

**SPORT AS A REGENERATIVE
URBAN CATALYST**

**KALAMAZOO
ARENA**



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ARENA**

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FALL 2012 - WINTER 2013

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"Symbolic space that connotes something other than its principal function - the realization of capital through the stimulation of consumer desires and the promotion of sales."

Mark Gottdiener, *The Theming of America*

INTRODUCTION



1.01 thesis abstract

This thesis is an investigating into how sport arenas and athletic teams impact local economies and how arenas often serve as a regenerative catalyst for urban areas. The positive correlation that stadiums and sports teams have on social and cultural identities not only strengthens the image of the city but also improves nearby businesses by attracting thousands of spectators on a weekly basis. Sports facilities have the potential to be a powerful economic driving force in bringing an area back to life and rebranding a city's image. The implementation of a hybrid arena within a city can allow commercial and residential developers to capitalize on the atmosphere created around a stadium by designing mixed-use buildings that feed off of the surrounding ambiance. An arena's relationship to its city and surrounding context would facilitate a diverse physical and emotional environment that coincides with attending sporting events.

Developing the experience of attending an athletic event within and around the arena is a design approach that should be maximized to have the greatest impact socially and economically on the city and the spectators. The arena and game itself should act as the final destination that is built up by the area developed around and within the arena

that generates energy, excitement, and revenue before and after the final whistle blows. Without a strong and passionate fan base, sports teams wouldn't make enough profit to stay competitive so by offering experiences to attract people to the game and area around the stadium should be a high priority for the developers. The venue itself needs to be adaptable and able to host a broad spectrum of events to keep the building occupied in the off-seasons and when the home teams are playing elsewhere. The financial and social potential around sports teams and their arenas create great opportunities to revive and enhance a once derelict area of a city or they may serve as a fresh opportunity to strengthen a great urban center.



1.02 thesis paper

Sports teams, fans, and their venues are indistinguishably at a nexus with the urban identities of the cities that host them. On event days, the immediate context of the area around the venue pulsates with energy as thousands of spectators flood to the area before and after the event has culminated. Sports and their facilities impact local cities in terms of their economic and social capabilities and therefore should be maximized by incorporating a multiplicity of events that generate energy, excitement, and revenue. This thesis is an investigation as to how a new, mixed-use hybrid arena in Kalamazoo, Michigan can act as a regenerative urban catalyst to bring a multiplicity of events that benefits the city, community, and its users.

A hybrid arena deviates from the norm of a conventional arena in the sense that its inherent functions are more than just a venue for sports. Through its avant-garde design and functionality, the arena can become a hybrid of retail, residential, social, and sporting events located within a single site. The goal of this thesis is to create a venue that bridges the gap of several distinct functions and challenges the notion of arena design to create a more viable and existential experience of viewing an event. Designing how multiple functions can benefit from each other and not detract from the economic goal of profit

margins will be an exploration into understanding how these functions can coexist. "Stadiums and arenas don't work alone," says Robert Mankin, an NBBJ sports specialist. "They can act as a catalyst." (Russel, 98)

Many issues regarding arena design can be ameliorated with the addition of supplementary hybrid architectural programming. By challenging the notion of arena design, an arena can be conceived of a hybridity of programs that are grouped within the function of a sporting facility. The other programs could ensure that the sporting and non-sporting public can utilize this space even when there are no events scheduled. The remaining supplementary attractions within the facility can create active public spaces in the surrounding area. The other hybrid program components would be able to exploit areas of the arena when events were taking place and even when they were not. Rather than surrounding the arena with surface parking lots, effectively creating a "parking island", which has been a trend in arena planning, the venue should be surrounded by energetic public space, to create a space for socializing before and after games and on non-event days. Incorporating hybrid programming allows the arena to readdress the street, creating a venue with both an inward

focus toward the spectacle and an outward focus to the surrounding community and context. In this sense, the facility can become much more than a sports arena, but an integral piece in the urban fabric and culture.

Commercial and retail shops, restaurants and bars, studio apartments, art galleries and public gathering spaces can all be infused into arena design to strengthen the functionality of the building and the site to create a destination during non-event days for sporting and non-sporting people alike. The incorporation of these programs is meant to sustain the context around the arena and allows the arena to become more a part of the community. The added programming has the potential to solve many of the constraints and dilemmas that sports stadiums and arenas contain. Several of these problems that would be alleviated would be offsetting the scale of the facility by locating the hybrid programming on the periphery of the stadium. This in turn, would produce pedestrian friendly street fronts and would establish an outward-looking facade and building form, which traditionally has been an inward-focused form. This inward-looking architecture causes the arena to turn its back on its immediate context. The elevation and facade located on the exterior of the structure traditionally becomes

unwelcoming and substantial. By creating a hybrid arena, these issues can be addressed to break the norm of sports architecture and will be the focus of my design investigations.

The proposed hybrid arena would create a flow of users at every hour of the day, appropriating the surrounding urban fabric. This steady influx of users can engender its own character and business, producing a multi-functional hybrid facility that reinvigorates the sports arena as a cultural manifestation of the significance that sports have on our culture and economy and as a representation of its inhabitants and city. The adaptation of a new breed of sports facilities and ancillary developments have the potential to focus on the regeneration of the blighted areas of downtown Kalamazoo by infusing a feeling of 'place' and 'destination', turning nothing into something that is beneficial for the city, community, and the public. The implementation of a hybrid arena would become a catalyst to promote transit-oriented development, smart business growth, and an urban renewal. A hybridity of programming and design will become integrated within the urban fabric and the additional functions would be respectful to the cityscape and designed to be utilized at all hours of the day, rather than around a series of events.

Arenas and stadiums by nature, in terms of construction, are traditionally inflexible structurally due to limitations and regulations regarding seating configurations, proper sightlines, and nearly consistent structural bays. Supporting a clear spanning roof to enclose the arena is a major design obstacle as it requires substantial supports and structures at common intervals. Also, providing the paying attendance the best possible seat to ensure a memorable experience means getting the fans as close to the event as possible while creating an exciting and energetic atmosphere for the players to feed off of. The sloping of the raked seating and the acoustics of the arena are design challenges that are standard in all multifunctional arena architecture. Incorporating and addressing these issues will be paramount throughout the investigation of this thesis project.

Recently, there have been new advances where sports architecture's renewed role on urbanism has produced an advantageous condition in which a city can identify with its arena. This condition has a two-fold circumstance whereby the city and arena both can benefit from the recognition to attract smart business growth and tourism to the city by adopting a self-promoting strategy. Cities are encouraging new sports facility construction

to consolidate and replace the old facilities that lack aesthetics, adaptability, and new technologies. Much like how Frank Gehry's Guggenheim Museum of flowing titanium ribbons put Bilbao, Spain on the world map, other cities across the world are looking for their own 'postcard city', and sports architecture is poised to be the image that represents and signifies the status of a city.

The long term lesson to be learned is not just simplistic mimicry of the "Guggenheim effect as spectacle" but the strategic and deliberate use of architecture as a catalyst to set off economic and social transformations.¹ Rather than using the same "shock and awe" architecture that Gehry implied for each city seeking to cash in on the Guggenheim effect, greater deliberate consideration should be achieved as to what each individual city needs. This can become realized through extensive knowledge of the local conditions and potentials that each site possesses. Therefore, it would be a great mistake to think that the Guggenheim effect is a generic recipe that can be duplicated without carefully analyzing the specific needs, conditions, and expectations of the community in question.²

As humans continue to evolve, their desire to experience and see new things is in a constant

[1]Klingmann, Anna. Brandscapes. The MIT Press, 2007. Print.

[2] Klingmann, Anna. Brandscapes. The MIT Press, 2007. Print.

state of flux. People have tendencies to not see or do the exact same things repeatedly; rather, they want to have a multitude of unique and diverse experiences. The challenge lies in using architecture strategically as part of a local condition, rejecting aesthetic notions that are inherently disconnected from the particularities of place.³ For that reason, the Guggenheim has had enormous success in Bilbao because it has never been duplicated and is in fact the original. To simply duplicate the Guggenheim's design idea from Bilbao and to put it in another city in all likelihood wouldn't compare to the original and would be rendered as a copy in whatever culture it was placed in. The danger of using branding in the literal way is that in paying homage to the original, it inevitably produces homogenization, a flattening of the cultural landscape.⁴ At a UNESCO conference in April 2000, Eduardo Portella (President of Administrative Council) gave a lecture titled, "Cultural Cloning or Hybrid Culture?". Within this lecture, he spoke:

[3] Klingmann, Anna. *Brandscapes*. The MIT Press, 2007. Print.

[4] Klingmann, Anna. *Brandscapes*. The MIT Press, 2007. Print.

A cloned culture is an aborted culture, because when a culture ceases to be interdependent, it ceases to be a culture. Interaction is the hallmark of culture. And interaction leads to hybridity, not cloning. With cloning, the one is an exact copy of the other. With hybridity, the one and the other give birth to a new entity, which is different but also naturally retains the identity of its origins. Wherever it has occurred, cultural hybridity has sustained roots and forged new solidarities, which may be an antidote to exclusion.⁵

The intention of this thesis project is to capitalize on a new hybrid arena in Kalamazoo, Michigan that creates a multiplicity essential to perpetuate a balance between the city's history and its potential for growth. This project aims to design architecture as a regenerative urban catalyst to realize Kalamazoo's ambition linked with its contemporary expression within its cultural and contextual identity. This can take place by separating out the arena's potential to become a stimulant for urban rejuvenation from its formal expression as a spectacle. The architectural intention is to attempt to design from the 'inside out' and not from the 'outside in', which has been the trend in sports architecture.

[5]Eduardo Portella, "Cultural Cloning or Hybrid Culture?." UNESCO. April 1999.

For this strategy to be implemented, the multiplicity of programming must be taken into account. It's cultural, commercial, and economic impacts; its capacity to influence patterns of behavior; its relationship to local traditions and existing cultural and political institutions; its resources and sources of support; its profitability and scale; its capacity to influence cultural history; and its long-term use and programming capability.⁶

The initial site that has been selected for this thesis is Kalamazoo, Michigan because it has the criteria of current arenas being outdated, outgrown, and not located within the downtown city center; specifically Western Michigan University's Lawson and University Arena and Wings Stadium. Kalamazoo is located in southwestern Michigan and has a metro population of over 325,000. The city is home to four universities and several semi-professional sports teams in hockey and arena football, all of which have seen increasing numbers in fan attendances over the last decade despite the economic recession. However, the current conditions of the three arenas in Kalamazoo are no longer capable of profiting from these increasing numbers due to their limited seating capacities of less than 6,000 seats at each venue. Kalamazoo, Michigan is ideal for a new hybrid

[6]"Guggenheim Foundation Announces Planning Alliance with Frank O. Gehry & Associates and Rem Koolhaas/AMO."

arena containing a multiplicity of functions by having its three existing facilities consolidated into a single facility and located at an underutilized site in the northwest quadrant of the Central Business District.

Locating a new arena with its periphery of hybrid programming within the immediate context of the downtown area would ensure that the facility doesn't become a 'white elephant' structure. The trend for sports stadiums and arenas throughout the 20th century was to build these structures miles away from the city, often times in the county where land was cheap and there was abundant and sufficient space for massive surface parking lots. These 'white elephant' structures have minimal impact on local economies and their concrete bowl ideology becomes a missed opportunity on their wasted economic and aesthetic potential. Realizing this mistake is what has lead this investigation to explore the possibilities and potentialities that a hybrid arena within an urban city center can have on the cultural, social, and economic factors of Kalamazoo.

But in order for this project to be successful, how can the design of a new hybrid breed of sports architecture engage a site specific to the contextual fabric of

the culture and society of Kalamazoo? What are the influences of design that can transform a conventional sports facility into a hybrid arena to act as a social condenser and attracter? How can large scale structures be designed from the 'inside out' rather than the 'outside in'? What is the mode of functioning of an arena and how can it be abrogated, the logic of the traditional ruptured? These are just a few of the questions that this thesis will begin to investigate in search of a new hybrid arena that is particular and unique to Kalamazoo, Michigan to act as a regenerative urban catalyst.

"Stadiums and arenas don't work alone, they can act as a catalyst."

Robert Mankind, NBBJ Sports Specialist

SITUATION



2.01 site selection

Kalamazoo, Michigan was listed as one of the best small cities to live in in the United States (CNN Money Magazine) and is one of Michigan's premier tourist destinations. Located in southwestern Michigan, Kalamazoo is located midway between Detroit and Chicago and an hour's drive south of Grand Rapids make Kalamazoo a prominent stop on the major commerce highways, Interstate 94 and US 131, that bisect Kalamazoo County.

With over 250,000 people, Kalamazoo has the 8th largest metropolitan population in the state of Michigan in 2011 and has seen a 4.9% increase in population between the years 2000 and 2010 despite the economic recession.

Three higher learning institutions are located within the city limits of Kalamazoo; Western Michigan University, Kalamazoo College, and Kalamazoo Valley Community College. This large and diverse student population contributes to the strong culture found in this city and establishes a passionate fan base for local sports teams.

The location for my thesis project is Kalamazoo because it has the criteria of current stadiums being outgrown, outdated, and not located within the downtown district. University and Lawson Arena, home to Western Michigan

University's basketball and hockey teams, and Wings Stadium, which hosts the semi-professional hockey team the Kalamazoo K-Wings. All three arenas have a combined age of 131 years in use and can no longer house the increasing number of fans wanting to attend the events held there.

