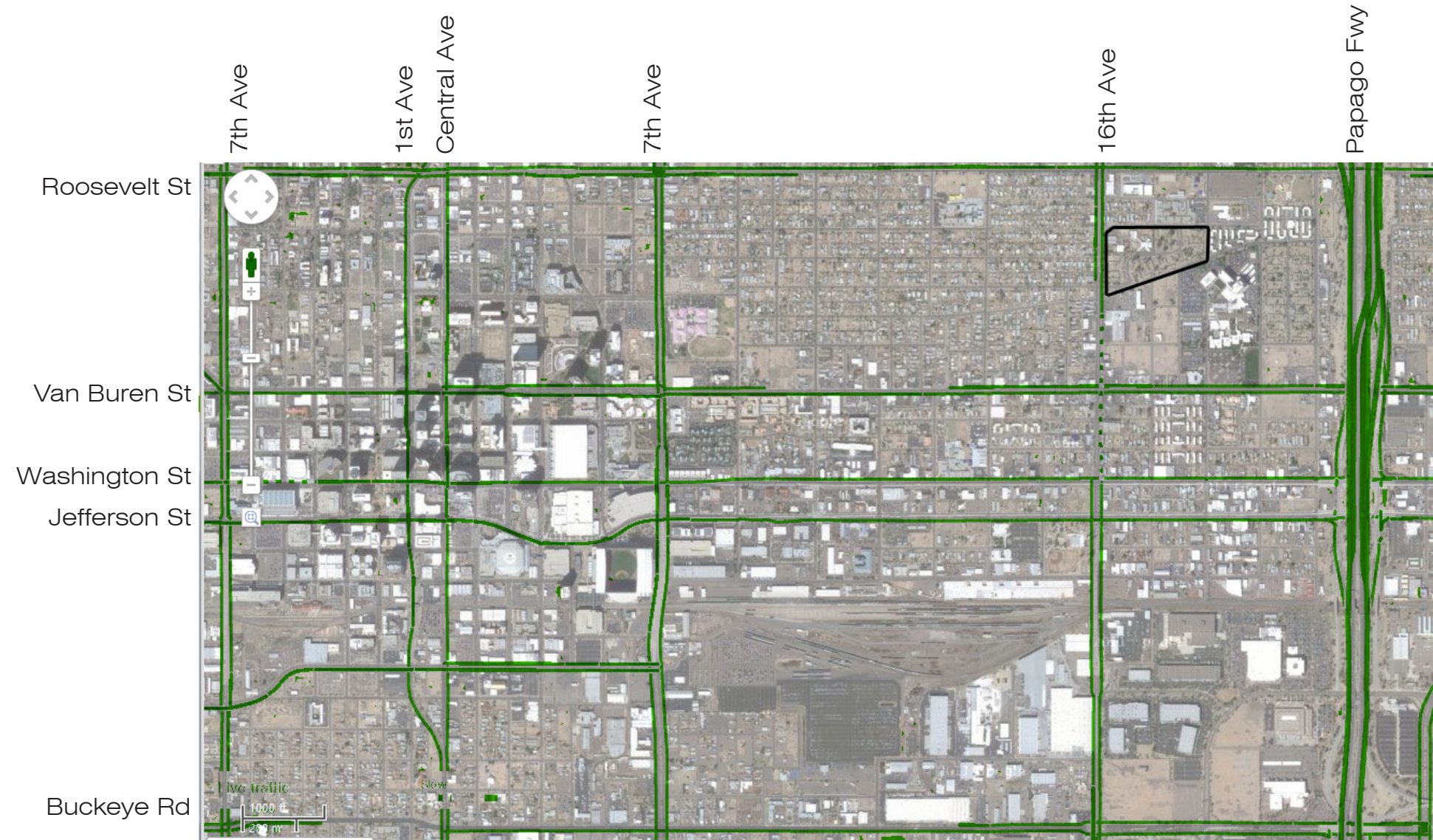
Phoenix Prevailing Wind Data:

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Direction	E	E	SW	SW	SW	SW	SW	SW	E	E	NE	NE	SW



**Site Photos: Garfield, Phoenix, AZ**





Downtown Pheonix



Van Buren Street



Washington Street



Nearby major street

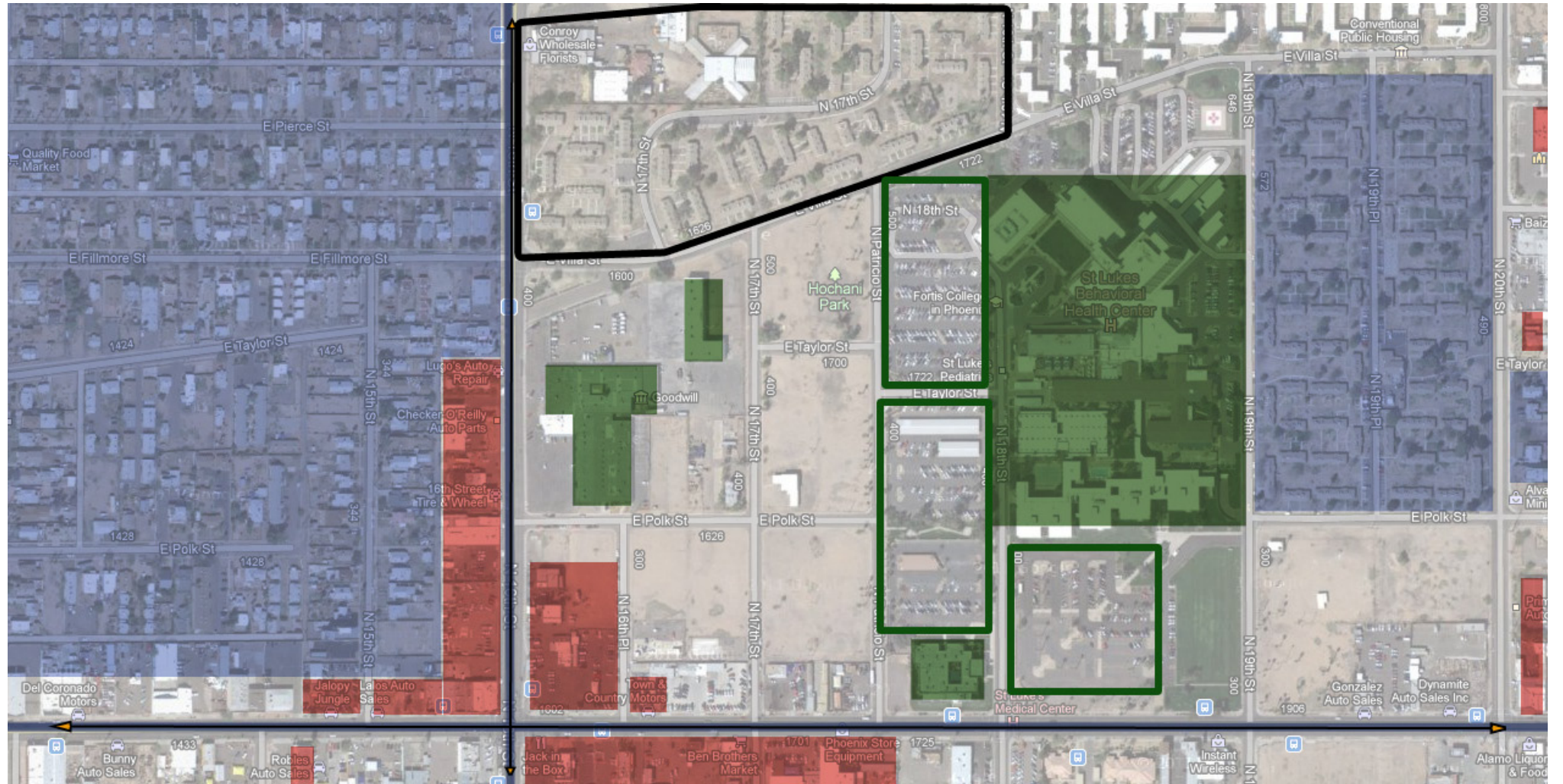


Phoenix Light Rail



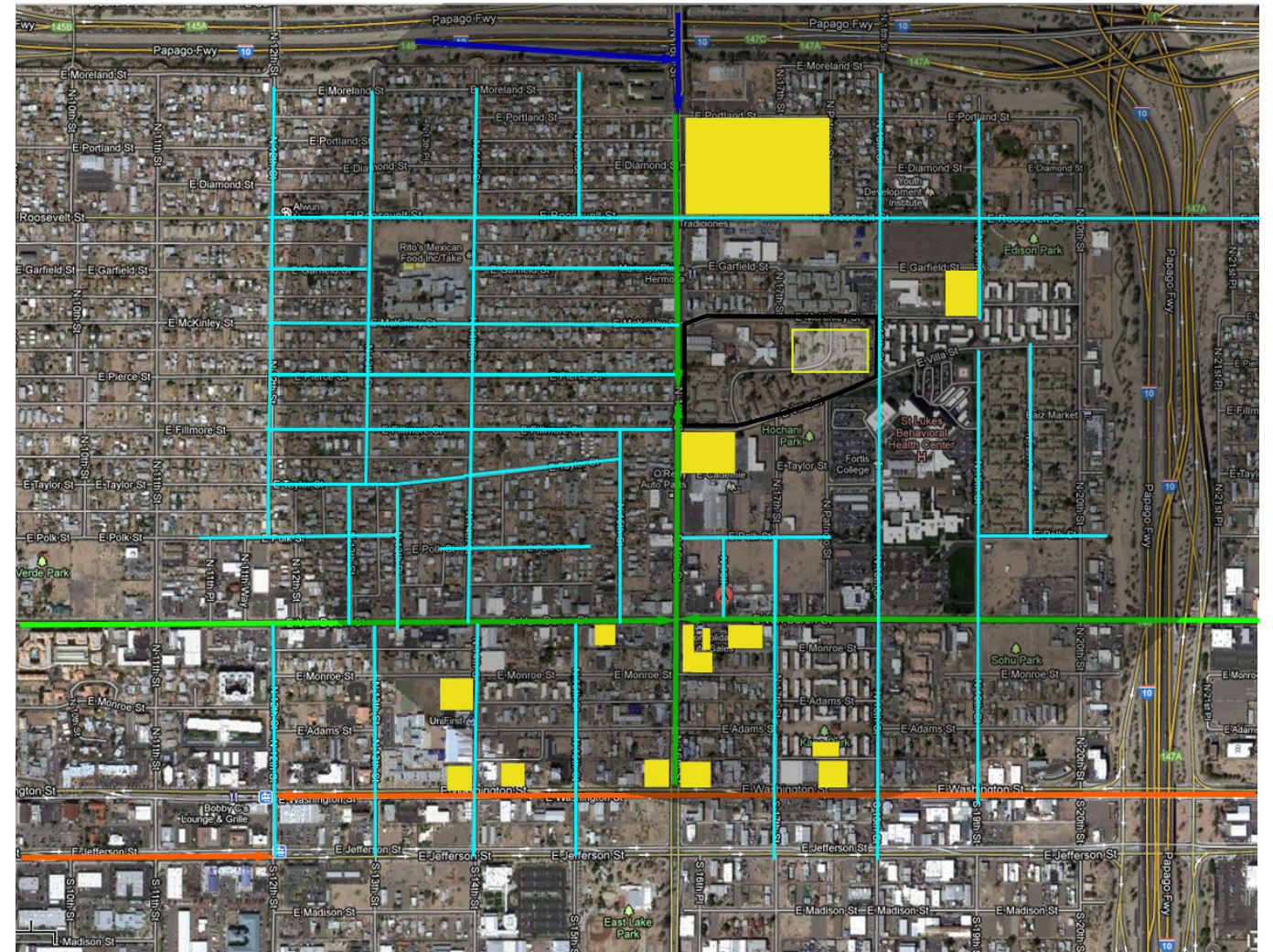
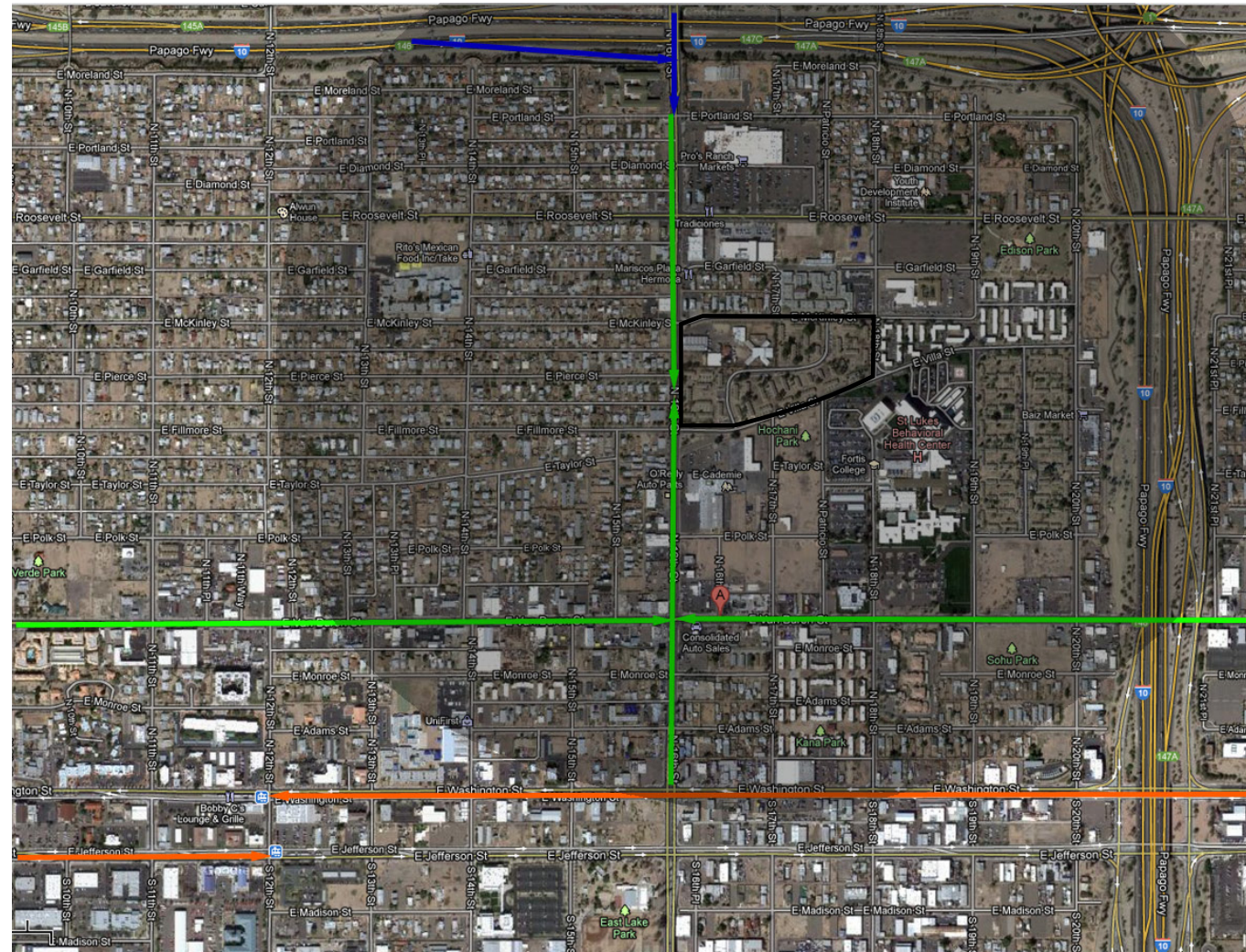
U.S. - Mexico game in Glendale

## Site Analysis



### Zoomed In Map Legend

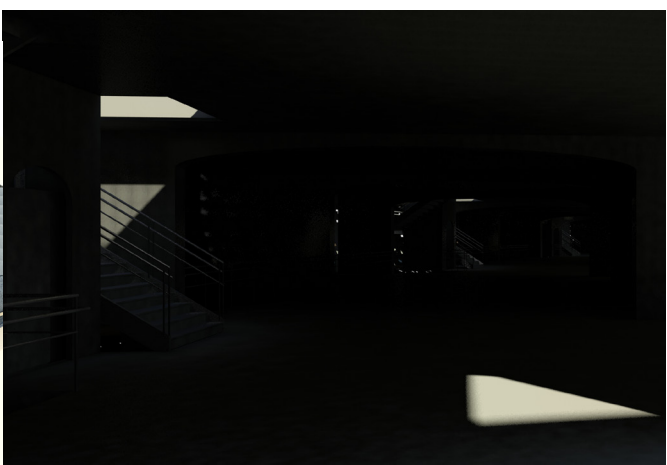
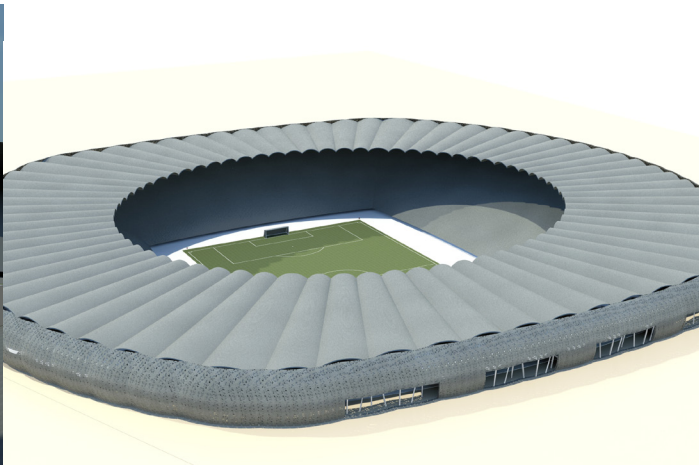
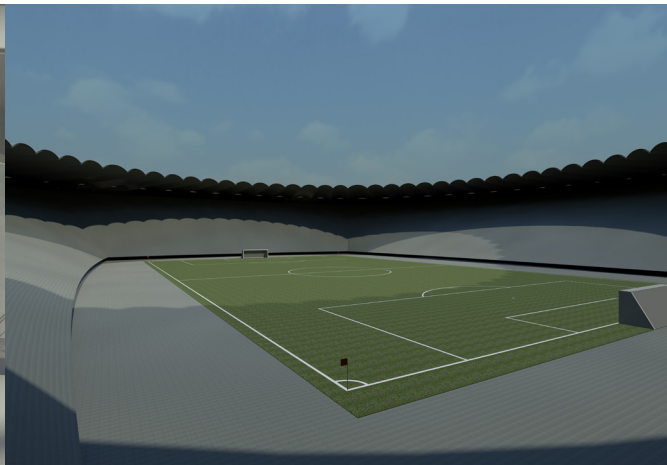
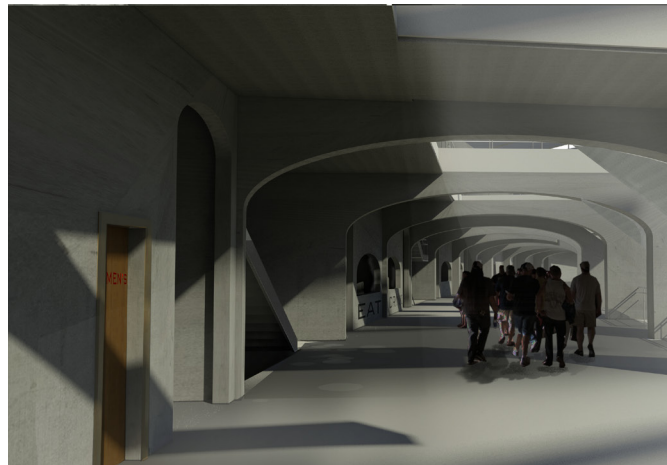
- Residential
- Site
- Commercial
- Main Boulevard
- Public/Health
- Parking
- Transportation



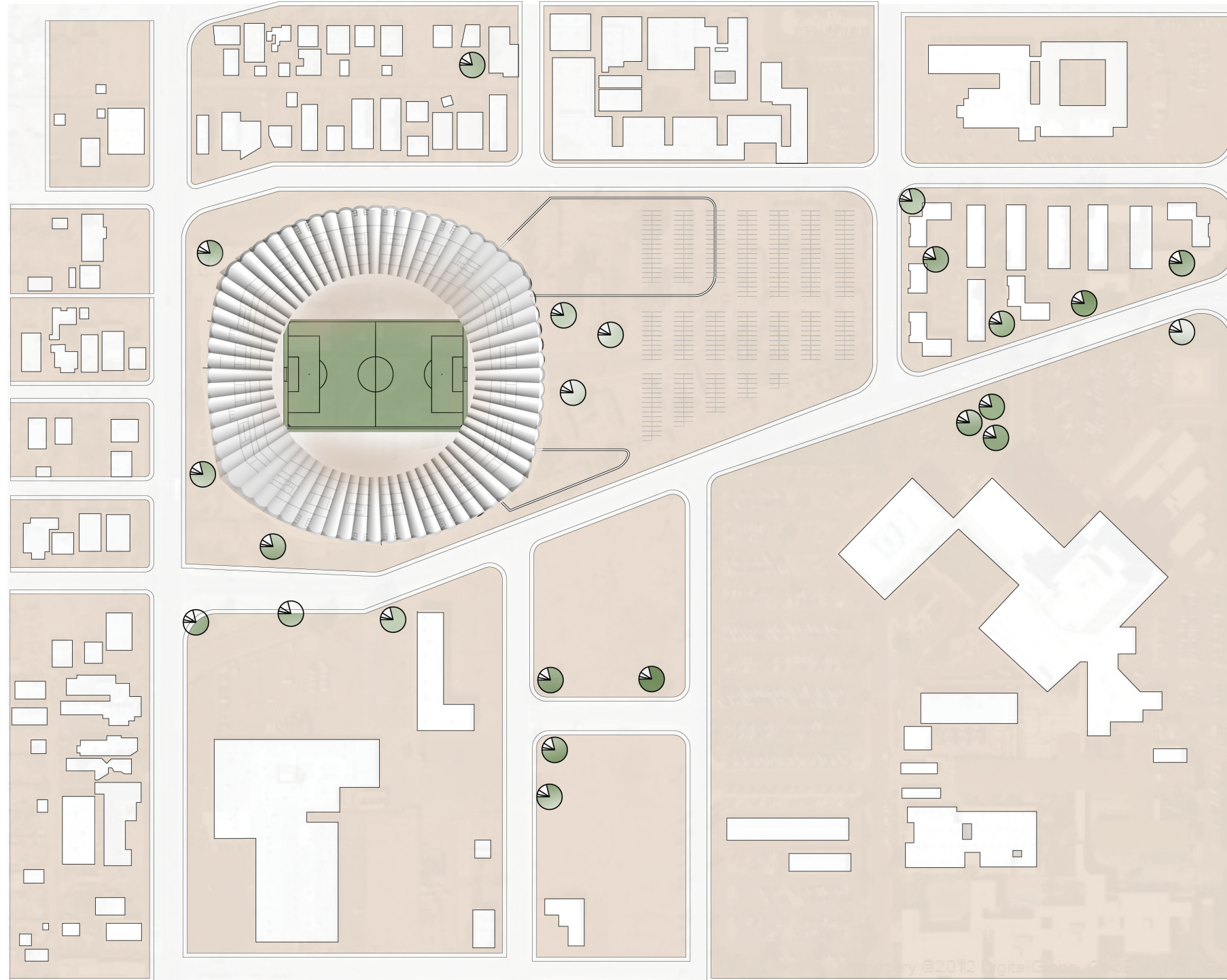
- train
- bus
- highway exit
- walking distance
- sidestreet parking
- borrowed parking lot



# PRODUCT



# Site Plan



Located in the up-and-coming neighborhood of Garfield, in Phoenix, AZ, this soccer stadium will serve as a local landmark for both the history and future of the area. There is currently no professional soccer team in Phoenix, largely due to the lack of a soccer-specific stadium (a necessity for Major League Soccer). However, the presence of a soccer stadium in Phoenix would be a symbol of the existing culture in the area and could act as a catalyst for economic growth in the community.

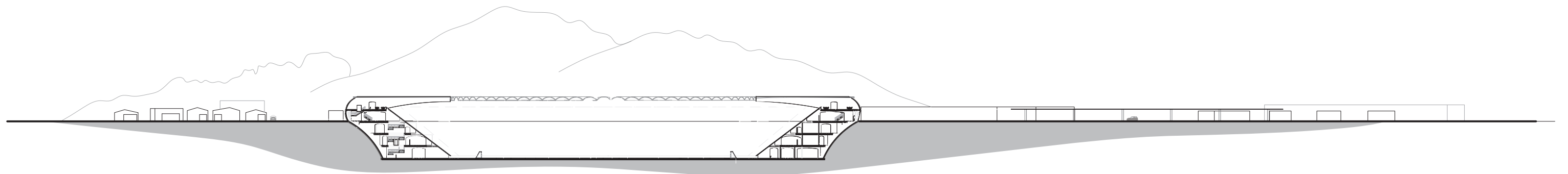


## Height reduction

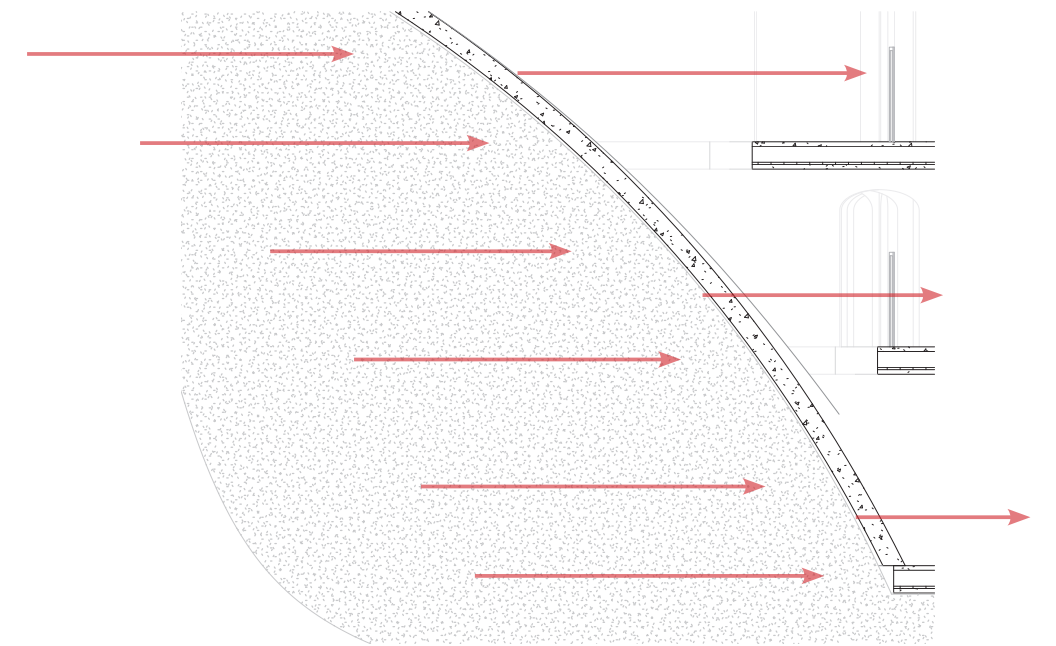
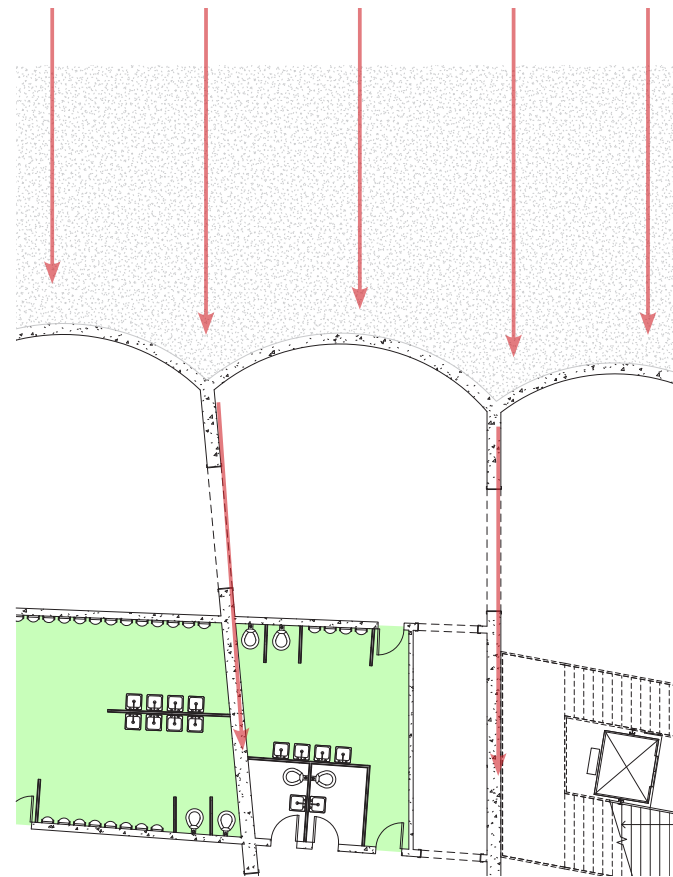
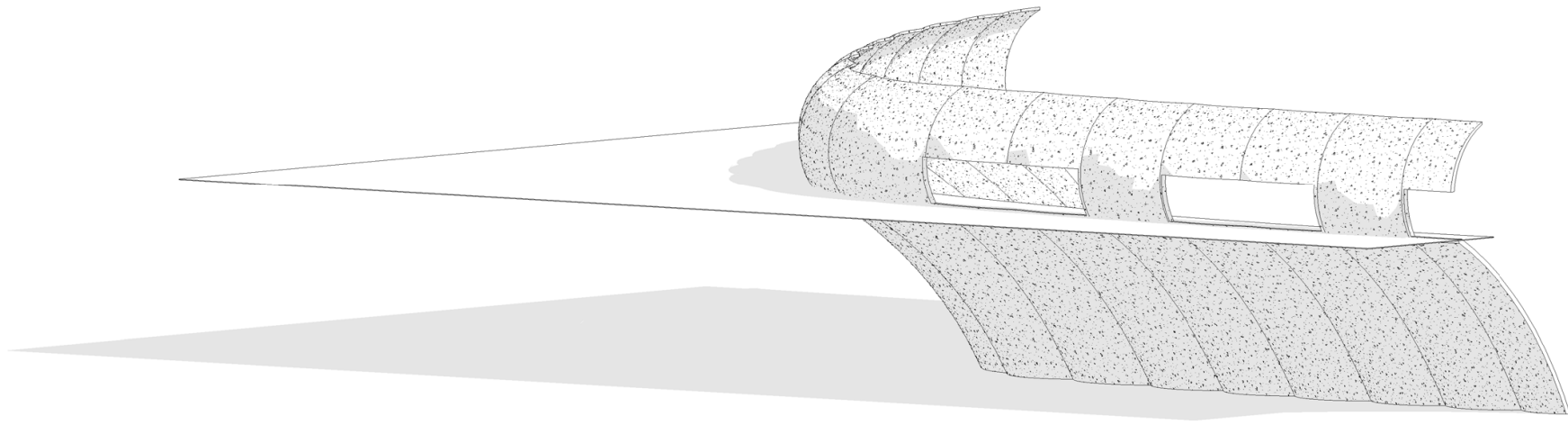
The site plan shows how the architecture is built into the city fabric. The stadium utilizes public transit and local parking, removing the “moat” of vehicles surrounding most arenas and opening up the space for communal use.