The bottom line of Kalamazoo's existing sports arenas would have an impressive financial impact if consolidated into a single multipurpose facility within Kalamazoo's downtown district. A new, state of the art sports facility located in downtown Kalamazoo would act as a catalyst for the entire city by attracting entrepreneurs, investors, visitors, athletes, and entertainers. What if Kalamazoo's three existing arenas were consolidated and located downtown?

EXISTING FACILITIES FINANCIAL IMPACT



...LAWSON ARENA

Capacity	3,700 seats
Avg. Ticket Price	\$15.00
Profit (per game)	\$55,500
X	
Home Games (per year)	20
	\$1,110,000 (Hockey Ticket Sales)



...UNIVERSITY ARENA

Capacity	5,500 seats
Avg. Ticket Price	\$15.00
Profit (per game)	\$82,500
X	
Home Games (per year)	48
	\$3,960,000 (Basketball, Volleyball, Gymnastics Ticket Sales)



...WINGS STADIUM

Capacity	5,200 seats
Avg. Ticket Price	\$18.00
Profit (per game)	\$93,600
X	
Home Games (per year)	70
	\$6,552,000 (Hockey, Concerts, Shows, Action Sports Ticket Sales)

ANNUAL TICKET SALES REVENUE \$11,622,000

Kalamazoo, Michigan

City Population: 74,743 (2011)

County Population: 252,074 (2011)

Area: 25.11 square miles

Below "Aerial view of Downtown Kalamazoo,
MI circa 1955."

1.



2.02 identity mapping

A city's identity is what makes it unique, or what constitutes it as a place. The history of a place is an important and often overlooked aspect that can be used in current and future designs that are a connection or reference to its past. Utilizing identity mapping provides an opportunity to re-establish components of a place that first brought people to Kalamazoo for a variety of different reasons. Such reasons as the booming local economy throughout the 20th century, new advances in pharmaceuticals, the start-up of several major musical instrument companies, and abundant and fertile soil ideal for agriculture established the city of Kalamazoo as an exceptional place to live, work, and play.

Historically, Kalamazoo has been considered as a "typical" American city. In 1957 and 1958 Kalamazoo was chosen as the model city to represent the United States in exhibits in Germany and Great Britain because it was recognized for its semblance with other communities across the nation.

The city was also at the nation's forefront as it was the country's first open-air pedestrian shopping mall. In 1959, the City of Kalamazoo endorsed a portion of a plan from Victor Gruen and Associates to close off portions of Burdick Street to establish the country's first open-air pedestrian shopping mall.



Above Historical photo of the corner of East Michigan Avenue in 1955.



Above A Kalamazoo postcard published by the Star Paper Company in 1908, 51 years prior to the nation's first open-air pedestrian shopping mall. Leading up to World War I, Kalamazoo was the country's largest paper-producing areas in the United States.

"Professional sports and their urban identity are inextricably linked. The buildings hosting the teams that local fans cheer leave an indelible mark on their hometowns."

Joann Gonchar, Big-League Dreams

CONDITION

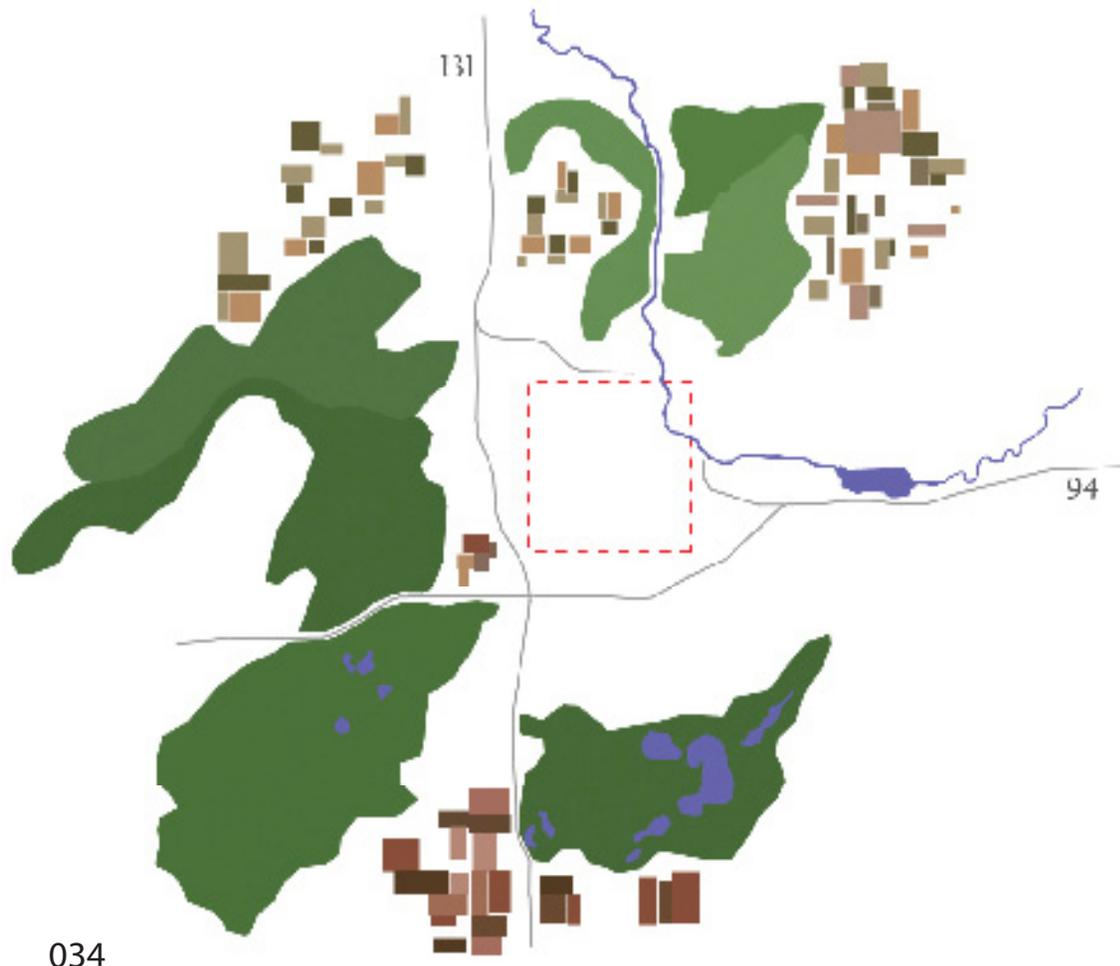
KALAM



MAZOO



4.



3.01 site mapping

Site mapping is a concept used to identify and abstract useful tools to better understand a place. In this thesis examination, the goal of these mapping exercises is to gain a better understanding of the specific characteristics of Kalamazoo that aren't easily noticeable from an everyday perspective. Recognizing the spatial conditions that exists between the built and natural environments, public and private, residential and commercial, and vehicular and pedestrian traffic to better perceive the urban fabric of the city.

Much of the built environment of Kalamazoo can be attributed to prominent manufacturing industries and a new and improved public highway system completed in 1963 that linked Kalamazoo to Detroit, Chicago, and Grand Rapids with four-lane divided expressways.

Since the turn of the 20th century, jobs in the manufacturing sector have dominated the labor force within the city and even today make up much of the city in terms of land zoning. Once again, the paper production industry ensured abundant jobs in the area and sprawl around the paper mills enabled the city's population and size to exponentially grow. For more than a century, paper was king and Kalamazoo became known as the "Paper City". Many of the local neighborhoods including the Edison, Vine, Northside, and Stuart neighborhoods were a result of

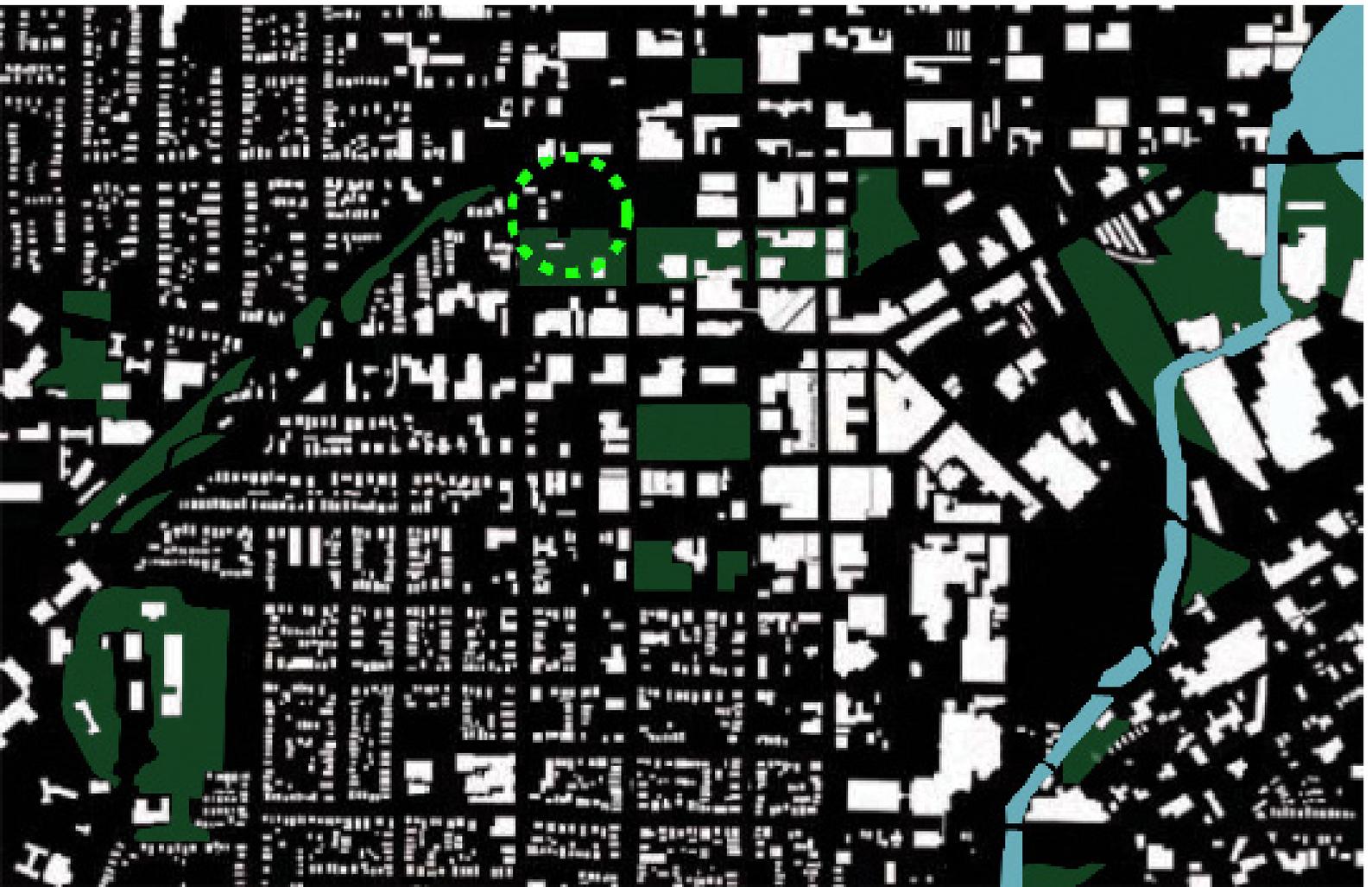


Above Arcadia Creek is home to numerous summer festivals and is a part of the landscaped park system that runs through the heart of downtown Kalamazoo.

Opposite Above Nestled within the Kalamazoo Valley, the city that bears its name is continually growing and seen as place with a progressive culture.

Opposite Below Kalamazoo County greenspace and major highway arteries with the Kalamazoo city center highlighted in red.

Below Figure ground study of the built and natural conditions of Kalamazoo, MI.



the paper mill families wanting to live closer to where they worked.

A report by The W. E. Upjohn Institute entitled *The Position of the Paper Industry in the Economy of Kalamazoo County Michigan in 1954* concluded "Yet so deeply is the paper industry imbedded in the Kalamazoo area that in 1954 approximately 32 percent of the combined sales of all the manufacturing, distributive, and service industries and 24 percent of total personal incomes in Kalamazoo County came directly or indirectly through its activities. Through its effectiveness in the use of the natural and human resources of the area, together with its extensive use of national and world markets the paper industry touches the lives of almost all of us."⁷ This report clearly demonstrated how Kalamazoo's strong paper driven economy was able to support many associated industries. Companies such as playing card manufacturers, chemical coating plants, and shipping concerns that were only indirectly related to the paper industry were able to prosper. By this point Kalamazoo had truly become The Paper City.⁸

Urban renewal in Kalamazoo emanated from the completion of the expressways US 131 and Interstate 94 in 1963 and the structuring of the urban fabric after the surge of the automobile in the mid-19th century. The figure study left displays the built and natural landscapes around the city center and its connections to the adjacent neighborhoods, as well as the resulting block sizes and public spaces.