The section below shows that the facility is built four stories into the ground, creating a cool shelter from hot Phoenix summers and building height that is perceived to match those of the buildings around it.

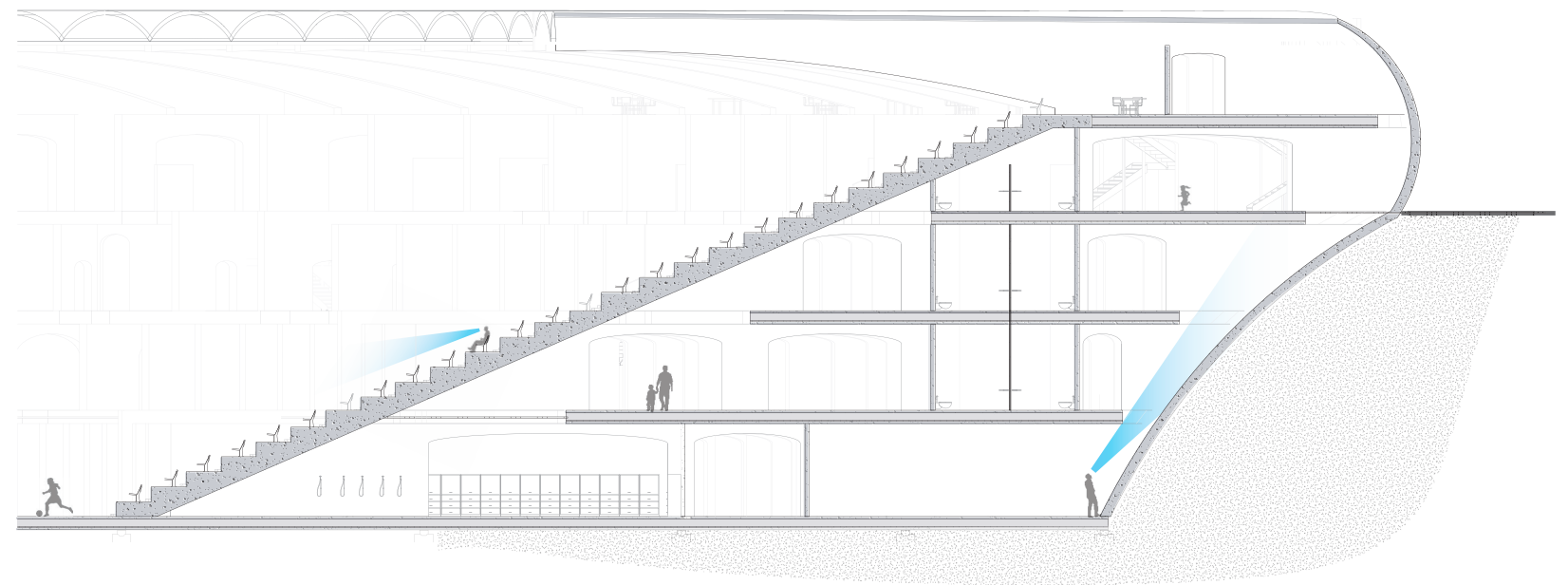
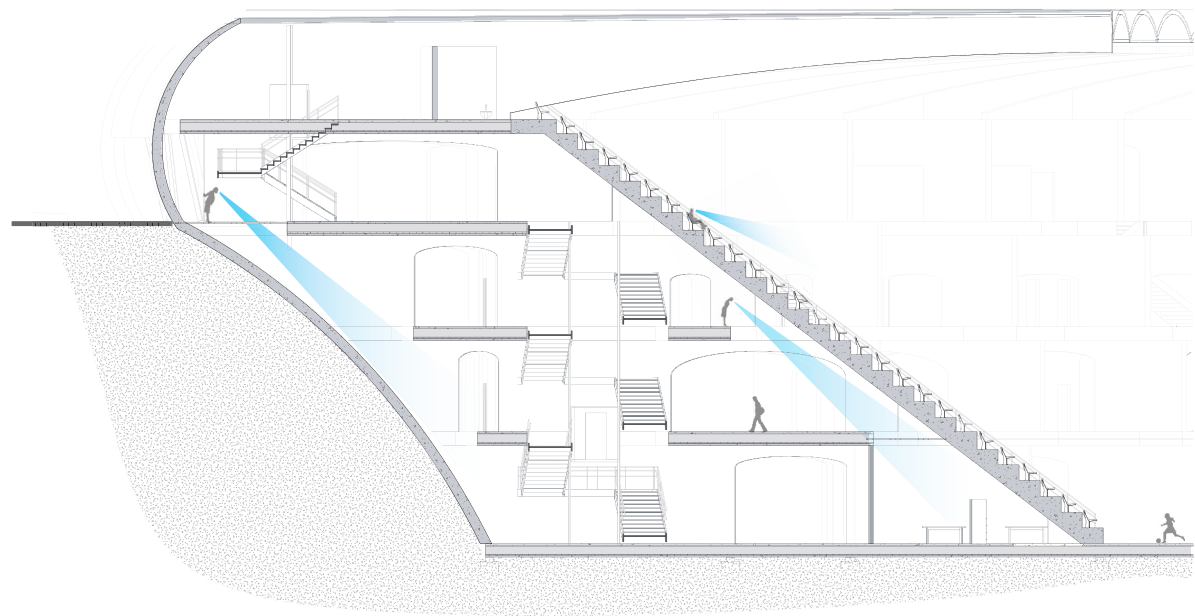
In addition to the height and spacial configuration, the building incorporates patterns and materials based on artifacts of the historical Navajo and Apache Native American tribes that had once populated the area. These gestures recall to arenas of the past and site specific architecture, providing a space where people can attach themselves to the sport, the community and a sense of place.



# Retaining wall

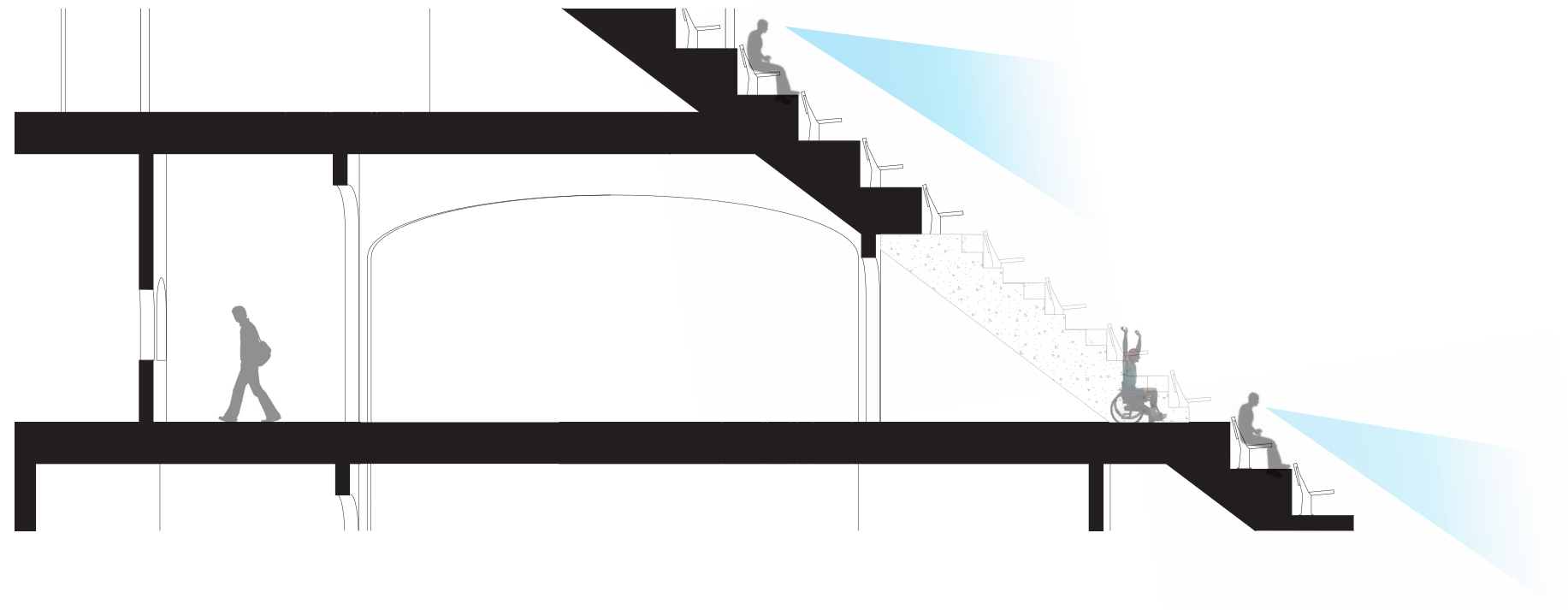


## Light and section



By placing the stadium forty-six feet below grade, the stadium's height better fits into the community. However, by placing the building underground, structural and lighting issues arise. In order to deal with the soil pushing back against the building, horizontally curved retaining walls deflect the forces into adjacent bracing walls. Furthermore, the retaining walls are continuous from grade to field-level, providing light from the surface to trickle down to the lower floors.

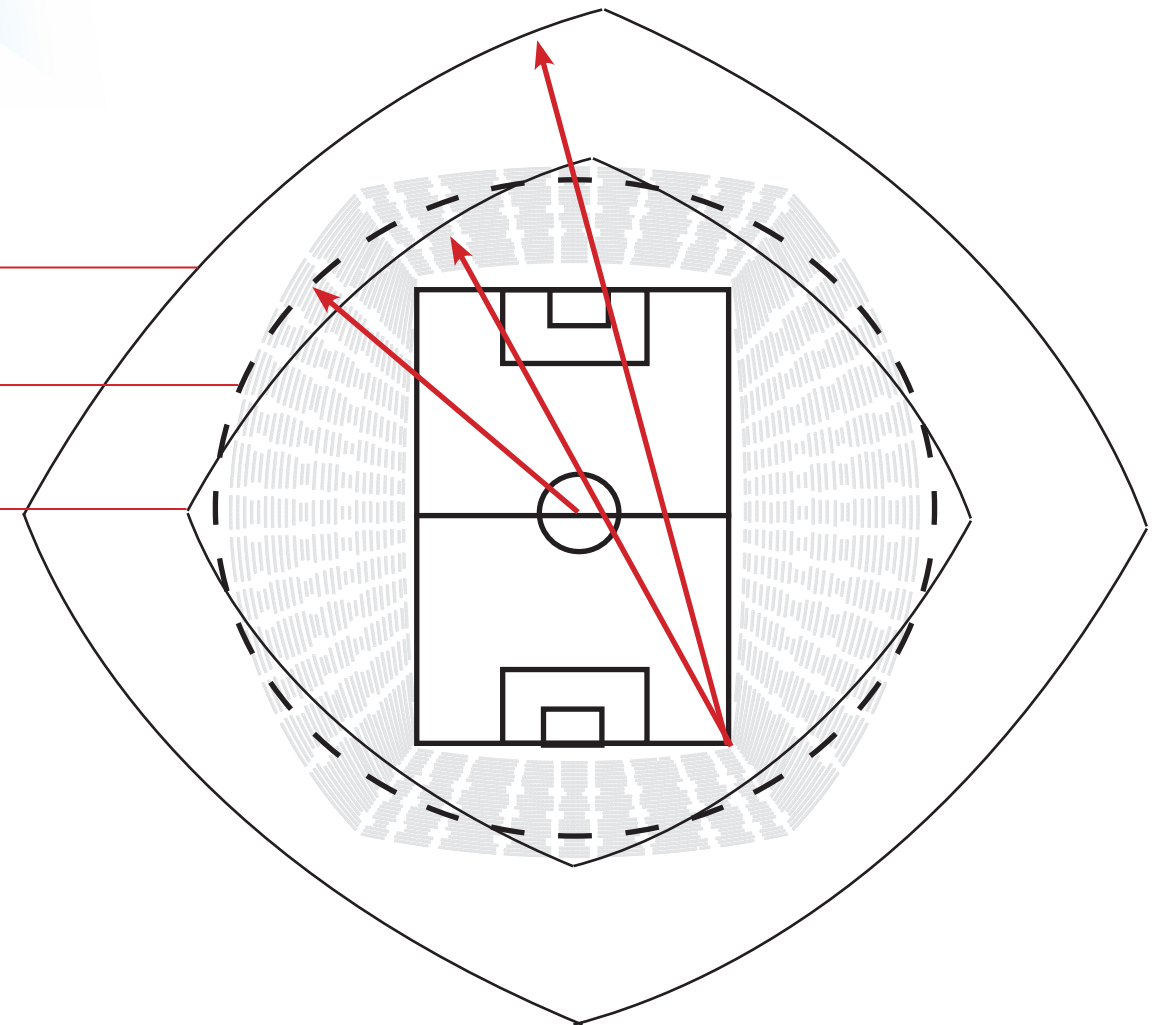
# Form dictated by views



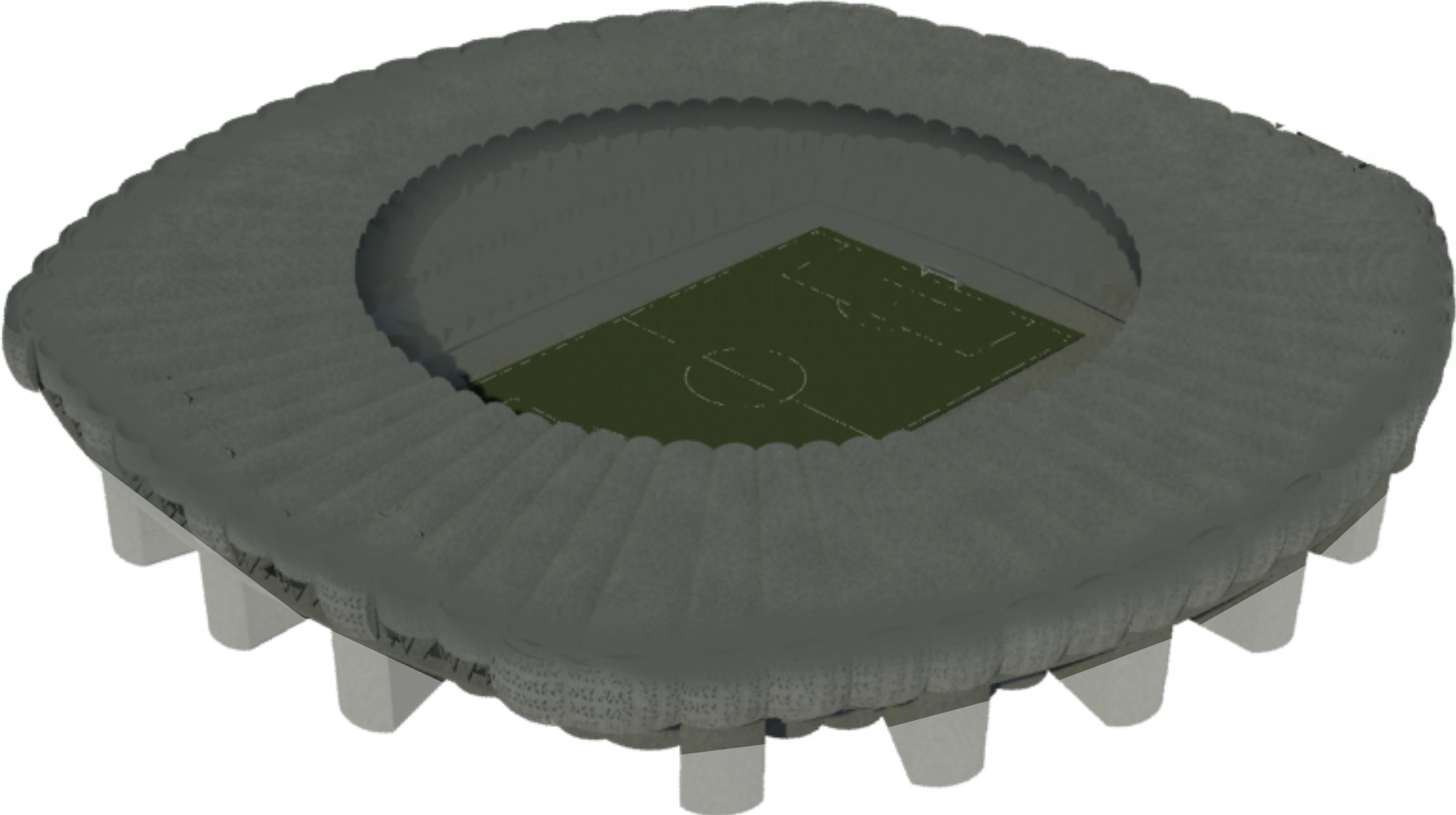
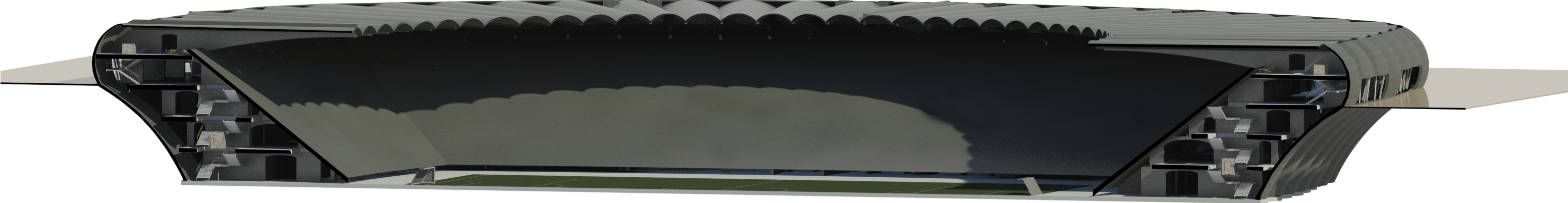
Maximum viewing distance 600 ft

Optimum viewing distance 450 ft

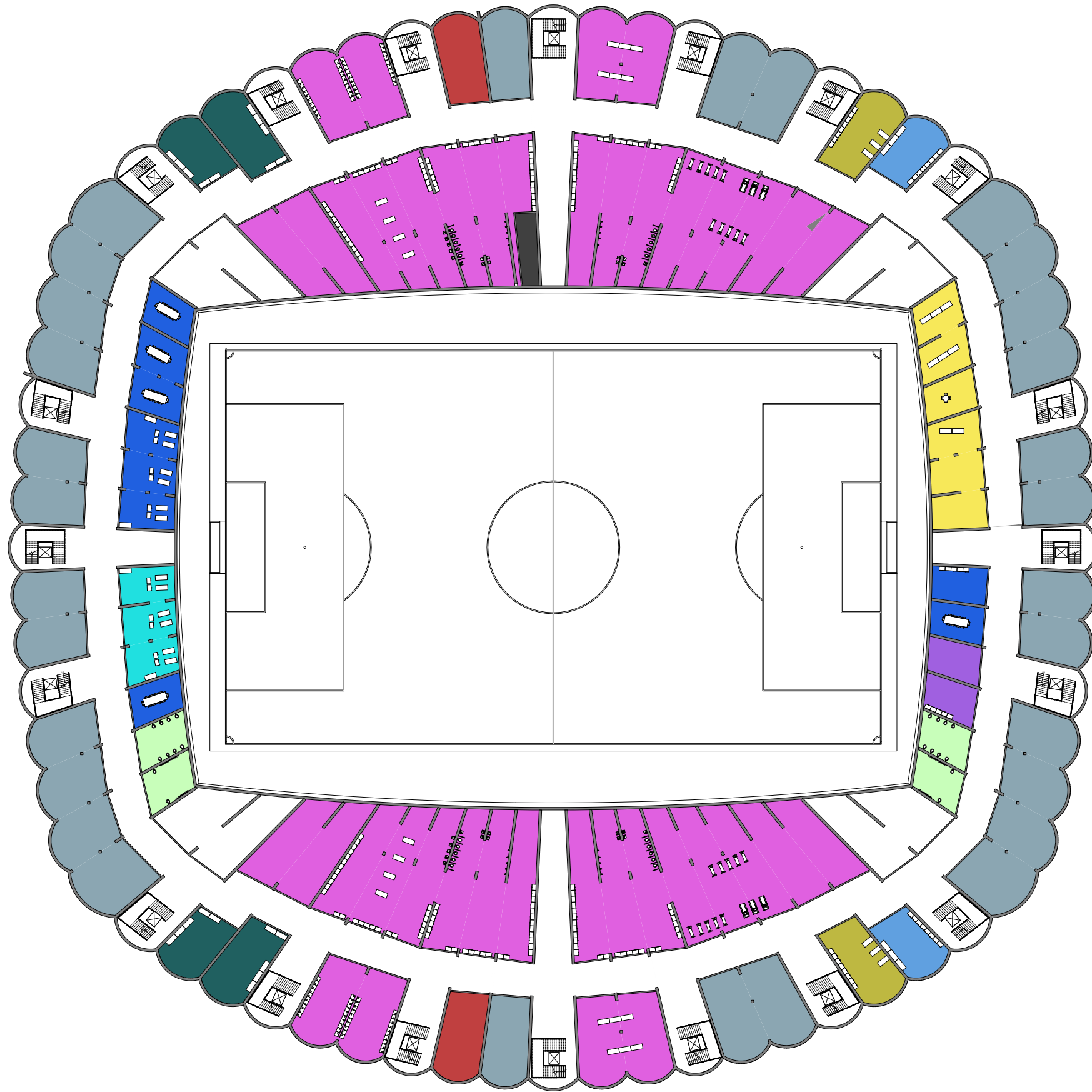
Optimum viewing distance 270 ft



Form

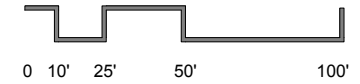


# First Floor -46'-0"

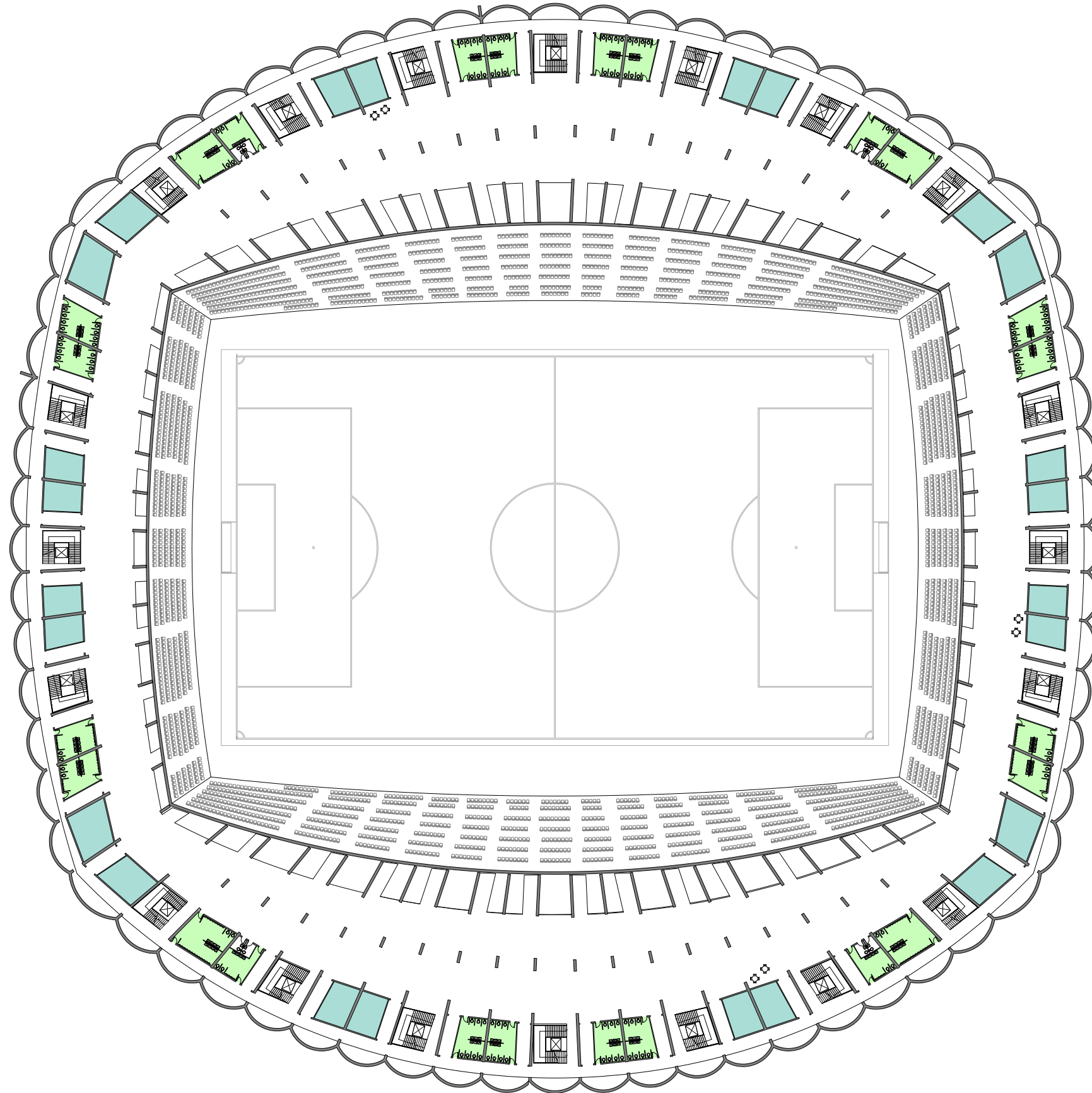


## Room Legend

- Storage
- Admin Offices
- Conference Room
- Stadium Control Room
- Staff Offices
- Player Facilities
- Players Lounge
- Laundry
- Officials Office
- Dressing Room
- Camera Control Room
- Camera Room
- Press Conference
- Press Lounge
- Interview Room
- Crew Changing Room
- Security Office
- First Aid
- Water Closet



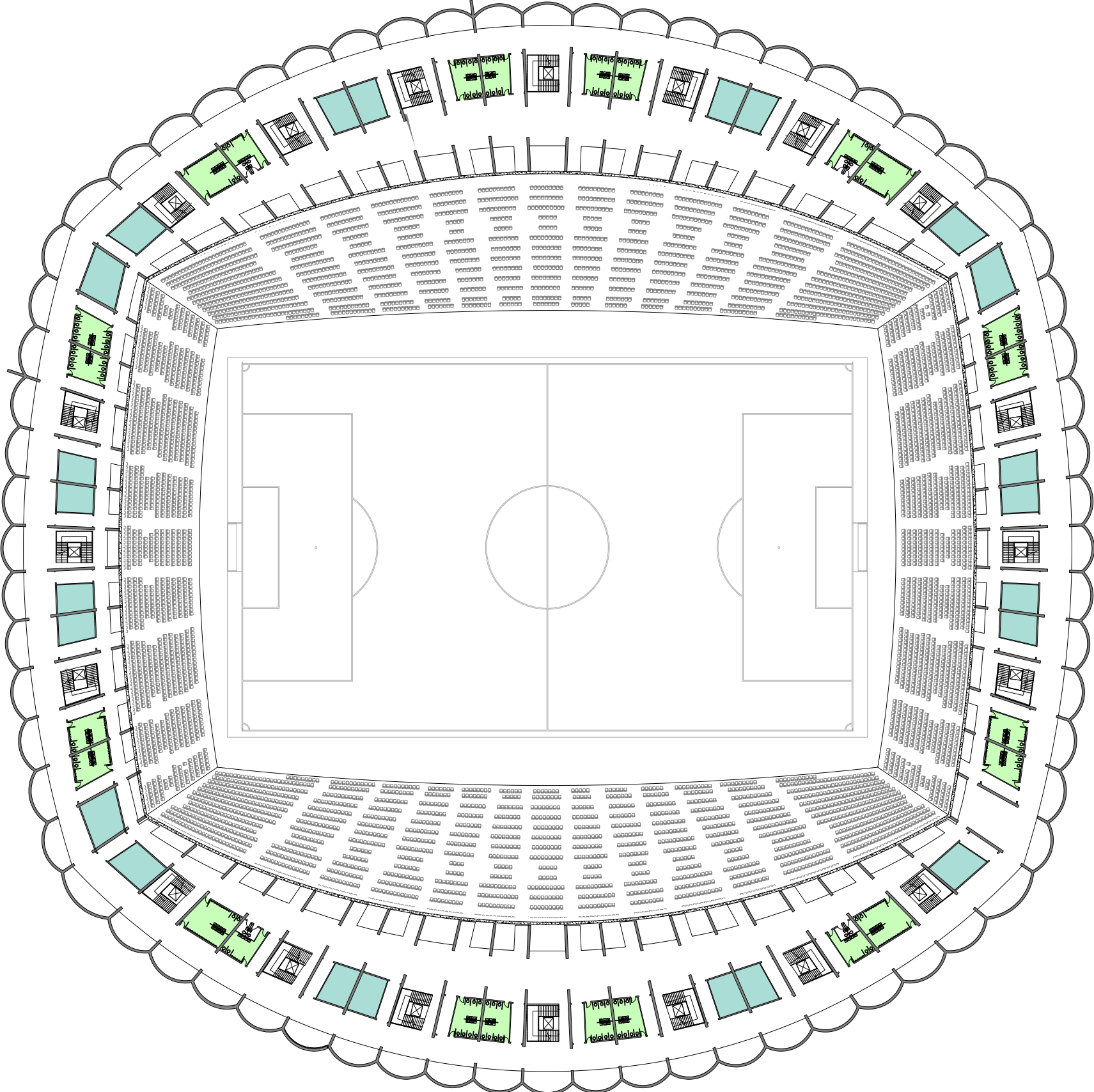
Second Floor -30'-0"