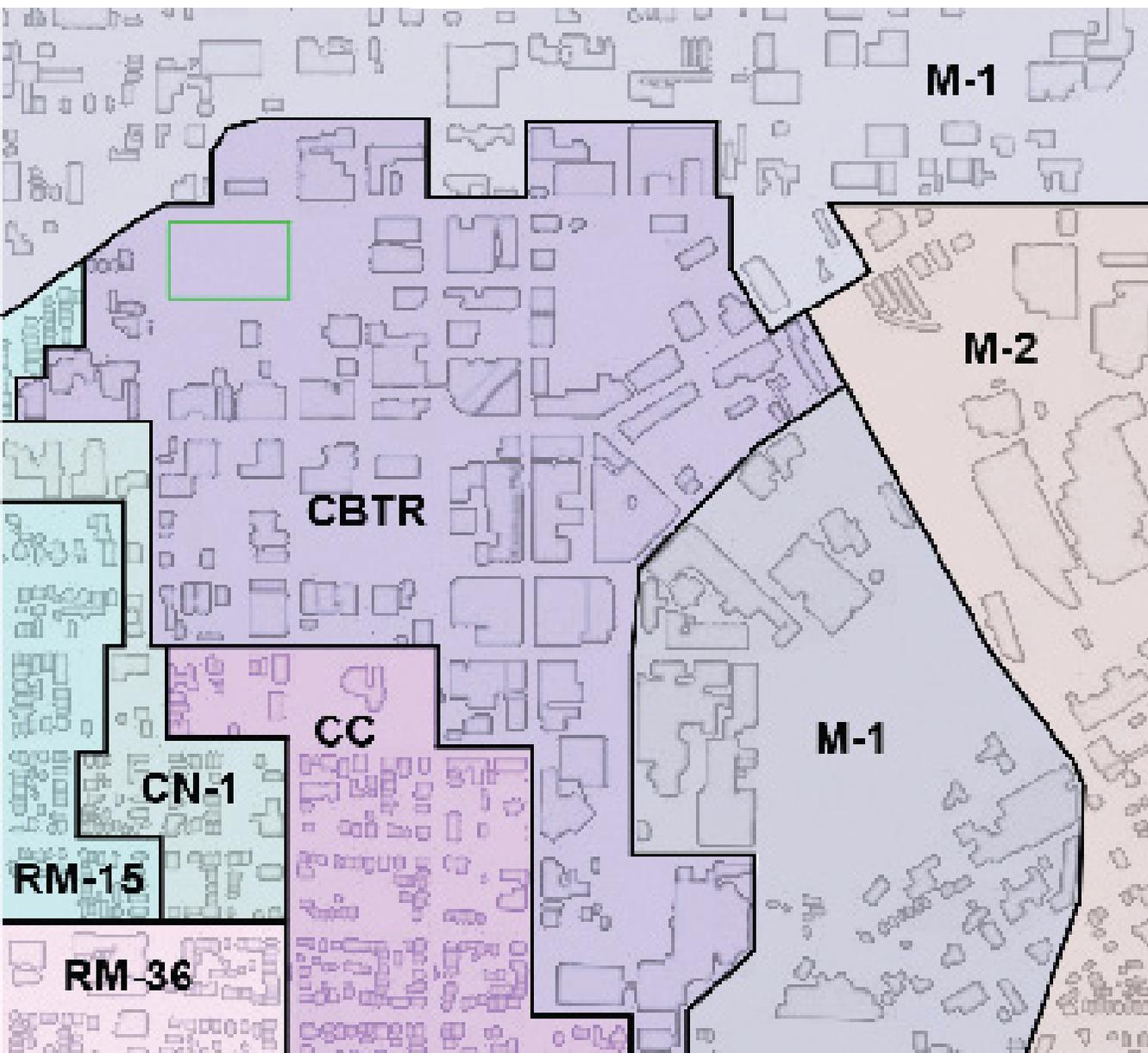
[7]Smith, Harold T. "The Position of the Paper Industry in the Economy of Kalamazoo County, Michigan, in 1954." W. E. Upjohn Institute for Community Research. (1958): n. page. Print.

[8]Garrison, Anne C. "It's a Paper World." *Business Topics*. (January 1956): n. page. Print.



Above The Sutherland Paper Company paper mill located just north of the city center and helped establish the prominent Northside Neighborhood.

- CBTR Business, Technology, & Research District
- CN-1 Local Neighborhood Commercial District
- CC Community Commercial District
- RM-15 Residential District (15 units per acre)
- RM-36 Residential District (36 units per acre)
- M-1 Limited Manufacturing District
- M-2 General Manufacturing District
- Project Site



3.02 site zoning

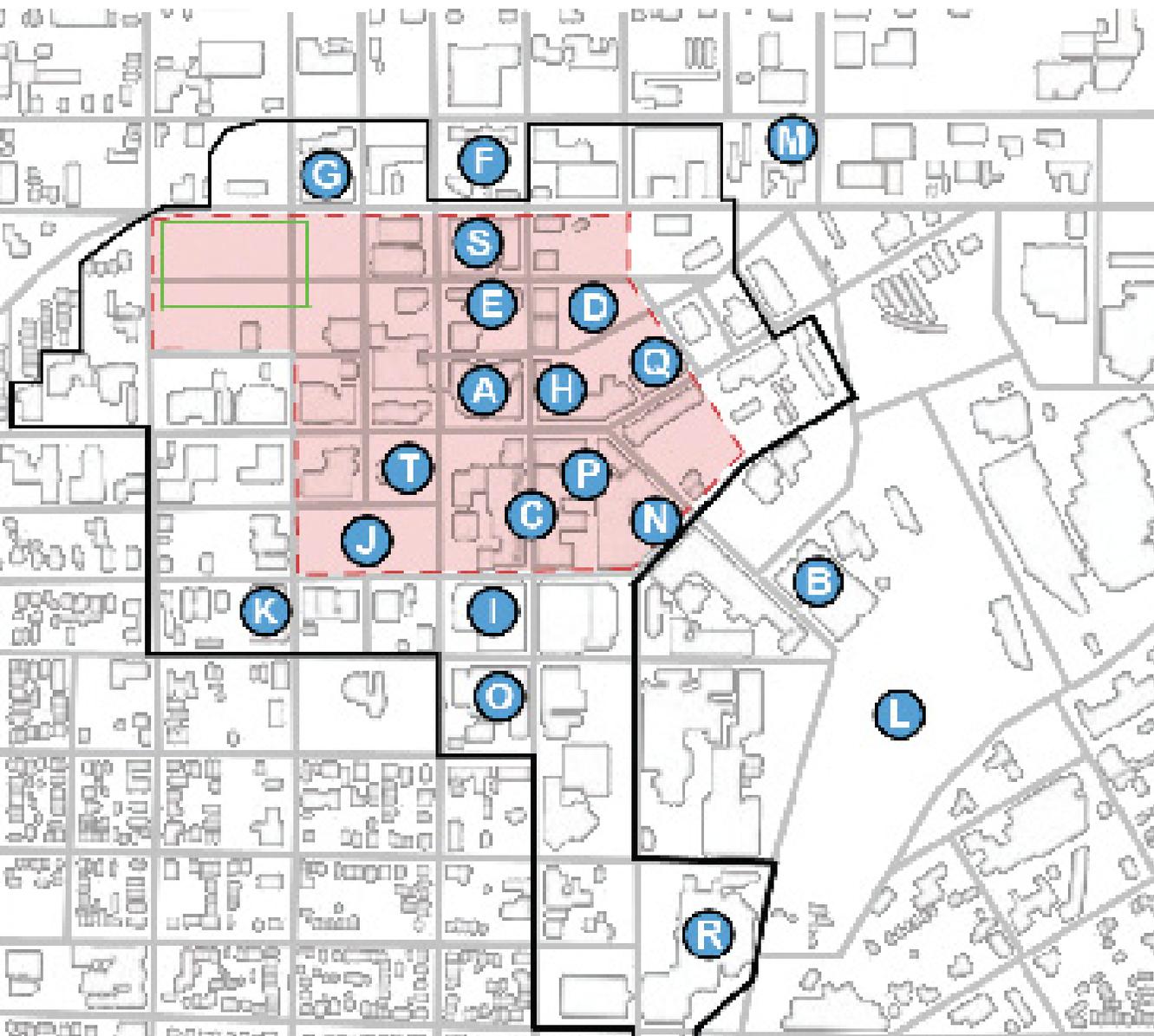
The project site for a new multi-use arena in Kalamazoo, MI would be located in the northwestern quadrant of the city center within the current zone of CBTR (Business, Technology, & Research District). Current zoning in the CBTR emphasizes economic development, community engagement, and specialized uses, all of which would be met with this thesis proposal. Other building types in this zone include retail, hospitality, institutional, commercial, and mixed use buildings that have existing or renovated historical designs incorporated into the facades. Currently, only the Radisson Hotel and KVCC Technology Center sited at the heart of the city center have modern facades.

The CBTR zoning is established to provide a high quality environment supporting economic development that is an asset to the community, neighbors, and owners. Also, it seeks to promote and maintain desirable development activities in a setting that is in harmony with the surrounding area. The adjacent zoning areas to this project site include a Limited Manufacturing District and a Local Neighborhood Commercial District.

Below Business within the CBTR are required to meet an agenda that follows and enhances:

- + economic development
- + community engagement
- + specialized uses
- + research & development institutions
- + preserve natural & historic buildings
- + architecturally attractive buildings

- CBTR Zoning
- - - Entertainment District
- ▭ Project Site

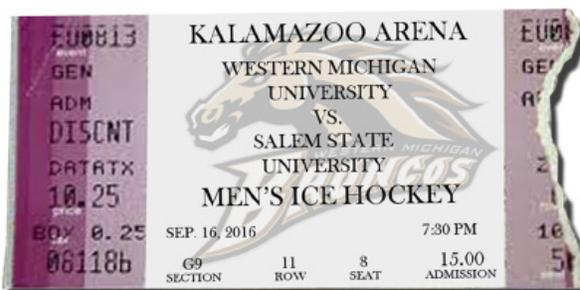


3.03 anchor investments

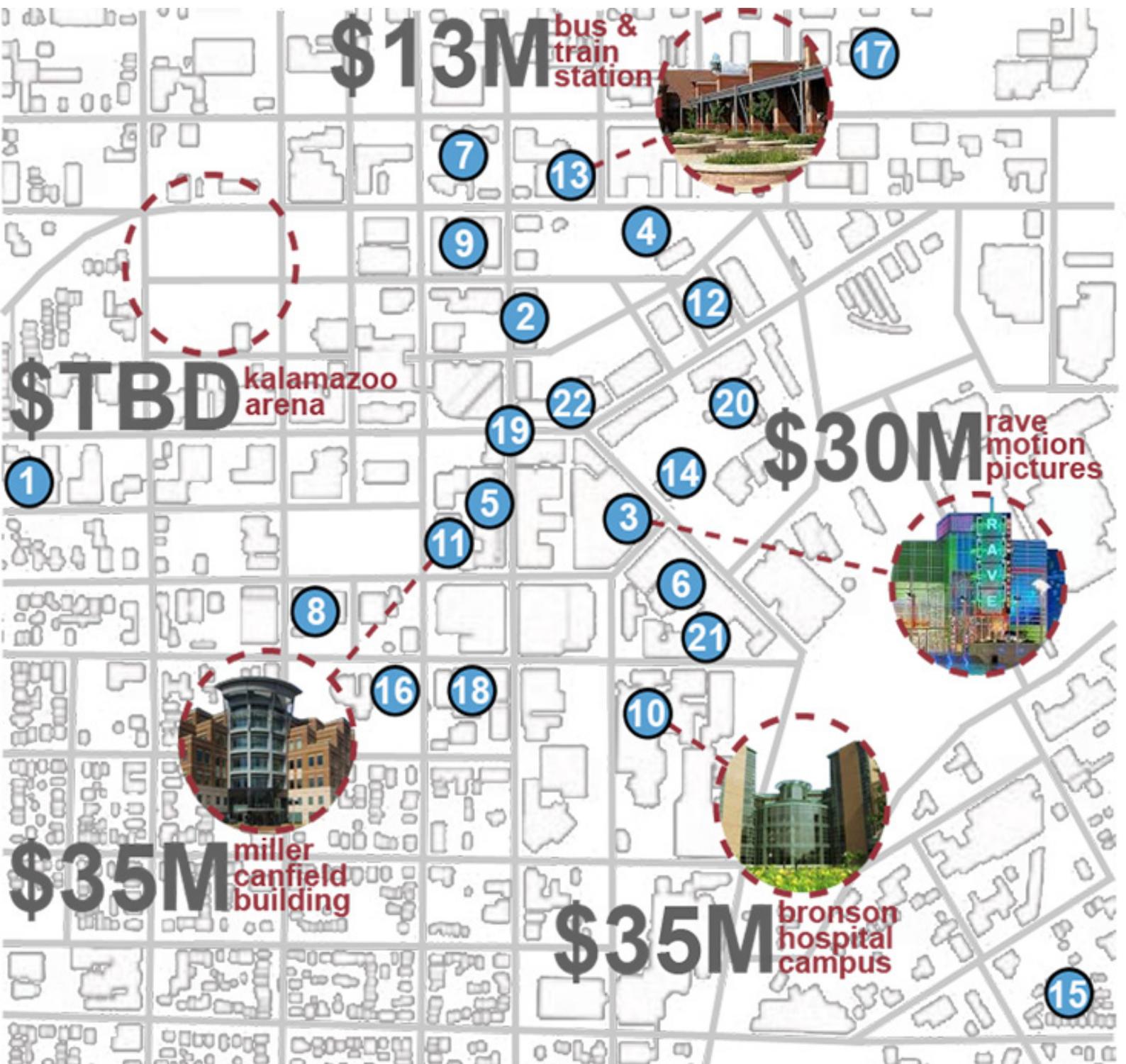
- A** Radisson Plaza Hotel
- B** Pfizer
- C** Kalamazoo Mall
- D** Arcadia Creek Festival Place
- E** Kalamazoo Valley Museum
- F** Bus & Train Station
- G** Park Trades Building
- H** KVCC
- I** Public Library
- J** Bronson Park
- K** Kalamazoo Institute of Arts
- L** Golf Course
- M** People's Food Co-op
- N** Rave Motion Pictures
- O** State Theater
- P** Police Station
- Q** YWCA
- R** Bronson Hospital
- S** District Court Building
- T** Kalamazoo Building

Opposite Left The anchor investments represent existing businesses that have an influential impact on the city of Kalamazoo. Many of the anchor investment locations are within the Central Business District and meet the requirements of: economic development, community engagement, and specialized uses.