Room Legend

- Food/Retail
- Water Closet

Third Floor -15'-0"



Room Legend

- Food/Retail
- Water Closet



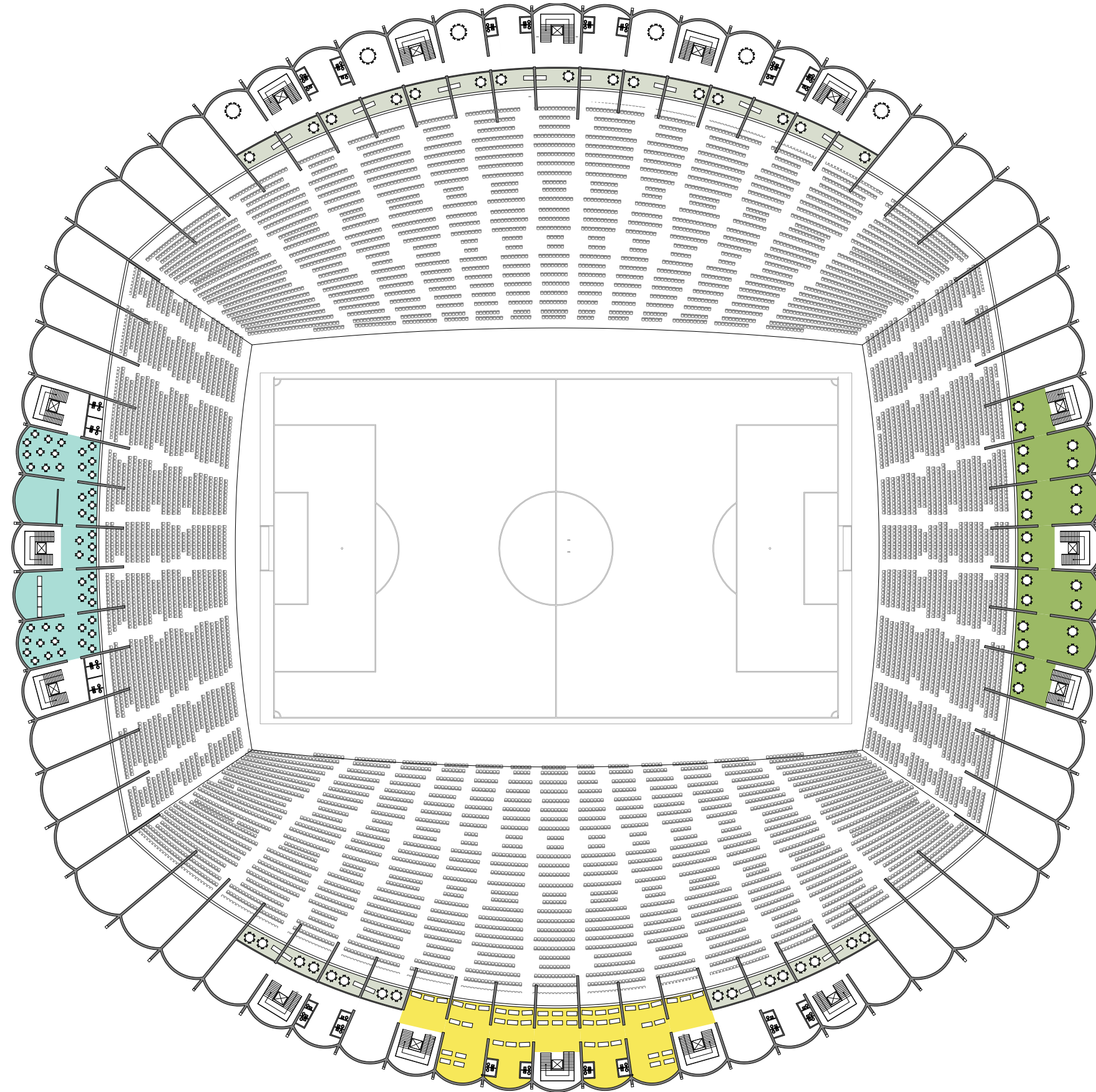
# Fourth Floor 0'-0"



## Room Legend

- Food/Retail
- Water Closet

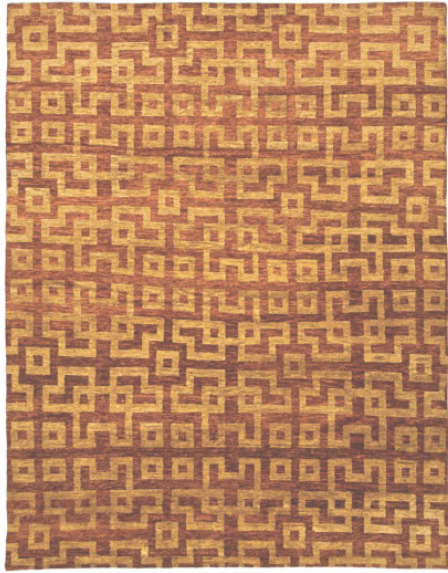
# Fifth Floor 14'-6"



## Room Legend

- Box Suites
- Press/Media
- Food/Retail
- Picnic

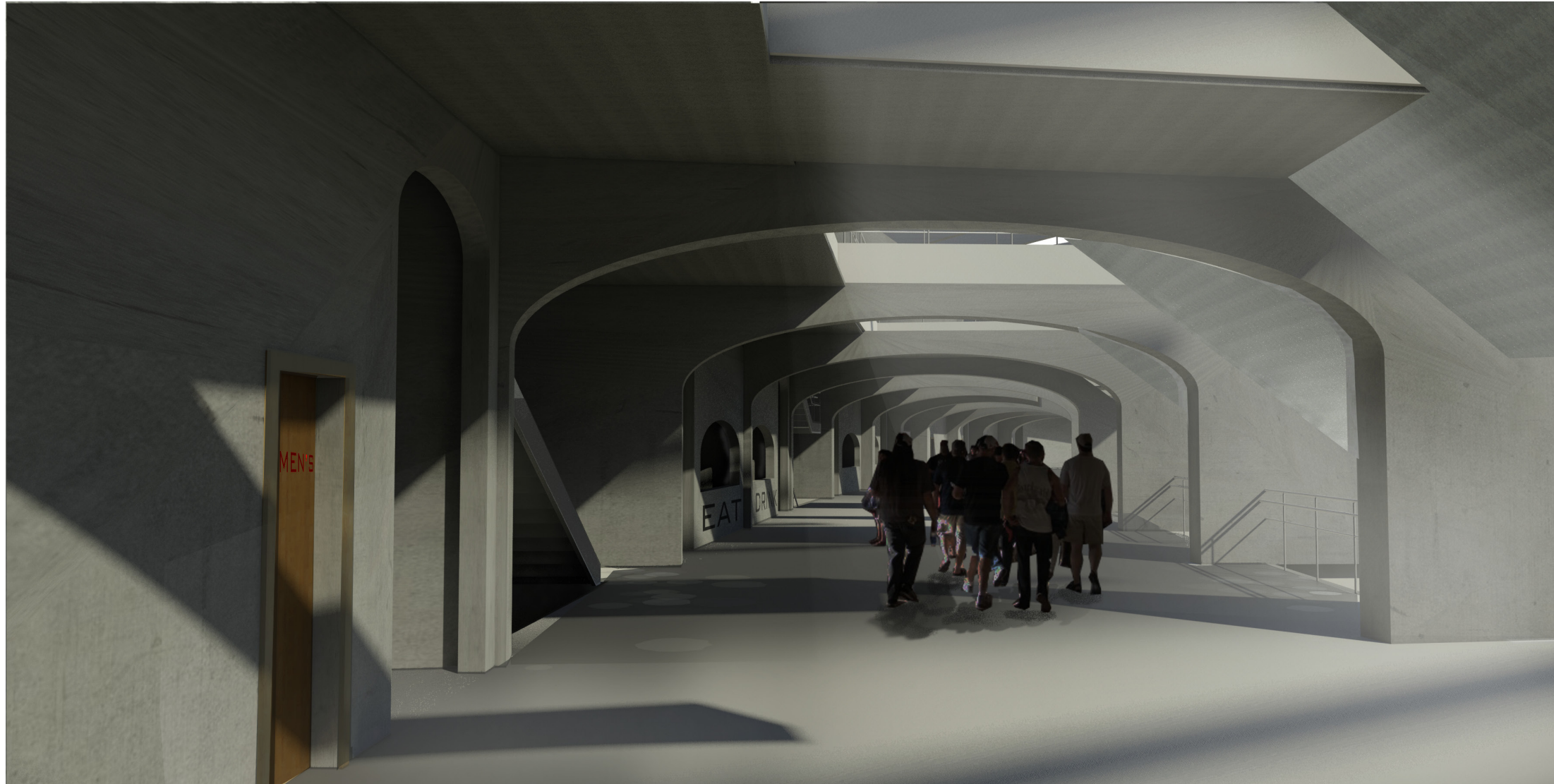
## Patterns and Materiality



As mentioned previously, the materials and patterns of the stadium were inspired by everyday items of the Native American tribes that once inhabited the Phoenix-area.



## Second Floor concourse perspective



Stadiums include several necessities to improve a fan's experience. Along the concourse there are concessions, restroom and frequent tunnels leading to specific seating areas. The seats themselves are elevated so that everyone has a clear view of the field, providing accessibility to both ADA and Olympic standards.

**View from the stands**



## Exterior perspective

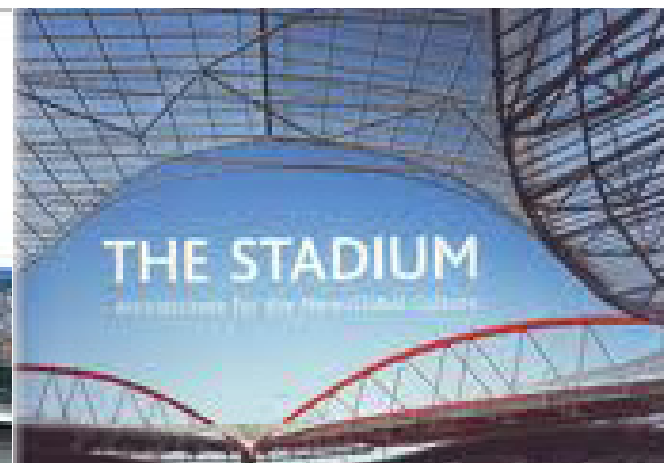








# BIBLIO



## Inspiration

Richmond, Peter. "Peter Richmond on America's Struggle to Build Great Stadiums - Grantland." Sports and Pop Culture from Bill Simmons and Our Rotating Cast of Writers - Grantland. 2011 ESPN Internet Ventures, 10 Aug. 2011. Web. 15 Sept. 2011. <[http://www.grantland.com/story/\\_/id/6851333/the-architecture-disaster](http://www.grantland.com/story/_/id/6851333/the-architecture-disaster)>.

This article on Grantland.com, a website founded by an ESPN writer, was the inspiration for my thesis project. The article complains that stadium architecture in the United States is poorly designed and lacks beauty. By reading it, I came to two conclusions: 1) that beautiful stadiums can fill seats even if the team is terrible, and 2) that if the stadium and neighborhood become intertwined and take on a new identity, that people will want to live and spend time in the community regardless of the available sports entertainment.

## Books

Delaney, Kevin J., and Rick Eckstein. Public Dollars, Private Stadiums: the Battle over Building Sports Stadiums. New Brunswick, NJ: Rutgers UP, 2003. Print.

This book focuses primarily with the economic aspects of placing a stadium in a city. Though the focus on my project will not necessarily be the budget, and I do not plan on putting together a pro forma, it is important to understand the relationship between designer, owner, and city government. The book uses examples of both successful and unsuccessful PPPs (private-public partnerships). The overlying idea is that successful sport venues end up revitalizing the particular area that it is built, justifying the city putting money in it. It is my goal to use this resource in order to justify the choice of site (wherever it may be) and my decision to focus on not just the stadium, but the urban revitalization of that site through the stadium.

John, Geraint, Rod Sheard, and Ben S. Vickery. Stadia: a Design and Development Guide. Oxford: Architectural, 2007. Print.

This book was very helpful for developing a program for my sports venue. It covers important technical issues such as zoning, orientation, transportation, materiality and structure, pitch dimensions, security measures, and even multi-purpose uses. It includes chapters on elements such as ADA, crowd control, circulation, maintenance, media treatment, sustainability, and even toilets. The goal is to use this book as a resource to determine the elements that will be included in the sports venue and how they will be treated. It offers several suggestions and examples of how things have been done in the past.

Provoost, Michelle. The Stadium: the Architecture of Mass Sport. Rotterdam: NAI, 2000. Print.

This book looks at several different kinds of "successful" or "well-designed" sports venues, providing beautiful pictures, plans, and sections. It also includes several interviews of articles written by the architects of these venues. These articles portray the architects' views on stadium design, the future of stadium, and explain the concepts and reasoning behind the design of the stadiums. I am my own designer, but to read excerpts from other stadium architects will be a useful tool in determining my own concepts and reasoning for the sports venue.

Also, the book was published 11 years ago, so the ideas may be slightly outdated (stadium design trends seem to change faster than phones and computers). But the architects interviewed are all still in practice, designing stadiums.

Sheard, Rod, Robert Powell, and Patrick Bingham-Hall. The Stadium: Architecture for the New Global Culture. Singapore: Periplus, 2005. Print.

Although one writer is in common with "Stadia", the subject matter for this stadium-themed book vastly differs. Rather than focus on the technical aspects of stadium design, this book focuses on the conceptual and historical relevance of stadiums. It includes several "articles", including one that compares the popularity of rock n roll (and its venues) to that of sports. Also, there is an "article" that explains that just great stadiums can make a difference and inspire people across the world as globalization increases. However, the "article" that will likely influence me the most is the one titled Five Generations of Stadia. It defines the five changes/themes in the world that have effected stadium design: accommodating the masses, influence of television, the family stadium, corporate sponsorship and the media, and the most recent generation, URBAN REGENERATION. The final "article" considers the stadium as a planning tool for the city, tying in the final generation of stadium design and a valuable element in my thesis project.

Spirou, Costas, and Larry Bennett. It's Hardly Sportin': Stadiums, Neighborhoods, and the New Chicago. DeKalb: Northern Illinois UP, 2003. Print.

This resource could possibly be the most helpful in understanding the issues that come with building a stadium in Chicago and trying to improve an urban area. The book looks at the three major sports venues in Chicago (United Center, Wrigley Field and Comiskey Park) and analyzes the relationship between the stadiums and surrounding neighborhoods. It closely examines the recent changes made to each stadium and how it effected the neighborhood. Also, it explains the history of each neighborhood and how that impacted certain decisions to change the stadium.

Given that my project most likely will be located in a Chicago neighborhood, this book will be very helpful in understanding previous changes made to Chicago's sports venues and their impact on various communities. It will provide me a precedent to the social environment I plan on implementing my design.

## Websites and Articles

2011 MLB Attendance - Major League Baseball - ESPN." ESPN: The Worldwide Leader In Sports. Web. 07 Dec. 2011. <<http://espn.go.com/mlb/attendance>

ESPN is a very credible resource for any sports information. MLB attendance info is very useful in understanding trends currently in the MLB, to see which stadiums, teams and fan bases are the most successful. Hopefully, by analyzing MLB attendance team-by-team over the past couple of years I will see some correlations that will lead to a better design. Though baseball and soccer are different, the design approach to incorporating a community has been successful in the past and understand where and why it has worked will hopefully transfer into soccer.

2010 NFL Football Attendance - National Football League - ESPN." ESPN: The Worldwide Leader In Sports. Web. 07 Dec. 2011.

ESPN is a very credible resource for any sports information. NFL attendance info is very useful in understanding trends currently in the NFL, to see which stadiums, teams and fan bases are the most successful. Hopefully, by analyzing NFL attendance team-by-team over the past couple of years I will see some correlations that will lead to a better design. In fact, the NFL in amount of games, field shape and traditions (tailgating, rowdiness...) is more

similar to soccer than baseball. Therefore, in the actual game experience, I can learn based on attendance which stadiums are more successful and whose design ideas are worth using.

Major League Soccer Attendance." Wikipedia, the Free Encyclopedia. 5 Dec. 2011. Web. 07 Dec. 2011. <[http://en.wikipedia.org/wiki/Major\\_League\\_Soccer\\_attendance](http://en.wikipedia.org/wiki/Major_League_Soccer_attendance)>.

As a Wikipedia resource, it is understandable that the numbers may not be exact. However, I cross referenced the info from other websites (which did not have it all as nicely compiled) and the numbers matched. This information is very useful in understanding trends currently in the MLS, to see which stadiums, teams and fan bases are the most successful. Hopefully, by analyzing MLS attendance team-by-team over the past couple of years I will see some correlations that will lead to a better design.

Phoenix, Arizona (AZ) Profile: Population, Maps, Real Estate, Averages, Homes, Statistics, Relocation, Travel, Jobs, Hospitals, Schools, Crime, Moving, Houses, News, Sex Offenders." Stats about All US Cities - Real Estate, Relocation Info, House Prices, Home Value Estimator, Recent Sales, Cost of Living, Crime, Race, Income, Photos, Education, Maps, Weather, Houses, Schools, Neighborhoods, and More. Web. 04 Dec. 2011. <<http://www.city-data.com/city/Phoenix-Arizona.html>>.

This website provided the information to better understand the community of Phoenix. By knowing the occupations, incomes, demographics, weather, traffic and other information, I will be able to create a design that can be catered to the people living in the area.

Freedman, Jonah. "Inside Look at MLS Pre-Season in Arizona." Sporting Kansas City. MLSSoccer.com, 3 Mar. 2011. Web. 07 Dec. 2011. <<http://www.sportingkc.com/news/2011/03/inside-look-mls-pre-season-arizona>>.

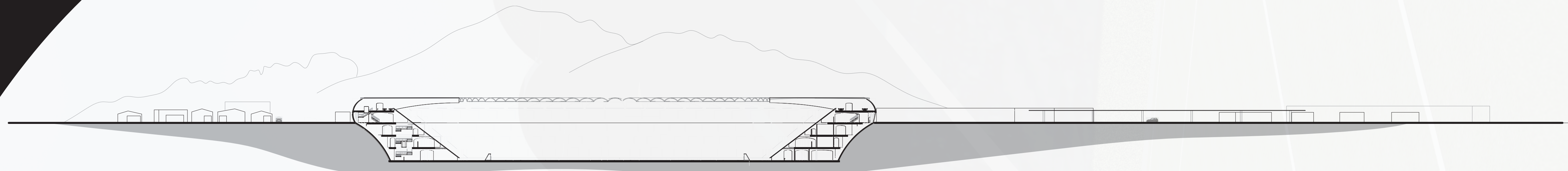
This article writes about the current teams that have spring practices in the warm climate of Arizona. It serves as further proof that there is an interest for soccer in the desert, and brings up perhaps some of the issues that would need to be addressed if a team were to permanently come to Phoenix.

Garcia, Jose E. "MLS Seeks Stadium Site." Arizona Republic [Phoenix] 8 Mar. 2007. Print.

This article looks at a Wall Street man's attempt to develop a group of investors who would be interested in bringing an MLS team and stadium to Phoenix. It discusses the difficulties at hand and what he envisions for the future. This is very useful in learning that there are people out there attempting to bring my idea to life, to make it a reality. Also, it provides a baseline for what may get built, so that I can better develop my own program.

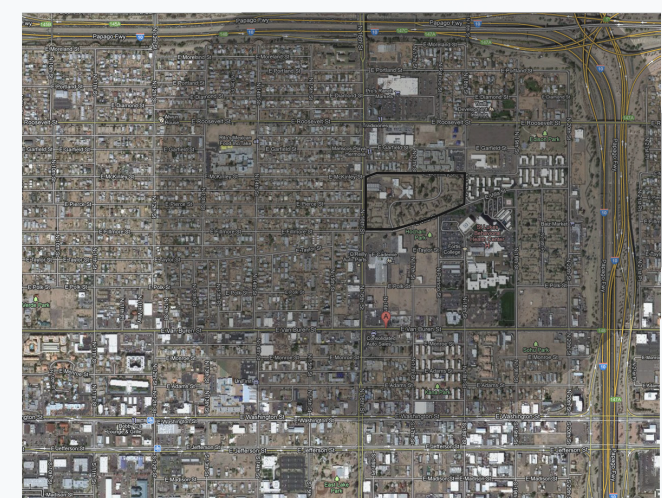


# A SOCCER STADIUM FOR THE COMMUNITY OF PHOENIX

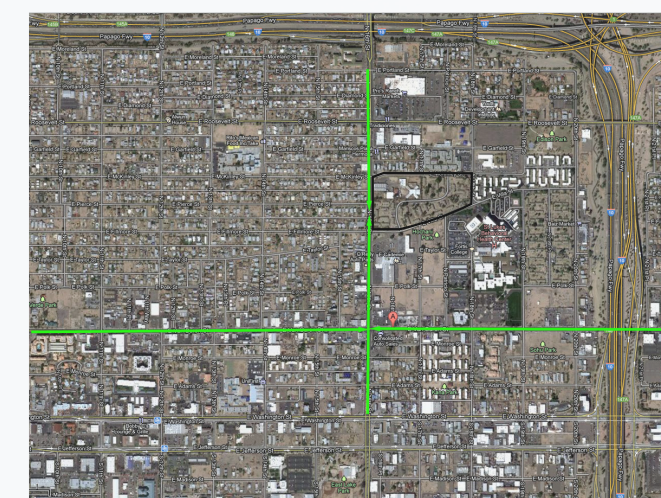


Located in the up-and-coming neighborhood of Garfield, in Phoenix, AZ, this soccer stadium will serve as a local landmark for both the history and future of the area. There is currently no professional soccer team in Phoenix, largely due to the lack of a soccer-specific stadium (a necessity for Major League Soccer). However, the presence of a soccer stadium in Phoenix would be a symbol of the existing culture in the area and could act as a catalyst for economic growth in the community.

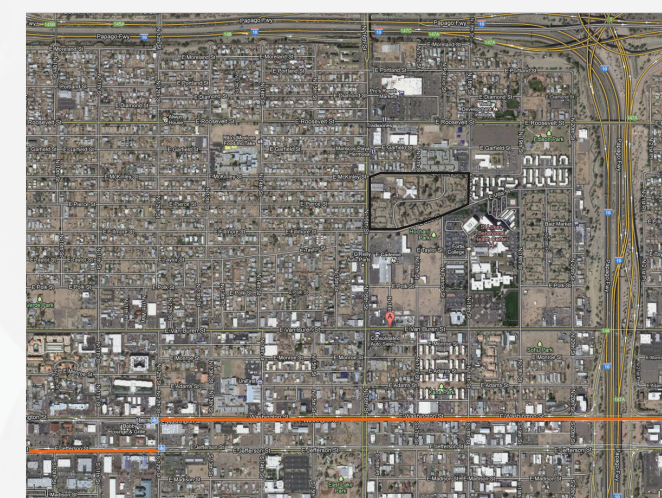
The stadium utilizes public transit and local parking, removing the "moat" of vehicles surrounding most arenas and opening up the space for communal use. Also, the building incorporates patterns and materials based on artifacts of the historical Navajo and Apache Native American tribes that had once populated the area. These gestures recall to arenas of the past and site specific architecture, providing a space where people can attach themselves to the sport, the community and a sense of place.