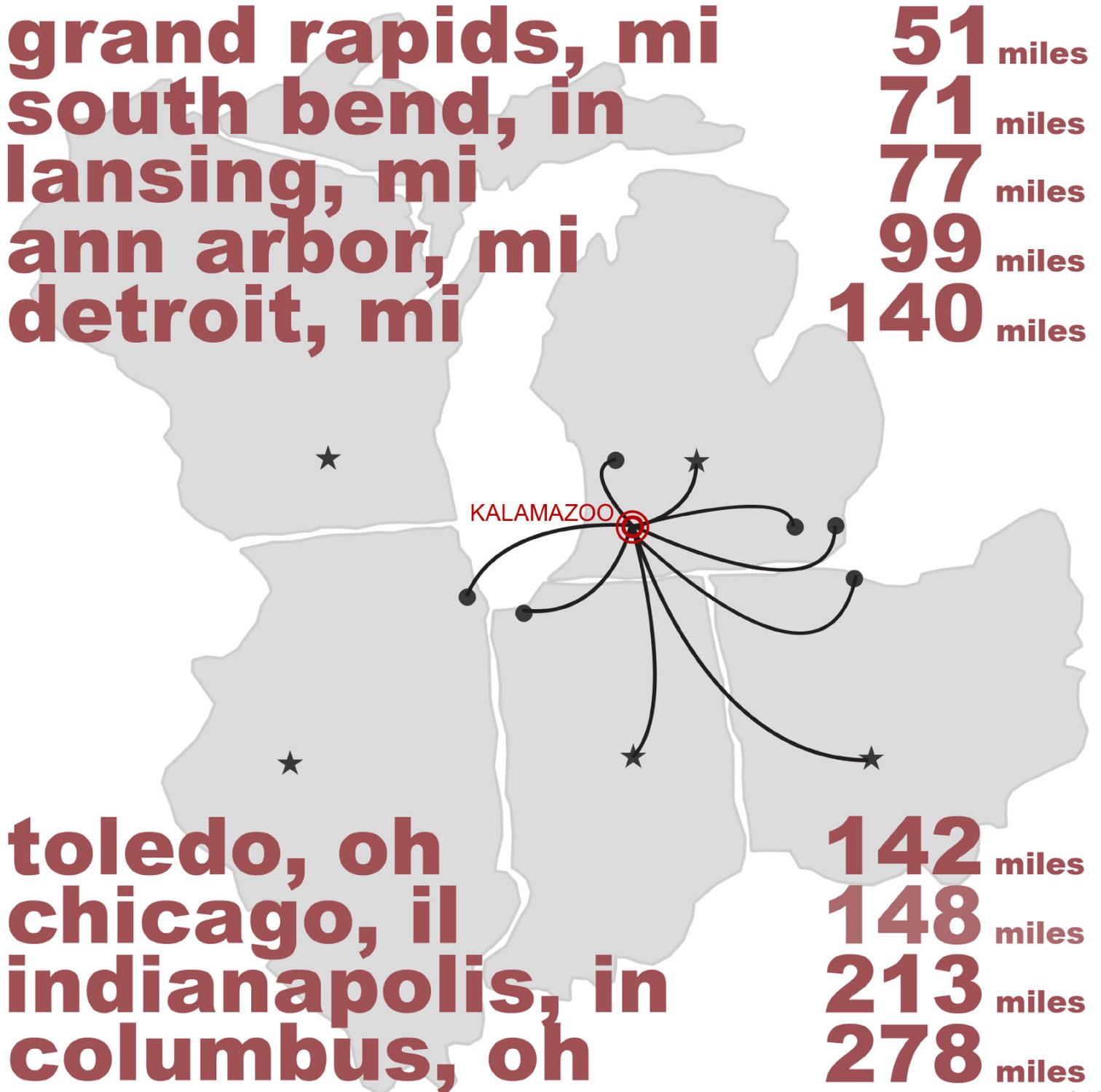
Below Ticket stubs to events at the Kalamazoo Arena can be used in partnership with local businesses to attract fans before and after an event has ended. This would ensure that the business within the downtown area would continue to prosper economically despite the construction of a new entertainment facility.

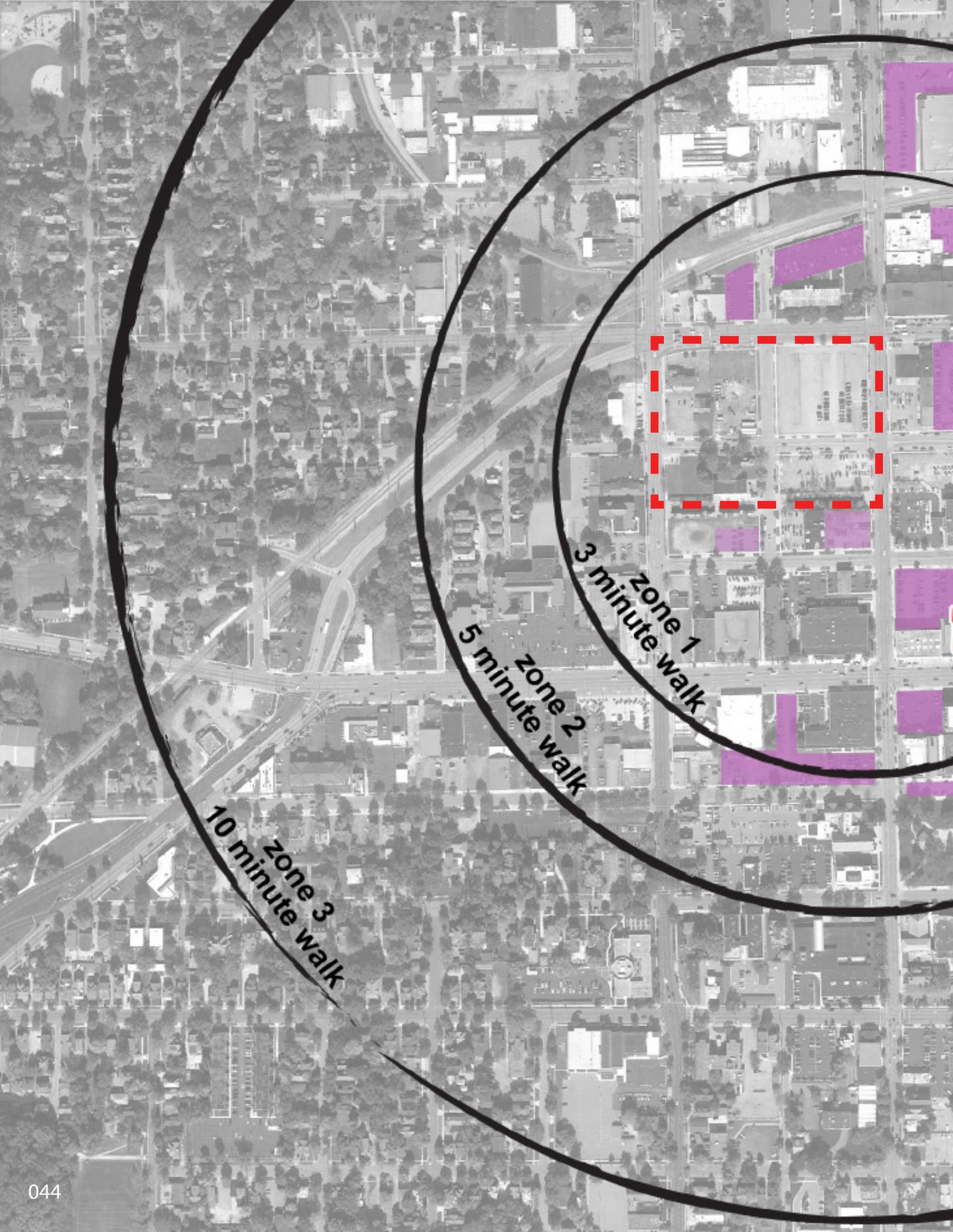


Below New construction projects completed between 2006-2011 in Kalamazoo.



Below The nine cities listed on the graph below all fall within a 300 mile radius of Kalamazoo, Michigan and will be the primary markets that the Kalamazoo Arena will be competing with to host the most popular events. New development around the arena will help enhance the overall experience and establish Kalamazoo as a premier entertainment destination..

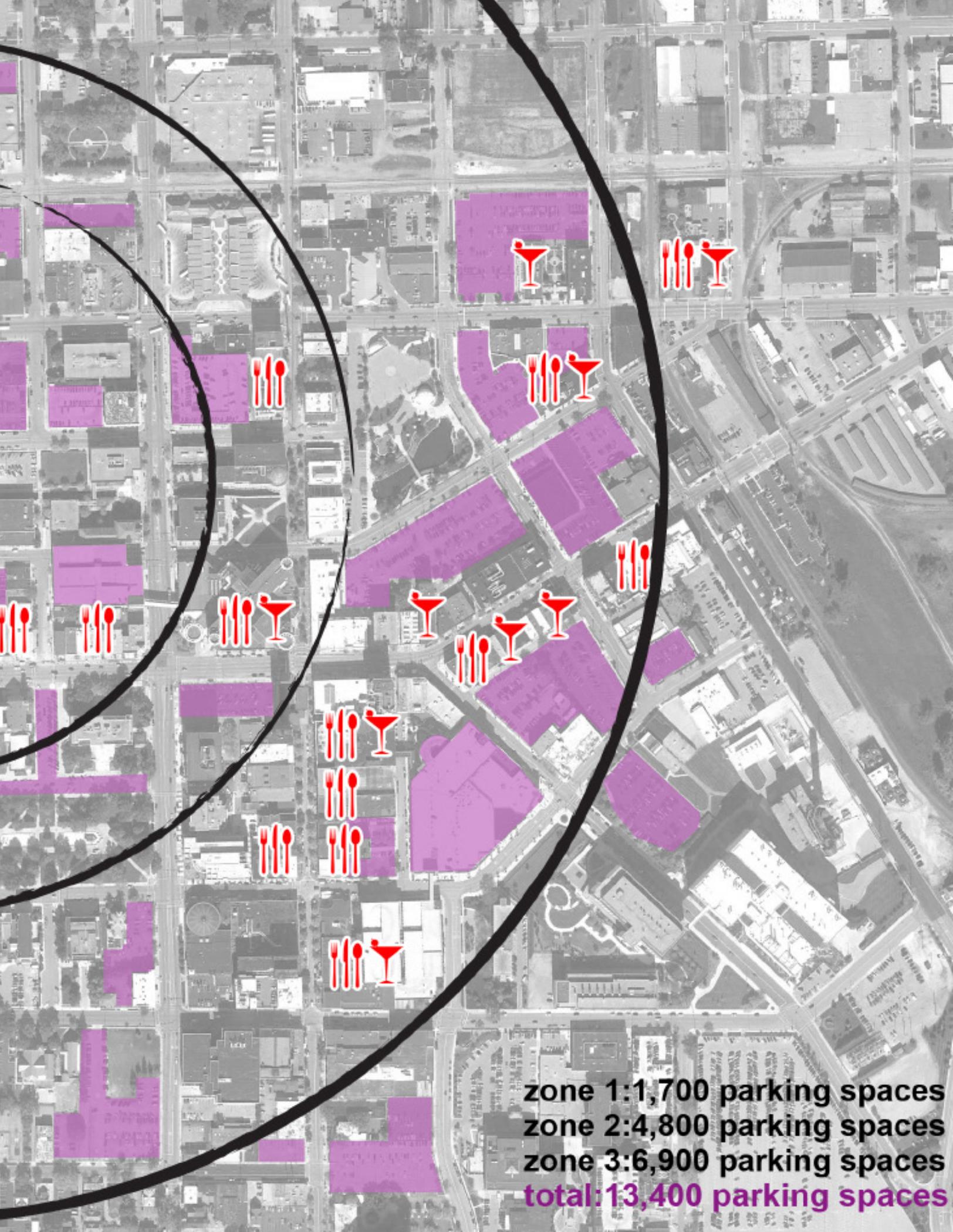




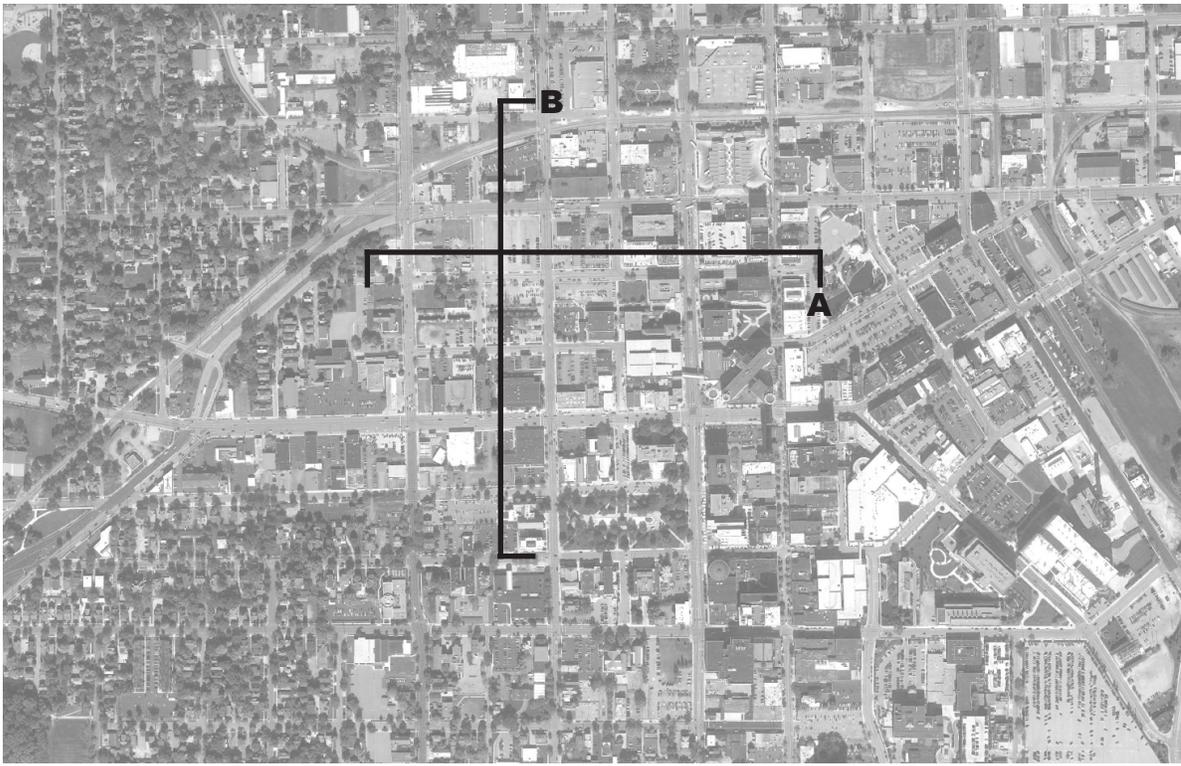
zone 1
3 minute walk

zone 2
5 minute walk

zone 3
10 minute walk



zone 1: 1,700 parking spaces
zone 2: 4,800 parking spaces
zone 3: 6,900 parking spaces
total: 13,400 parking spaces