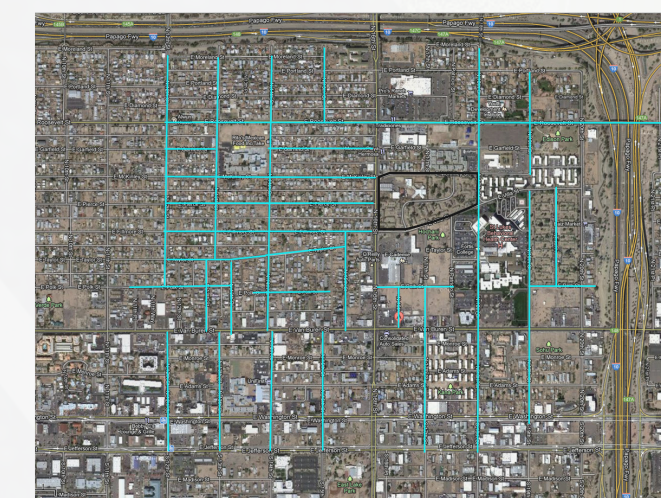
.5 mile walking distance



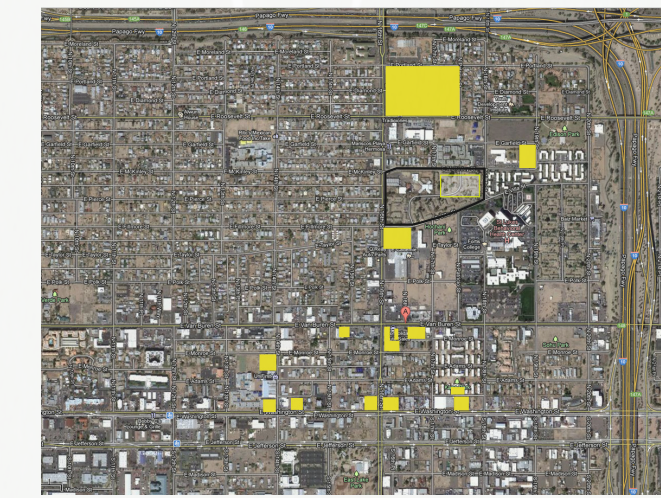
Nearby bus routes



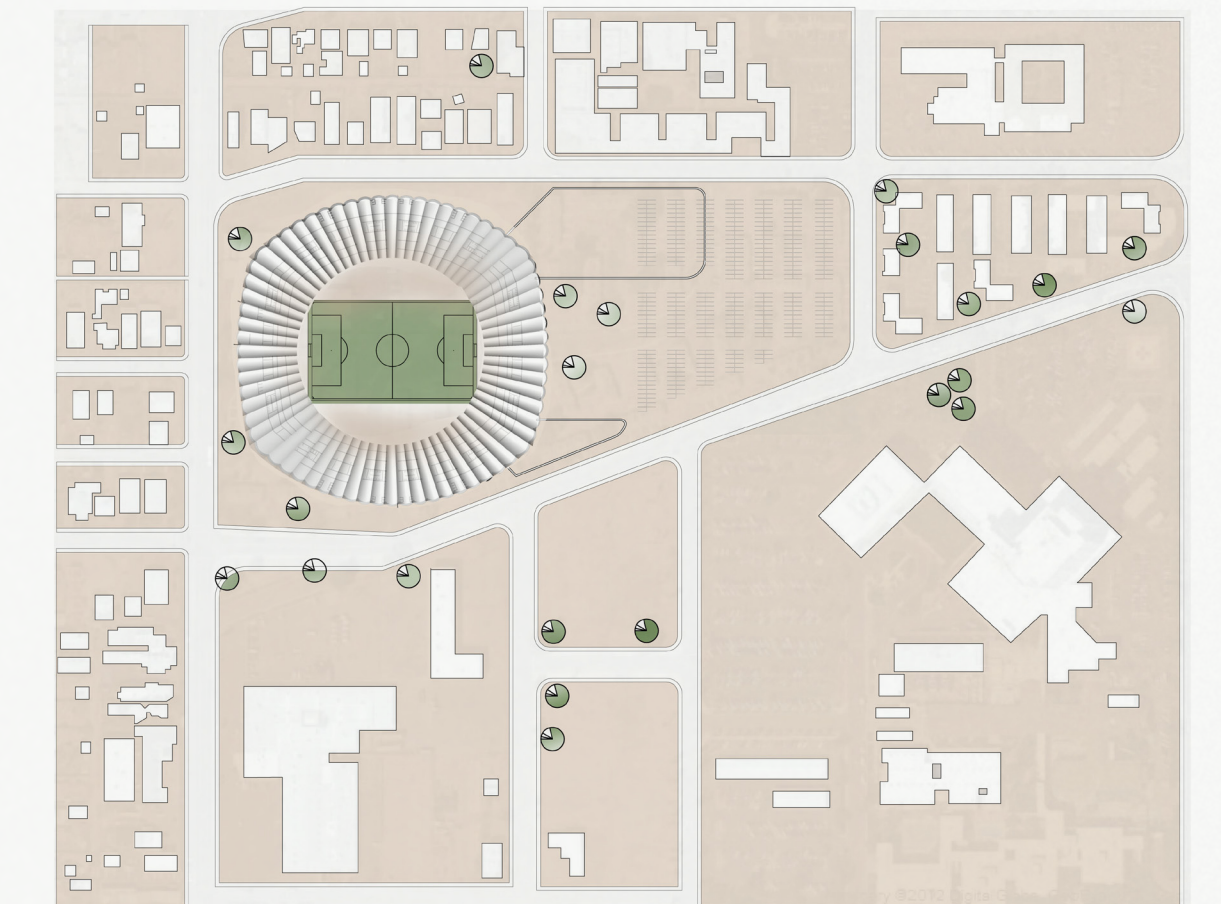
Train routes



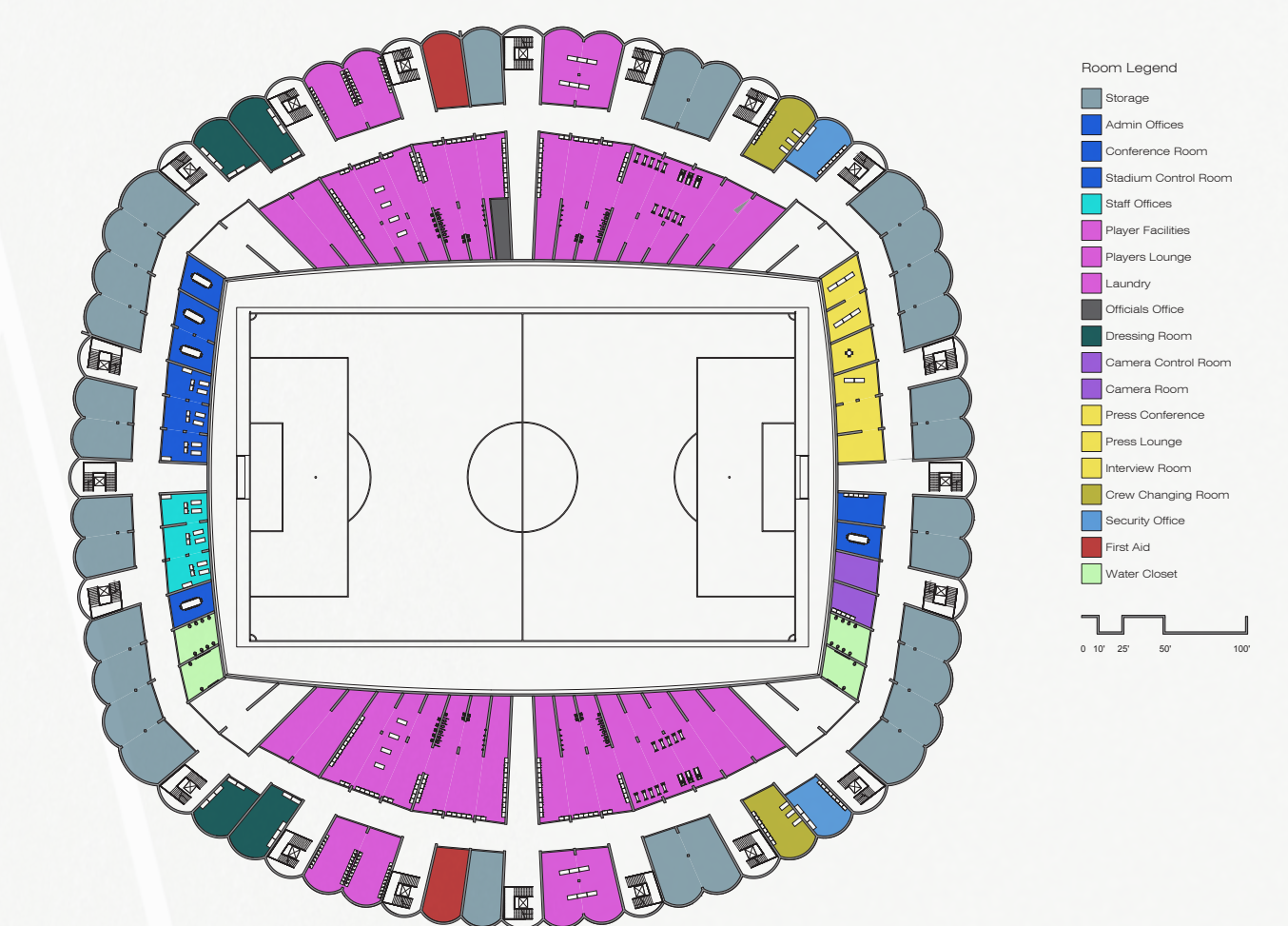
Street parking



Nearby parking lots

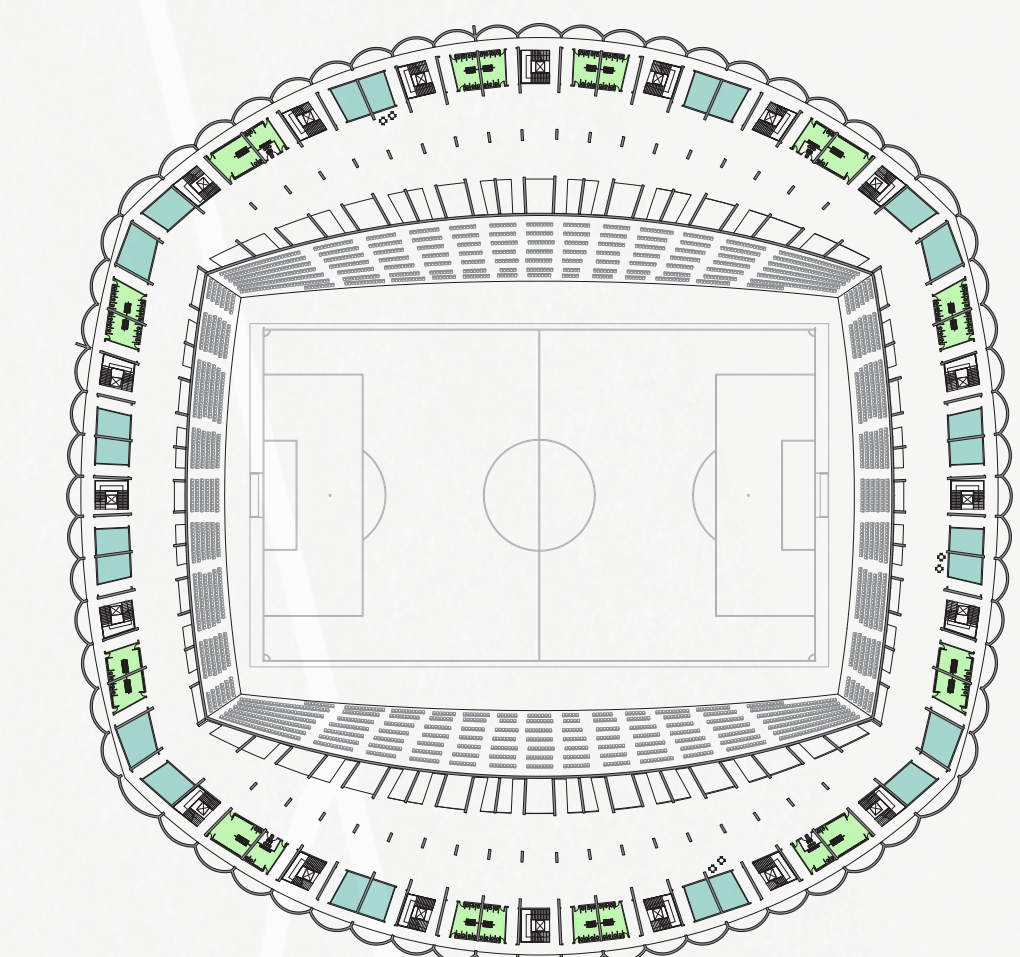


Site Plan



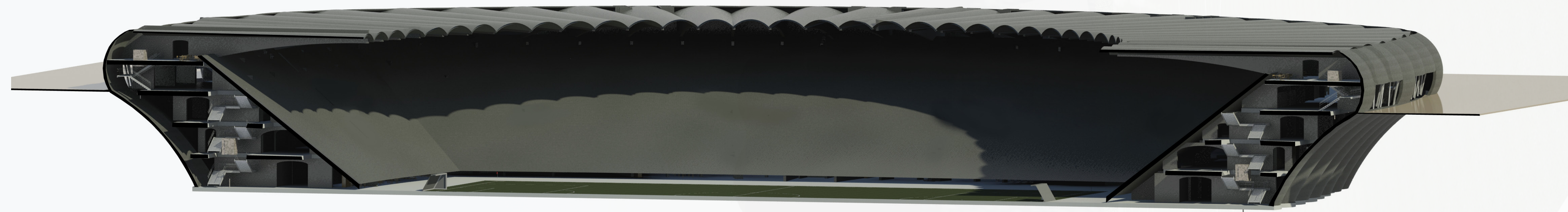
First Floor -46'-0"

- Room Legend
- Entrance
- Admin Offices
- Conference Room
- Media Control Room
- Ball Office
- Player Facilities
- Player Lounge
- Lobby
- Offices
- Offices
- Camera Room
- Camera Control Room
- Press Conference
- Press Lounge
- Press Booth
- Crew Changing Room
- Security Office
- Field Box
- Water Closet

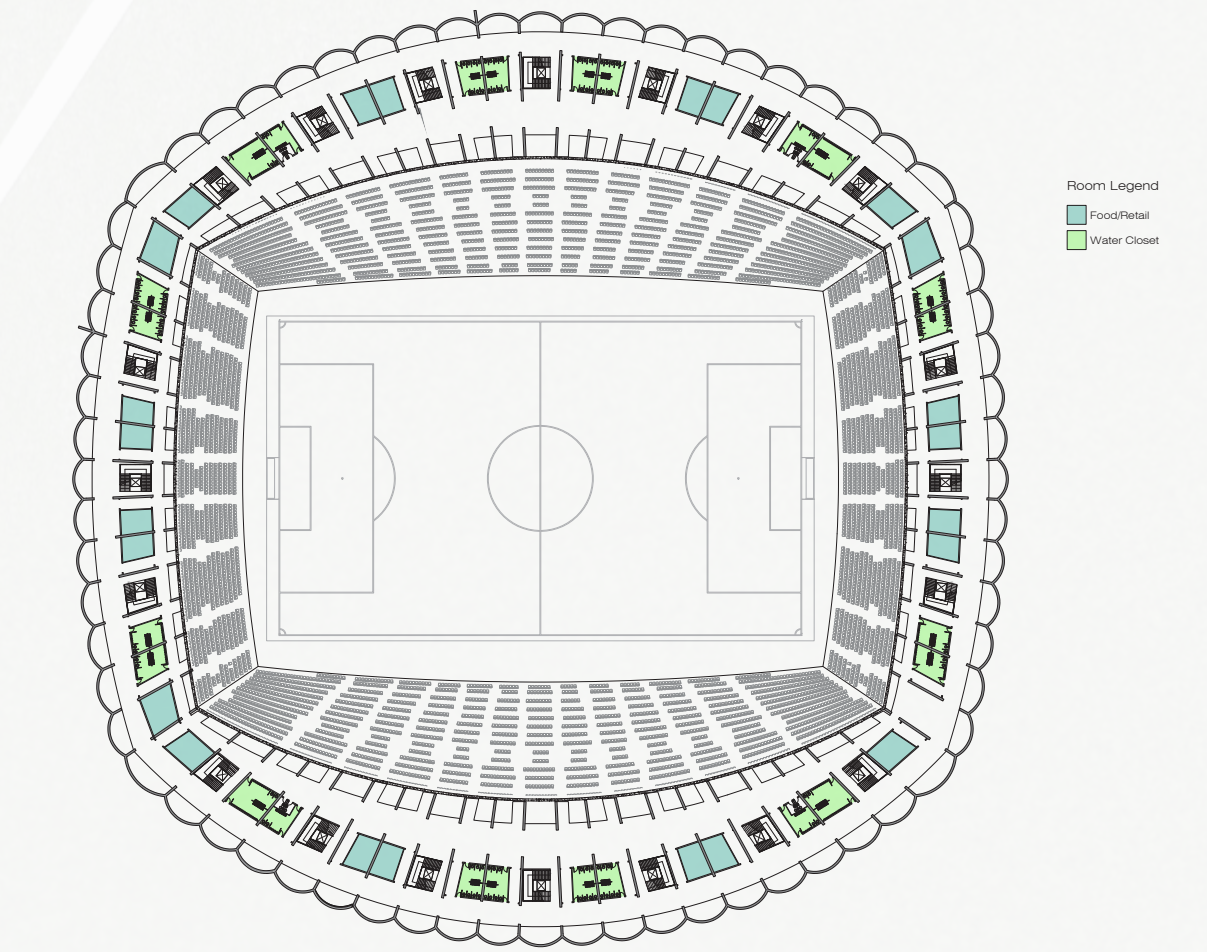
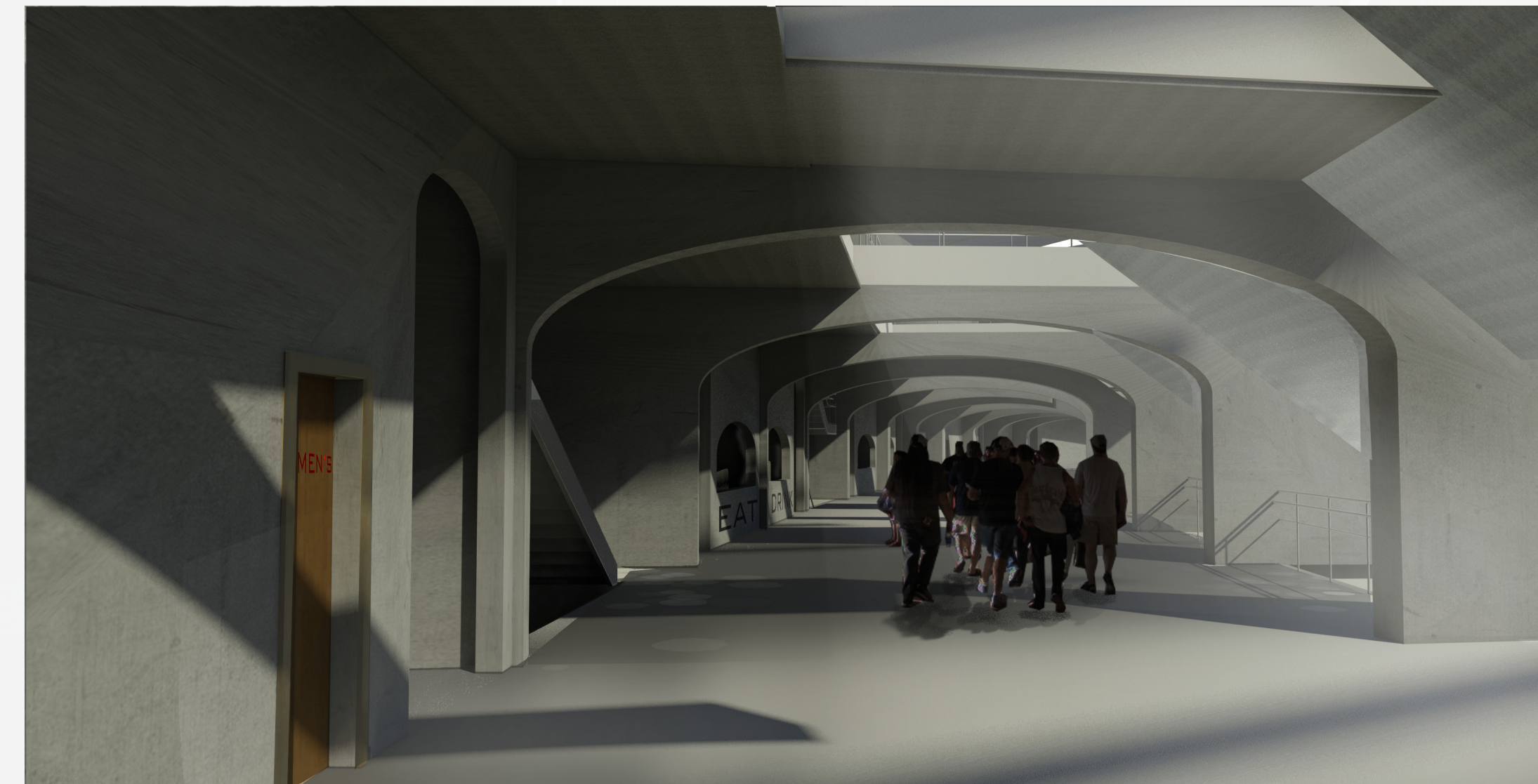
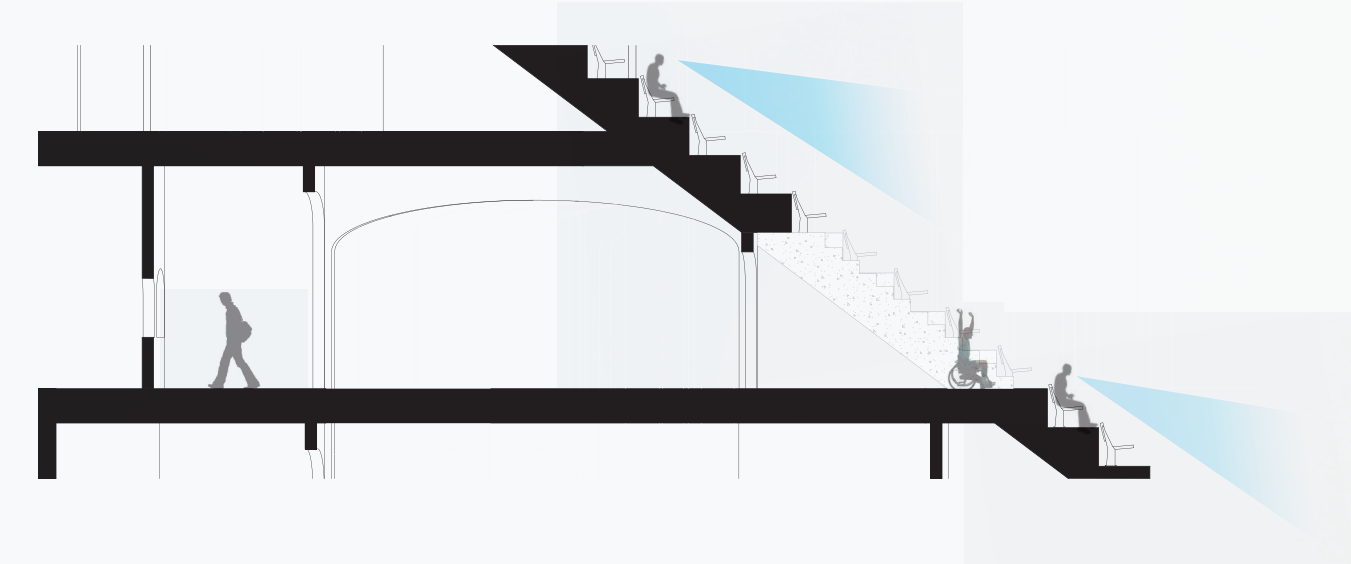