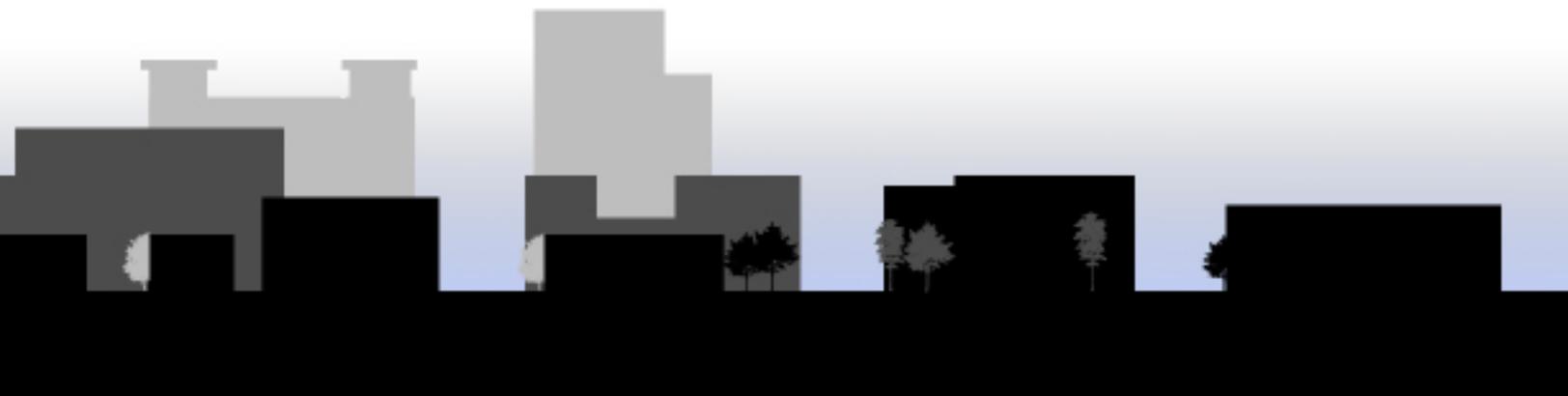


Section A



Section B

Below Section cuts through the city played a major role in understanding the building and spatial relationships in the immediate area of the site. Locating a structure with a large and diverse program into an urban context informed and guided the overall design to create a scale that fit within the existing cityscape.



Opposite Page 1. Kalamazoo Public Library; 2. Radisson Plaza Hotel; 3. Kalamazoo Building; 4. The Haymarket Buildings; 5. Kalamazoo Mall (Burdick Street); 6. Bronson Upjohn Building; 7. East Michigan Avenue Street Front.



"How humans come together in cities is nothing less than a key to the long-term stewardship of the land, air, water, and energy use, as well as to habitat preservation, health, security, and positive social interaction."

John Lund Kriken, City Building

PRECEDENT STUDIES

Columbus, Ohio, U.S.A.

City Population: 797,434 (2011)
Metro Population: 1,858,464 (2011)
Area: 223.11 square miles



1. Lifestyles Community Pavilion



2. Nationwide Arena



4. Burnham Square Condominiums



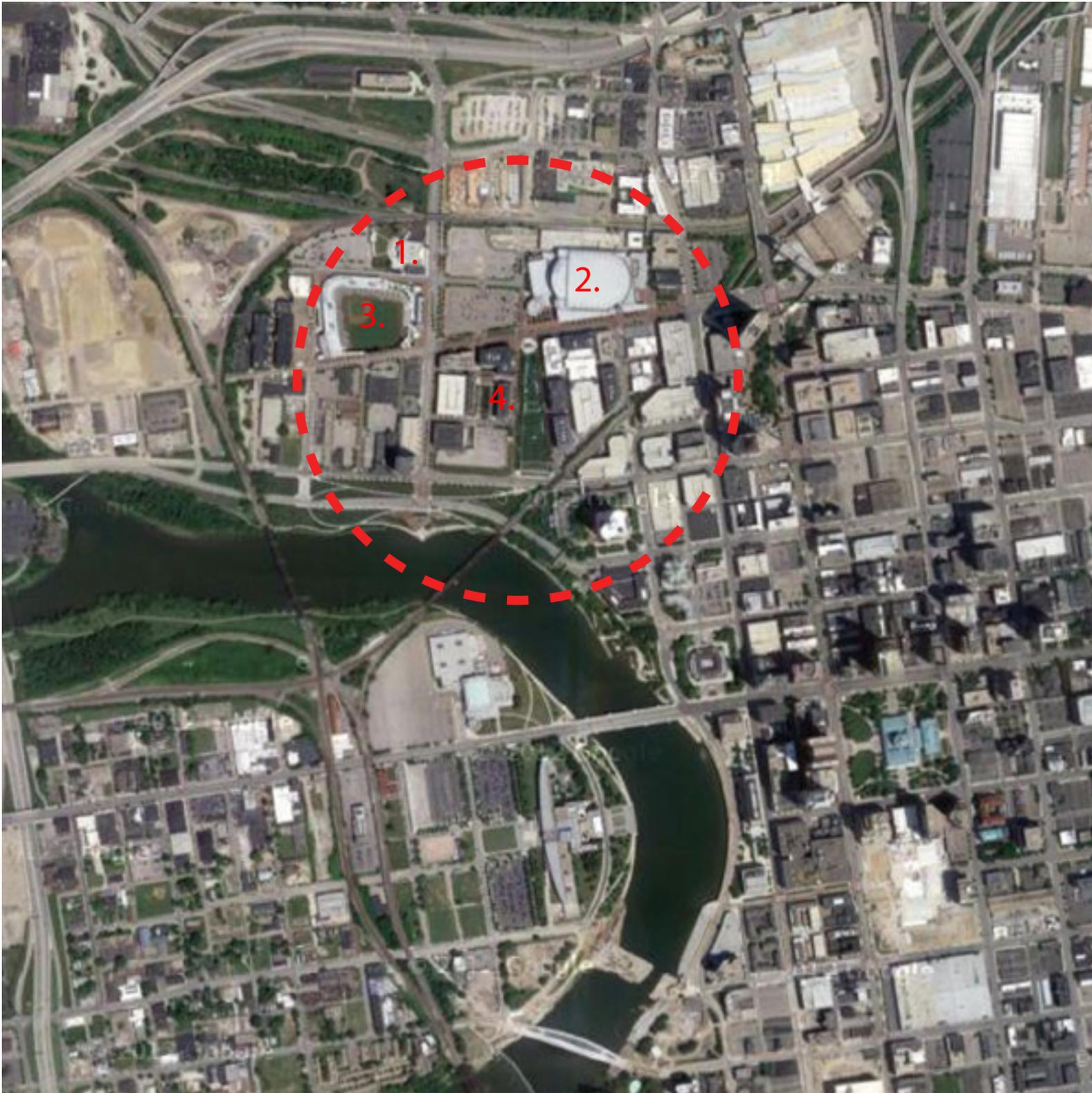
4.01 arena district columbus, oh, u.s.a.

"As the premier entertainment district in downtown Columbus, Ohio, the Arena District offers dining, accessible parking, live entertainment, sport teams, major community events, affordable hotels, and unique residential and commercial office opportunities."⁹ The Arena District is a mixed-use urban infill development covering 75 acres aimed at catering to the market of attracting various entertainment options centered around a major sports arena. The Arena District is master planned and characterized by its New Urbanism layout and neo-classical American design, being influenced by Daniel Burnham¹⁰, architect of the Columbian Exposition (1893) and the City Beautiful Movement (early 1900's).

The Arena District features over 1.5 million square feet of retail, office, and entertainment space and is home to the NHL's Columbus Blue Jackets and AAA baseball's Columbus Clippers. Also incorporated into the \$750 million development are 600 residential units located along parks, dining, retail, bike trails, and various entertainment options.¹¹ The implementation of the Arena District on the Greater Columbus area has seen a positive influence on the local economy and quality of the city since its inception. A similar development project incorporating the same live/work/play environments in Kalamazoo would help establish the city as a premier destination for southwest Michigan.

[9] "Experience the District." Arena District. Nationwide Realty Investors, n.d. Web. 12 Mar 2012. <<http://arenadistrict.com/about/>>.

[10, 11] "The Arena District, Columbus, Ohio." Nationwide Realty Investors. Nationwide Realty Investors, n.d. Web. 12 Mar 2012. <<http://www.nationwiderealtyinvestors.com/portfolio/arena-district/>>.





Medellin, Colombia, South America

City Population: 2,743,049 (2012)
Metro Population: 3,592,100 (2012)
Area: 445 square miles



4.02 the coliseums medellin, colombia, south america

The Coliseums in Medellin, Colombia, which was built for the 2010 South American Games showcases the successful integration of large scale sports facilities as an urban activator. According to plan:b's architect, Felipe Mesa, "We conceived of the four buildings as a single large urban structure with sporting arenas and covered areas for public zones."¹² A major design point for The Coliseums was its accessibility and social transparency. The exterior laminated metal facade was laser cut to not only ensure that spectators on the interior of the arenas had views out on to the city of Medellin but also the users of the public spaces can catch glimpses of the action taking place inside without paying for admission.

The complete site of the arenas and covered roof structure between each individual sports hall "enables the entire complex to be read as a whole and, with the protected public zones it creates along the buildings' peripheries, creates spatial continuity as well."¹³ The implementation of sports facilities along with public spaces allows for public use that complements the action that takes place within the built structures. Often times spontaneous and unscripted events, such as skateboarders or team warm-up drills animate the public space and allows the entire site to be connected to the community and city.

[12, 13] Broome, Beth. "Coliseums for the South American Games." *Architectural Record*. Jan 2011: n. page. Web. 26 Mar. 2013. <<http://archrecord.construction.com/projects/portfolio/2011/01/coliseums.asp>>.





Perth, Western Australia, Australia

City Population: 1,603,000 (2011)
Metro Population: 1,832,114 (2011)
Area: 739 square miles



4.03 perth arena

perth, western australia, australia

Perth Arena, located in southwestern Australia is a newly completed (2012) multi-functional arena that was designed to be internationally reconized and become a landmark for the city. Taking clues from the "Bilbao Affect", where architecture is used as a 'post-card image' for the city to attract visitors and become a major economic and social driver for the host city. Perth employed ARM Architecture to design a new arena on the northern edge of the Central Business District. The arena is meant to attract "250,000 people into the City Link precinct each year and is the catalyst for the renewal of the whole precinct, re-establishing a connection between Perth's commercial and entertainment hubs."¹⁴

This iconic arena features state-of-the-art acoustics for concerts, a retractable roof for natural lighting, multi-functional spaces, corporate hospitality suites, cafes, and a maximum seating capacity of 15,500 spectators when arranged for tennis matches. Also, Perth Arena features sustainable techniques in its design by employing Western Australia's largest PV (solar) arrays on the roof to take advantage of the high number of days with sunshine per year. The iconic design has also captured the attention of West Australia's Premier, Colin Barnett, who claimed, "This is an iconic venue for Perth...the arena is a work of art."

[14] "Perth Arena." ARM Architecture. ARM Architecture. Web. 26 Mar 2013. <http://www.a-r-m.com.au/projects_PerthArena.html>.





New York City, New York, U.S.A.

City Population: 8,336,697 (2012)

Metro Population: 18,897,109 (2012)

Area: 468 square miles



4.04 **nike stadium** new york city, new york, u.s.a.

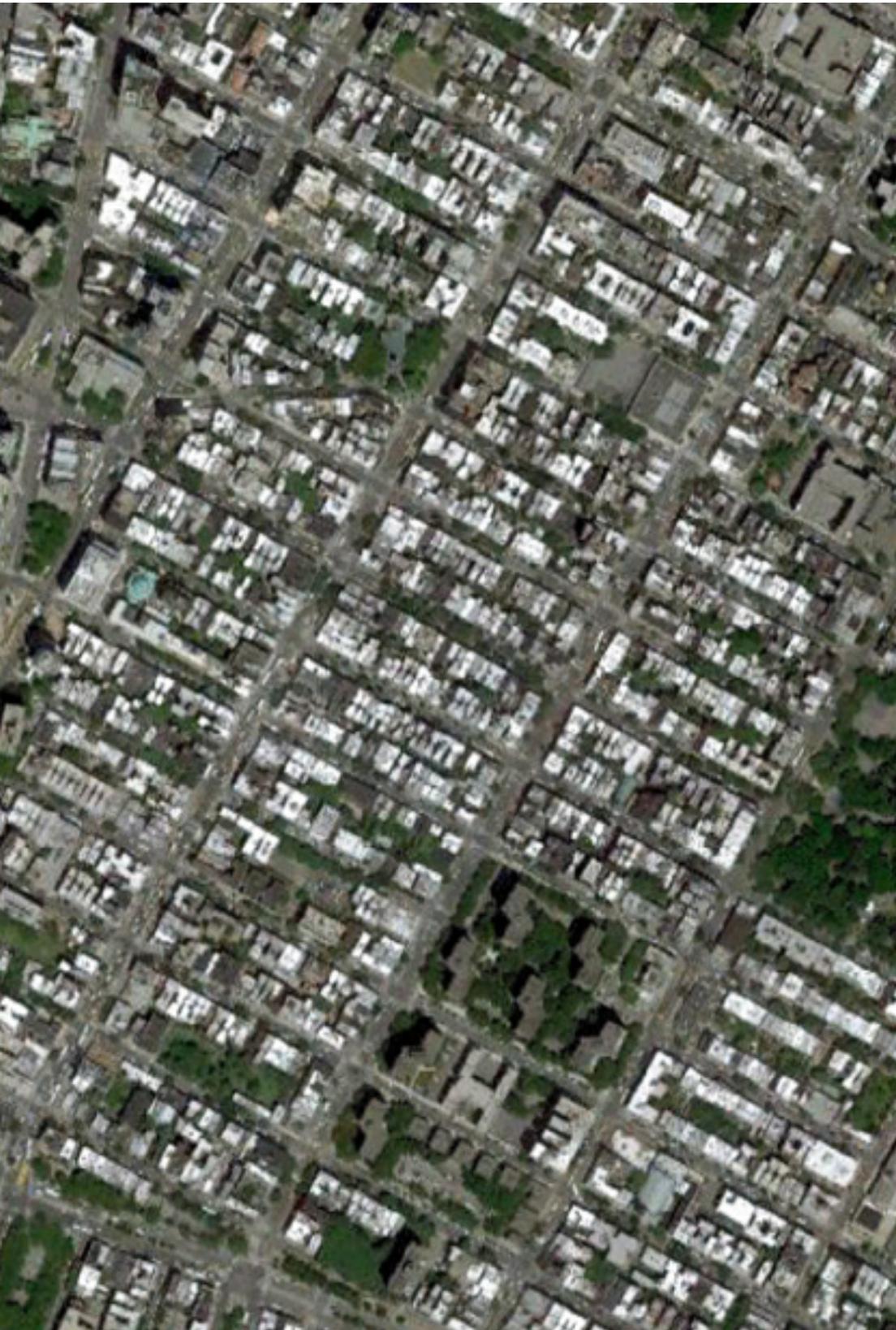
“True to its “art of performance” brand identity, Nike has created a new way to fuse sport and culture, installing venues focused on creativity issues that used sport as an inspiration.”¹⁵ With each store, Nike creates an environment that puts less pressure on moving retail and turning a profit and focuses its efforts on experimentalism and culturism. Every Nike Stadium features a rotating design/display/product that gets changed every couple months. In most cases, an architect or designer or artist will transform the space to feature an experiment on new technology, fashion, or art.

What really separates Nike Stadium from conventional retail stores is that Nike Stadium is flexible and open to the community’s needs in which it is located. These stores are multi-purpose destinations acting as “Stages for inspired performers, labs for innovative expressions, spaces where stories are told and others are written.”¹⁶ In the New York City store, the furniture can be pushed against the walls, transforming it into a late night yoga studio or a meeting place for local running clubs.

Since its opening in 2010, Nike Stadium in New York City has become a social hub for events, lectures, and retail space that has been fully embraced by the No-Lita neighborhood and visitors wanting to experience the next generation of retail.

[15, 16] “Nike Stadium.” Santoria Comunicazione. Santoria, n.d. Web. 27 Mar 2013. <<http://santoria.com/projects/nike-stadium/>>.

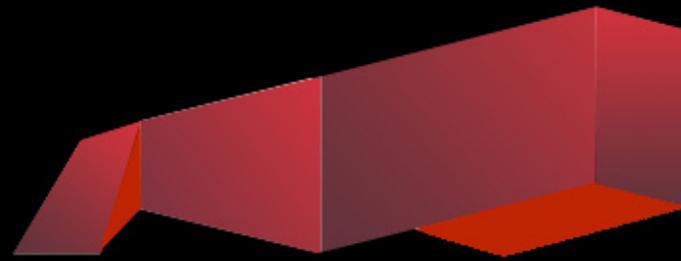




"By building an open-ended, relationship-oriented culture that fosters sensitivity, understanding, and a creative questioning of the status quo, an architecture informed by market and place encompasses a larger social and cultural context through dialogue, both internally and externally."

Anna Klingmann, Brandscaapes

ARCHITECTURE



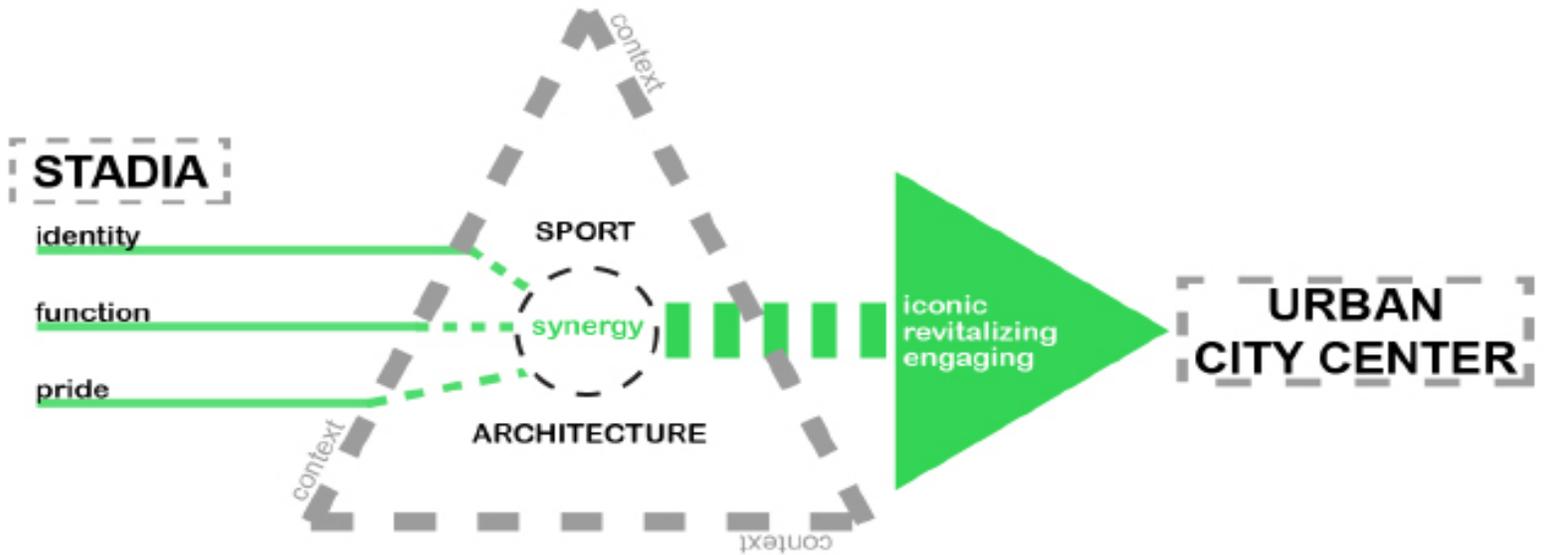
KALAMAZOO
ARENA

5.01_{proposal}

The proposal for my thesis investigation centers around the idea of using sports as an urban regenerator or economic and social catalyst for the city of Kalamazoo, Michigan. As a result from my investigations and research, this project aims to establish Kalamazoo as a preeminent entertainment destination. My response to this was to develop:

1. Become a social hub and economic catalyst for the Central Business District to leverage the city to attract premier sports teams and entertainers;
2. Capture a market in consumer spending that is currently lacking or non-existent by incorporating retail stores and restaurants that compliment and benefit from existing establishments in the city;
3. Engage the community by incorporating pop-up spaces that are flexible to accommodate a wide range of activities and events;
4. Provide residential components to allow more residents to live closer to where they work and play in the downtown area.

The resultant of these responses transformed an under-utilized surface parking lot on the northwestern edge of the Central Business District into a microcosm of entertainment, commercial, and residential opportunities.



SPORTS + ARCHITECTURE PROGRAM

- 1// MULTI-FUNCTIONAL ARENA**
basketball // hockey // concerts // conventions // events
- 2// ENTERTAINMENT DESTINATION**
restaurants // bars // clubs
- 3// DOWNTOWN CATALYST**
business incubator // residential units

5.02_{program}

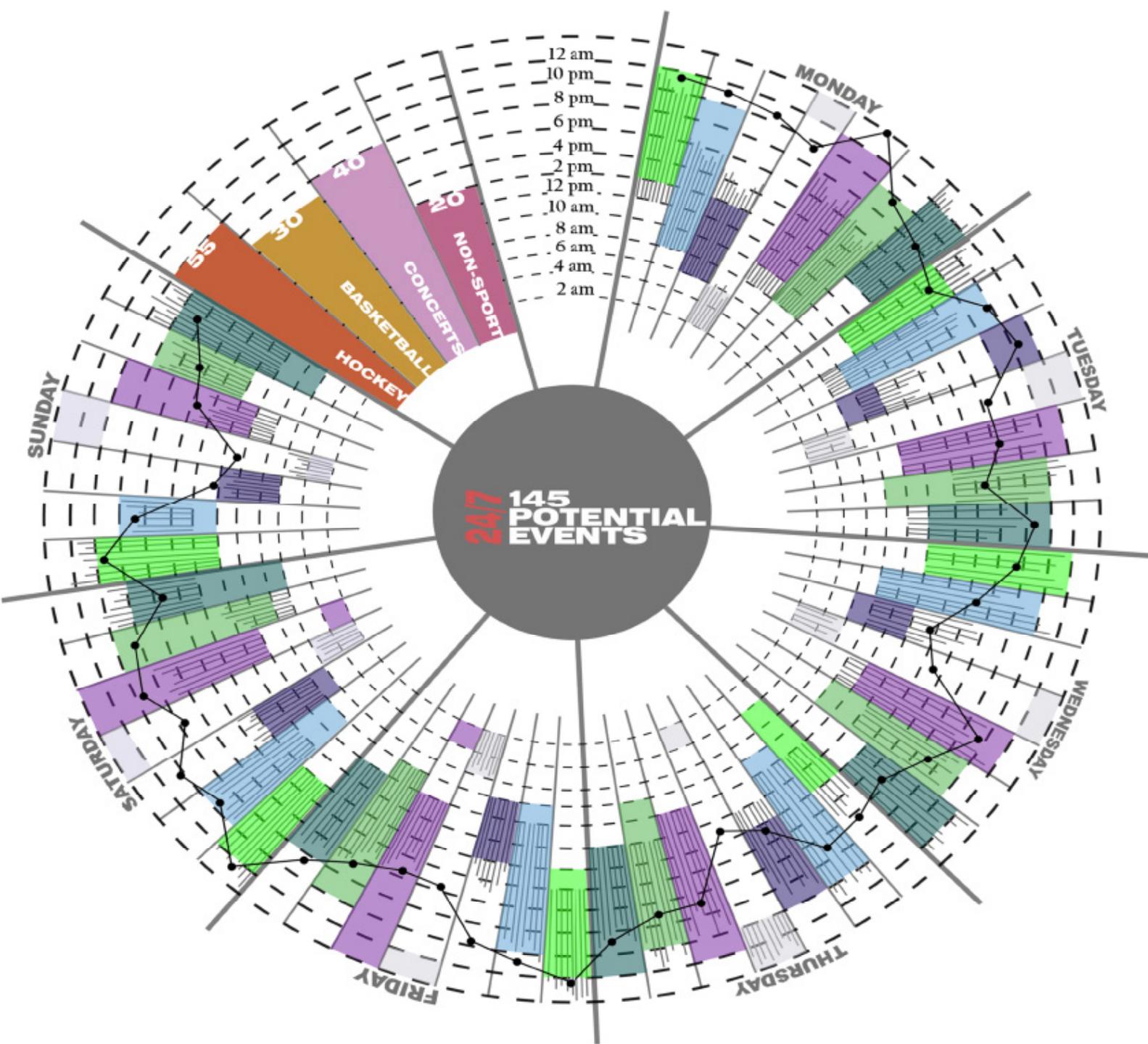
In terms of a conceptual programmatic design for the Kalamazoo Arena, I have researched and included multiplicities that will enhance the overall experience of the city. My concept for a multi-functional arena is a catalyst for a variety of amenities that do not compete with the existing retail and restaurant facilities within the city center, but rather reinforces Kalamazoo's presence as a premier destination.

The arena will house sports, retail, residential, community events, and recreational opportunities in a synergy that benefits the users and the city. The Kalamazoo Arena is meant to serve as an urban activator with a reversed-inward looking focus.