Second Floor -30'-0"

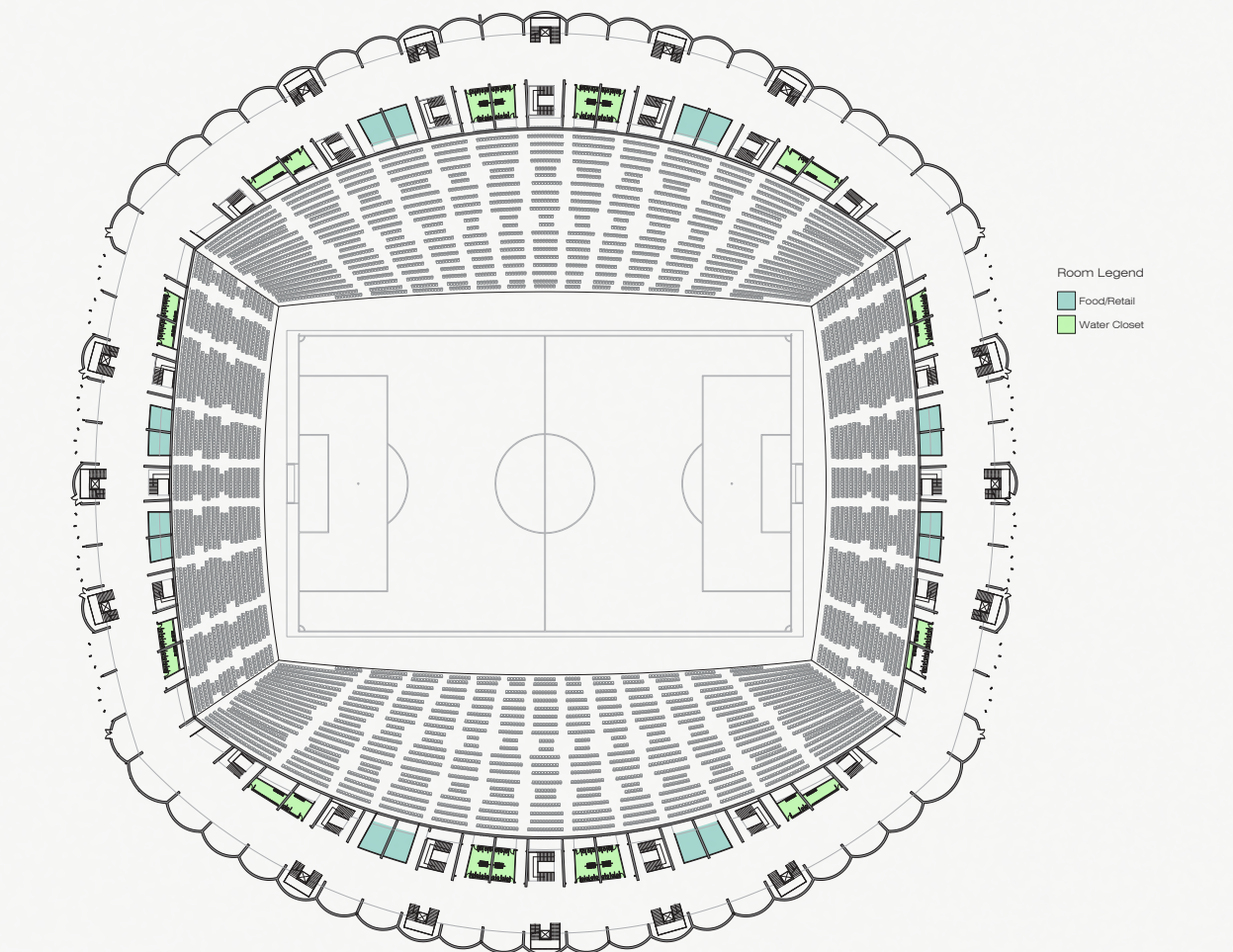
- Room Legend
- Press Booth
- Office



Stadiums include several necessities to improve a fan's experience. Along the concourse there are concessions, restroom and frequent tunnels leading to specific seating areas. The seats themselves are elevated so that everyone has a clear view of the field, providing accessibility to both ADA and Olympic standards.

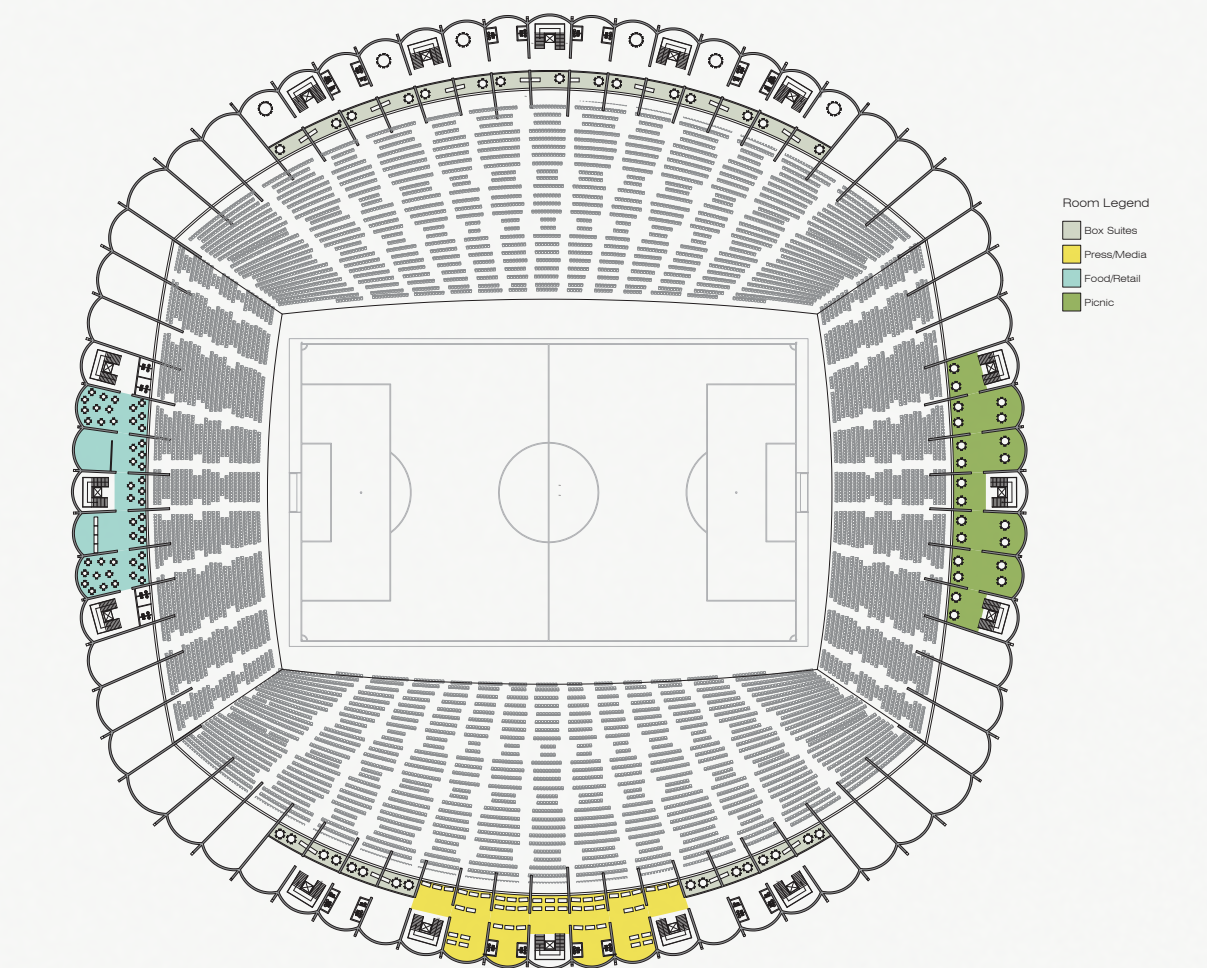
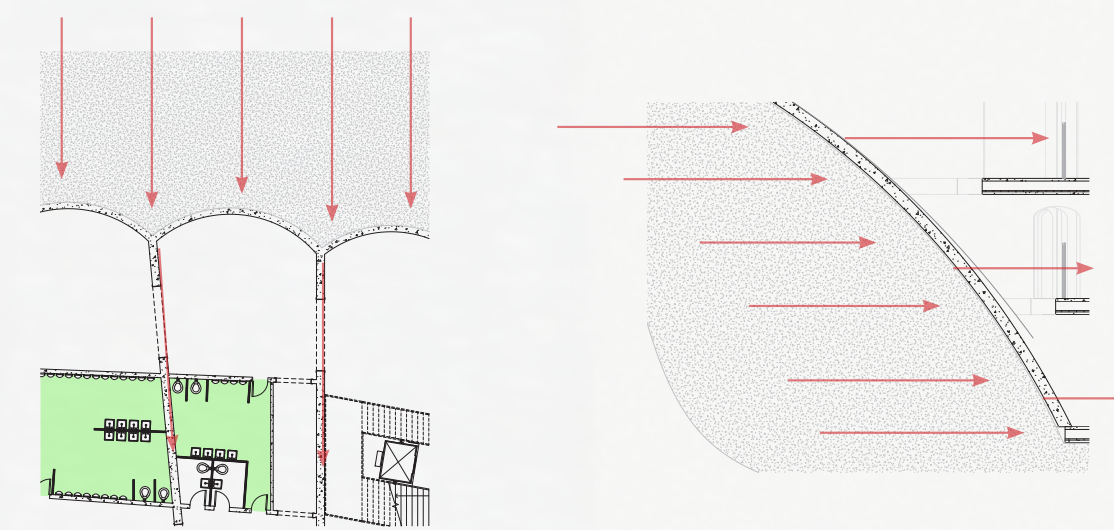
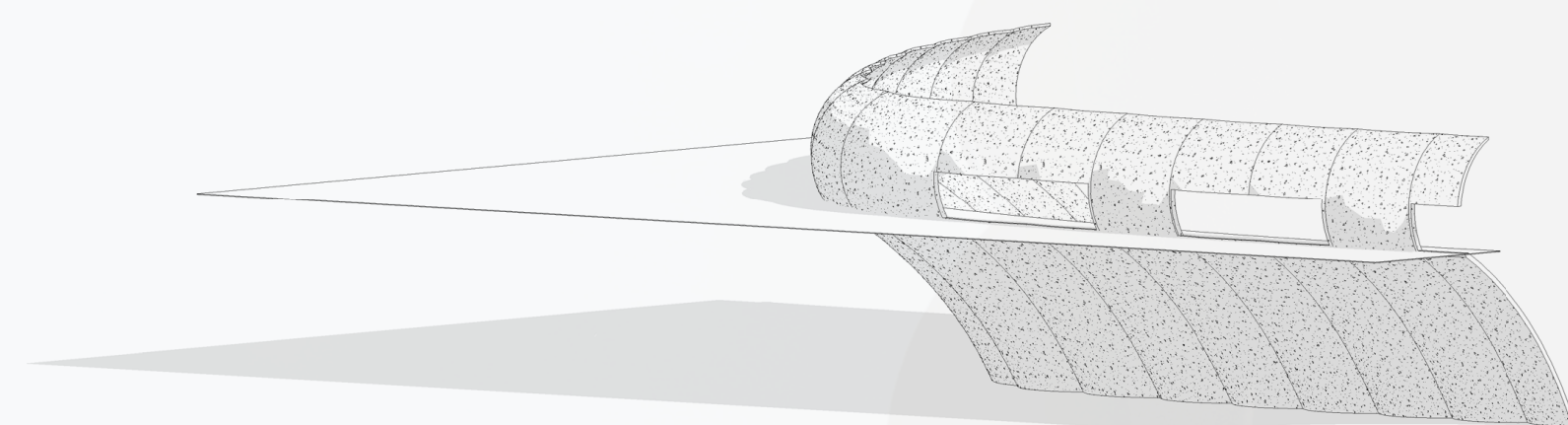


Third Floor -15'-0"



Fourth Floor 0'-0"

By placing the stadium forty-six feet below grade, the stadium's height better fits into the community. However, by placing the building underground, structural and lighting issues arise. In order to deal with the soil pushing back against the building, horizontally curved retaining walls deflect the forces into adjacent bracing walls. Furthermore, the retaining walls are continuous from grade to field-level, providing light from the surface to trickle down to the lower floors.



Fifth Floor 14'-6"