The hybrid program allows the arena to be a microcosm where social interaction and social control go hand-in-hand. These programs, and their interactions are interrelationships will allow the arena complex to act as a social condenser and attractor, fostering varied activities for sporting and non-sporting people at every hour of the day.

Spectator Facilities					
	Space	Room	Quantity	SF	Total
1.1	Circulation	Ticket Sales & Lobby	1	3,500	3,500
		Public Stairs	4	1,500	6,000
1.2	Public Toilets	Men's	4	850	3,400
		Women's	4	1,000	4,000
		Family	2	100	200
1.3	Seating	General Seating	7,500	6	45,000
		Barrier-Free/Disabled	75	20	1,500
		Total Seating	7,575		46,500
				3,500	
		Sub Total			110,100
Food / Merchandise					
2.1	Concession Stands	Food Stands	2	1,000	2,000
		Drink Stands	3	225	675
2.2	Merchandise Stands	Team Store	1	600	600
				3,500	
2.3	Storage	Misc. Storage	2	1,000	2,000
		Sub Total			5,275
Media Facilities					
3.1	Broadcasting	T.V./Radio Booths	1	250	250
3.2	Media Support	Press Box	1	1,000	1,000
		Sub Total			1,250
Player Facilities					
4.1	Home Team	Locker Room	1	1,500	1,500
		Shower Room	1	400	400
		Equipment Room	1	800	800
		Coach's Office	1	500	500
		Laundry Room	1	200	200
4.2	Visiting Team	Locker Room	2	1,000	2,000
		Shower Room	2	400	800
4.3	Multi-Use	Locker Room	2	1,000	2,000
		Shower Room	2	400	800
4.4	Officials/Stars	Locker Room	2	200	400
		Shower Room	2	150	300
4.5	Floor Area	Arena Floor	1	19,550	19,550
		Sub Total			29,250

Event Support					
	Space	Room	Quantity	SF	Total
5.1	Facility Admin.	Reception	1	500	500
		Offices	4	120	480
		Storage/Copy	1	250	250
		Conference	2	200	400
5.2	Loading/Storage	Loading Docks	1	3,000	3,000
		Staging	1	3,000	3,000
		Event Storage	1	4,000	4,000
		Trash Room	1	1,200	1,200
5.3	Operations	Operations Supervisor	1	120	120
		Productions Office	2	300	300
		Janitor Closets	8	100	800
		Housekeeping	1	1,000	1,000
5.4	Security	Security Office	1	750	750
5.5	First-Aid	Medical Room	1	300	300
5.6	Ticketing	Ticket Offices	2	120	240
		Work Room	2	300	600
5.7	Employee Facilities	Uniform/Lounge	2	450	900
Sub Total					17,840
Support Systems					
6.1	Building Services	Mechanical Room	2	1,000	2,000
		Electrical Room	1	1,000	1,000
		Fire Pump Room	1	500	500
		I.T. Room	1	500	500
6.2	A/V Equipment	Sound Control Room	1	850	850
6.3	Misc. Systems	Zamboni Room	1	1,200	1,200
Sub Total					6,050
Kalamazoo Arena Totals					
Prog. Arena. S.F.					169,765
Circulation Factor				.1	16,977
Total Prog. Arena S.F.					186,742
Total Site Area					288,000
Remaining Site Area					101,258



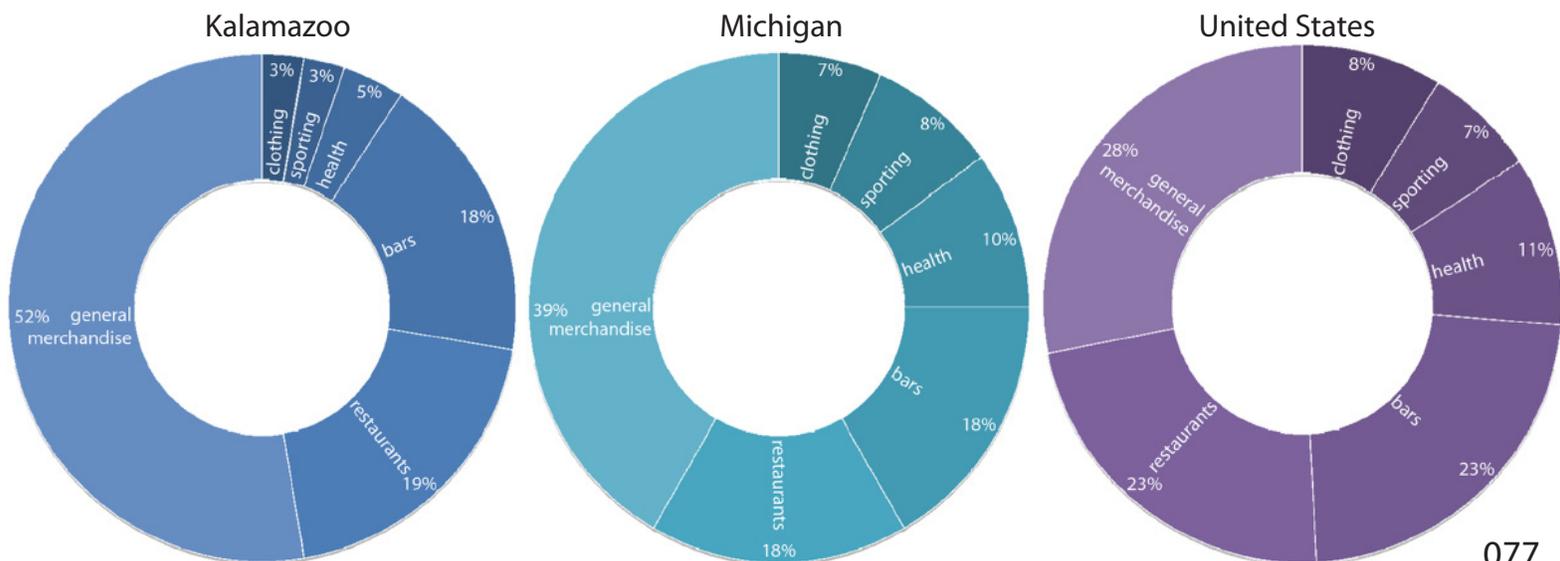
- Sport
- Retail
- Recreation
- Dance
- Food
- Exhibition
- Community

5.03_{planning}

An important aspect of this thesis project was to understand and identify the major stakeholders and for what reasons they are interested in the project becoming fully realized. The result of the “townhall meetings” then began to inform and dictate the planning and functional spaces of the Kalamazoo Arena facility. The user groups identified as ‘The Mayor’, “The Developer”, “The Local Business Owner”, “The Local Family”, and “The New Residents” all represented valuable input as to what they were wanting be added to the city from varying levels of involvement. The following graphic on the next two pages represents what these user groups would be interested in with regards to a new hybrid arena in Kalamazoo.

Opposite Left The multiplicity graph displays when the varying amenities of the hybrid Kalamazoo Arena will be operational at every hour of the day, every day of the week. It highlights 145 potential events that the arena can accommodate within a given year, which is comfortably in the range for a profitable facility.

Below The charts on this page represent consumer retail spending trends in the city of Kalamazoo, the state of Michigan, and the United States’ national average. As evident of these charts, technology, sporting good, and health sales are below both the Michigan and U.S. averages. Incorporating this data into the hybrid arena ensured the ‘wants’ and ‘needs’ of the residents would have local commercial opportunities that don’t currently exist.



TOWN HALL



The Mayor



The Developer



The Business Owner

Revitalized downtown core

New mixed-use building

More customers in the business

New arena to consolidate existing arenas and to attract more events & fans

Improved property values & high use commercial enterprises

Higher pedestrian traffic around the area of the businesses

New residents moving to Kalamazoo

Redevelopment of blighted & vacant lots

Improved sales

Increased sales in local shops, restaurants, bars, and hotels

New arena as the anchor & commercial businesses to supplement

Incentives to attract a new market of people

L M E E T I N G



The Local Family



The New Residents

New entertainment options

Healthy & safe lifestyle

Improved quality of life

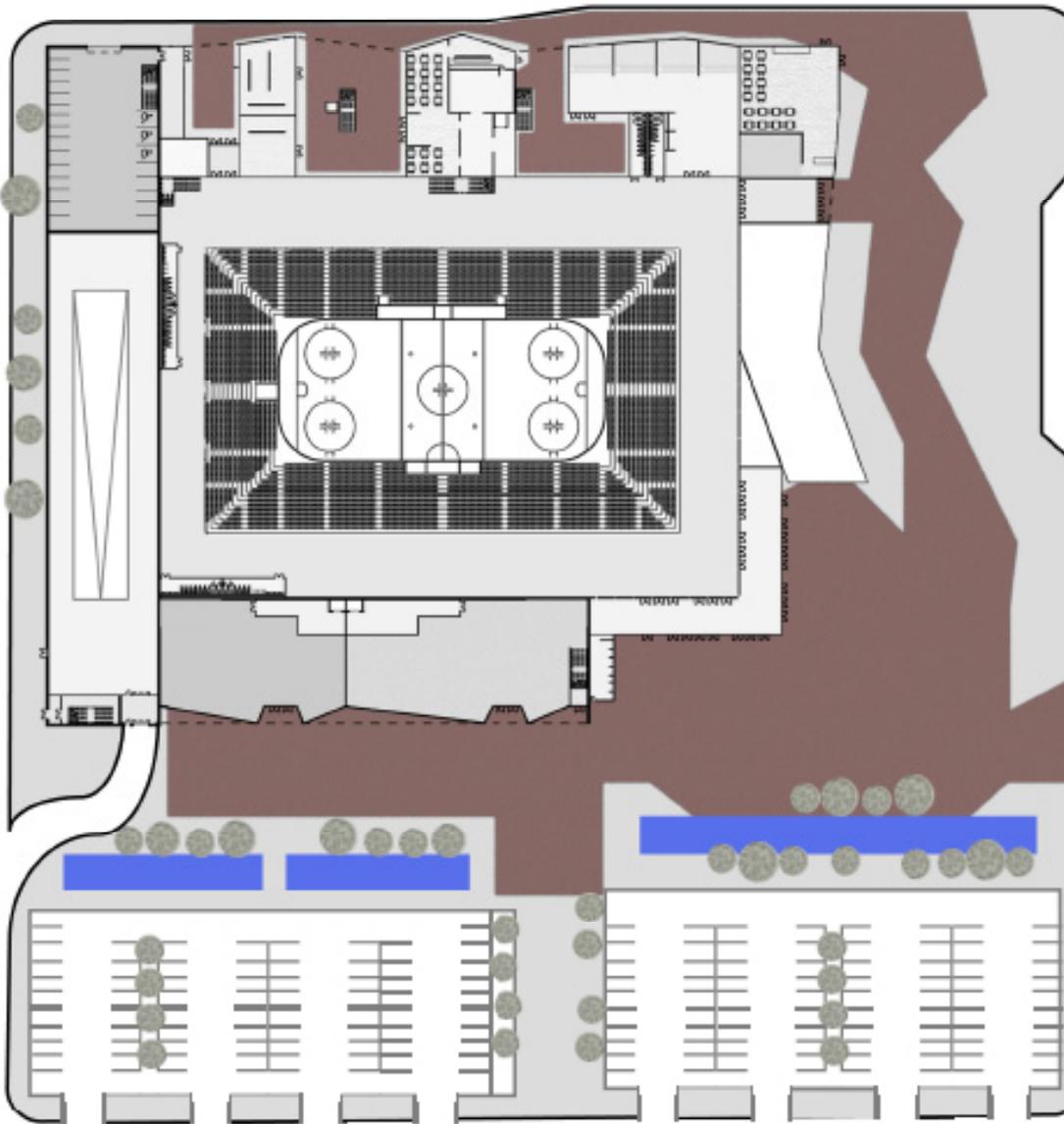
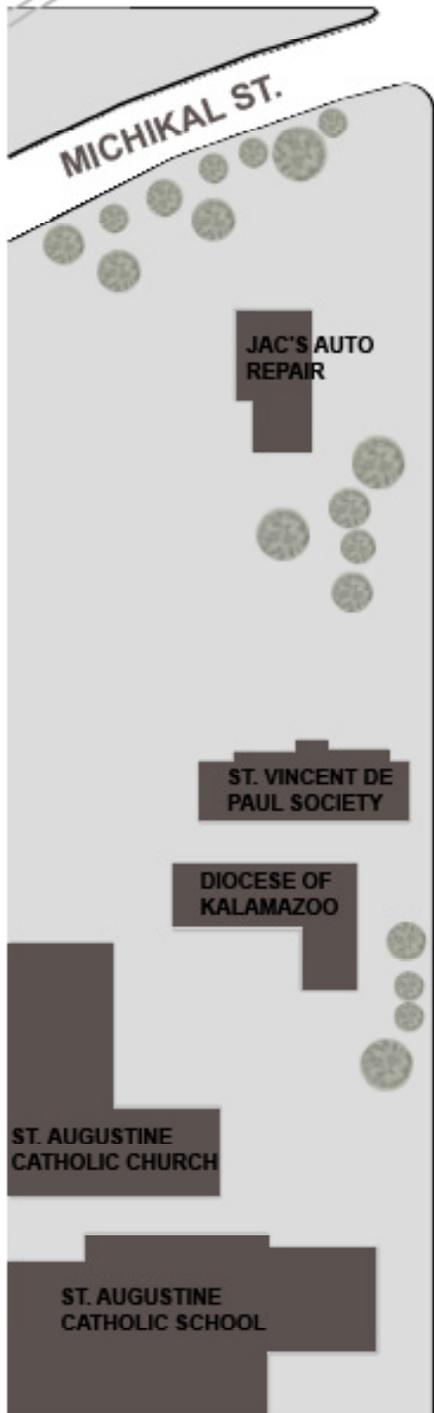
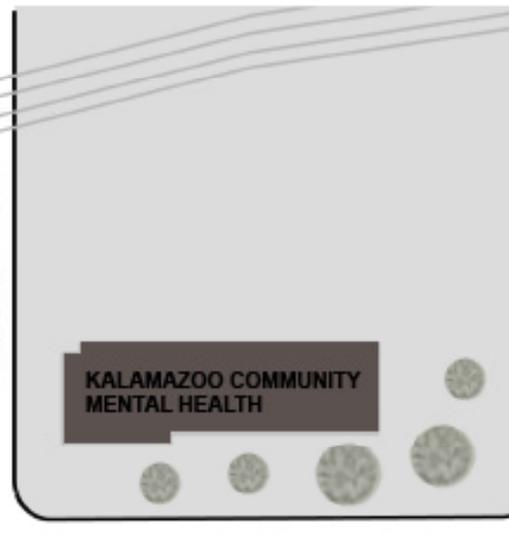
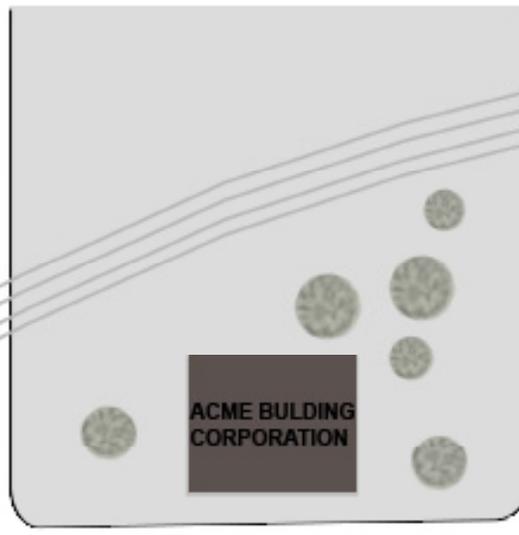
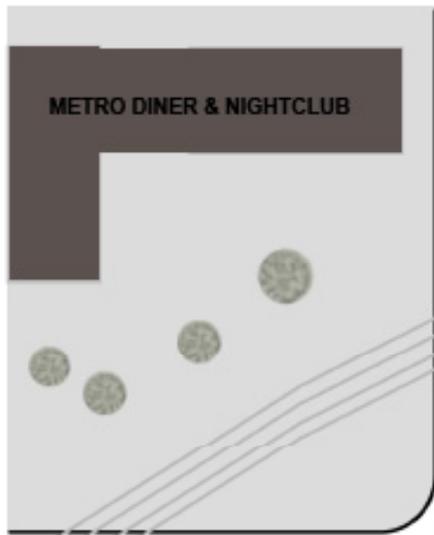
Technologically advanced event center

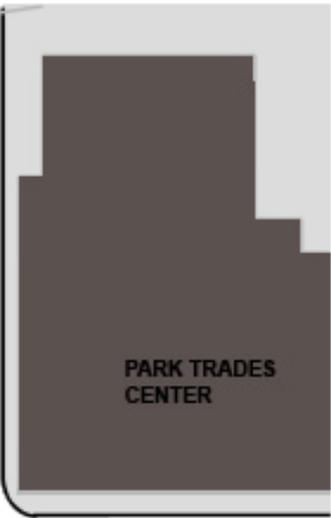
Active & hip lifestyle

Community engagement

Variety of experiences

Year-round entertainment





PARK TRADES CENTER

Left (site plan) The Kalamazoo Arena becomes more than just a sports arena. Through research on consumer spending trends in Kalamazoo it became apparent of what spaces should fill the peripheries of the facility.



OTTO KIHM TIRE & SERVICE

Consumer reports show that spending money on technology and sporting goods were lacking in the area. With considerate analysis, it was clear that Kalamazoo was losing out on capturing the residents business to other cities. By inserting an Apple store and Niketown to become the supplementary anchor shops to the sporting events, the demographic of technology and sporting good stores can reach its potential at this new and centrally located entertainment destination.

ELEANOR ST.

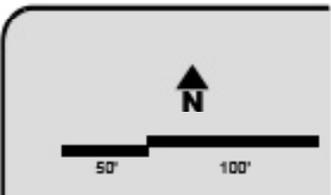
The public plaza located along Park Street is open and flexible to accommodate a wide use of activities from temporary public outdoor markets to skateboard street competitions. On-site parking is situated off of Water Street is acts as VIP and handicap parking on event days and patron parking on non-event days. The Apple store and Niketown are also located on the southern edge of the hybrid arena.



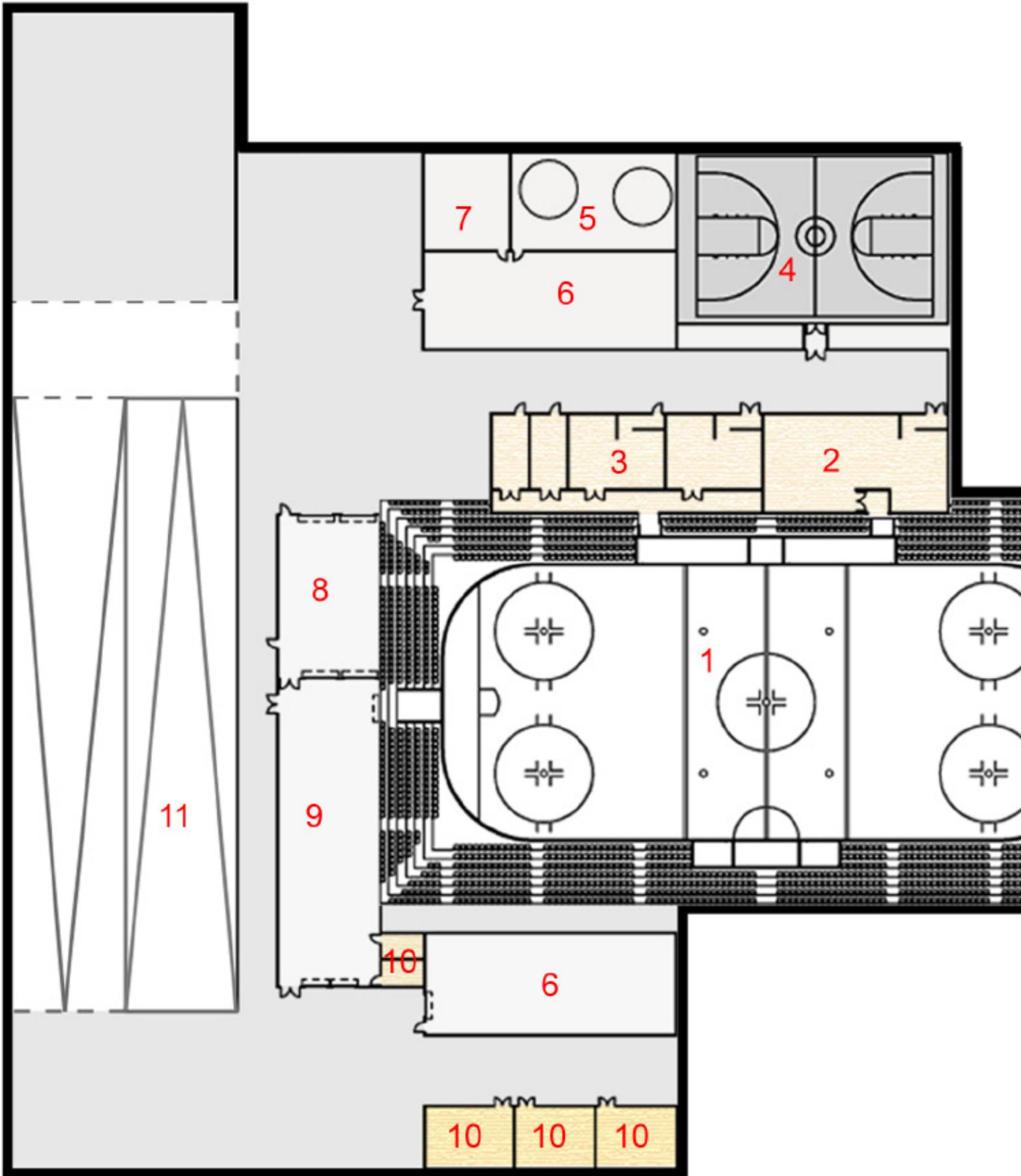
WEST MICHIGAN CANCER CENTER

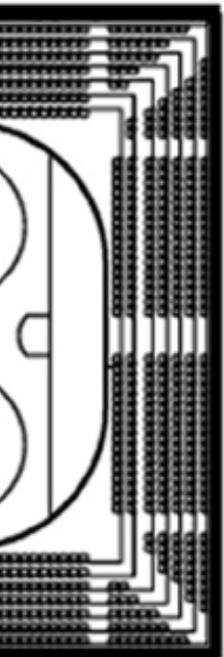
The west side of the site is reserved for delivery truck drop-off and resident parking for the 2nd and 3rd floor residents. The northern edge of the facility stretches out to the site boundary line and features an organic restaurant, coffee shop and pop-up shops.

WATER ST.



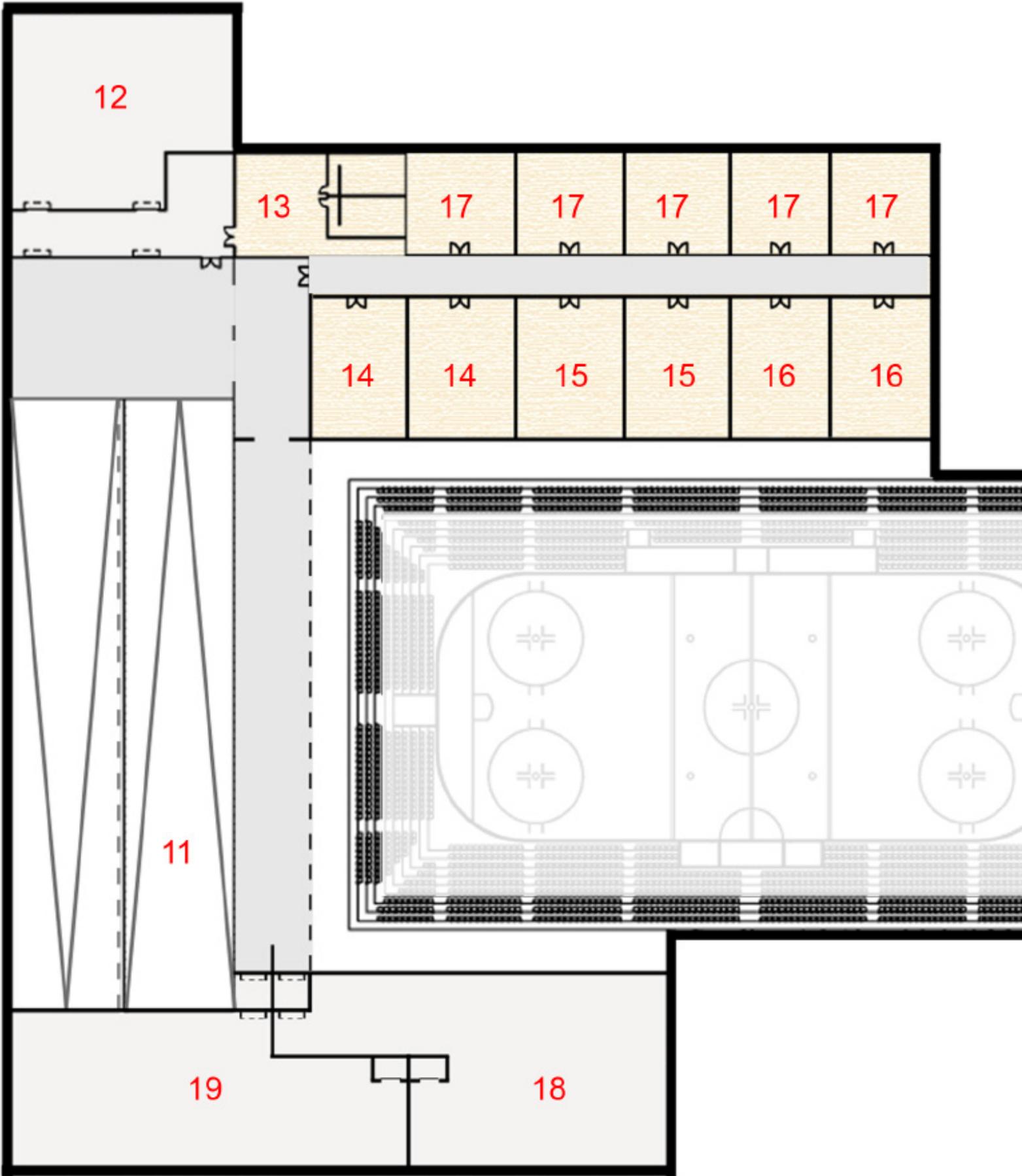
N. PARK ST.

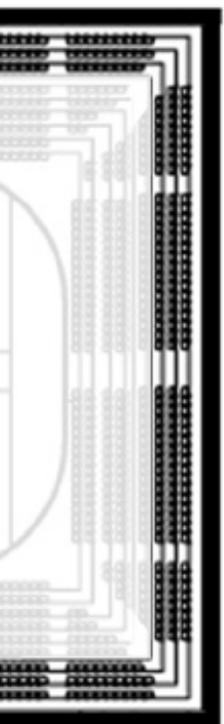




2 floor

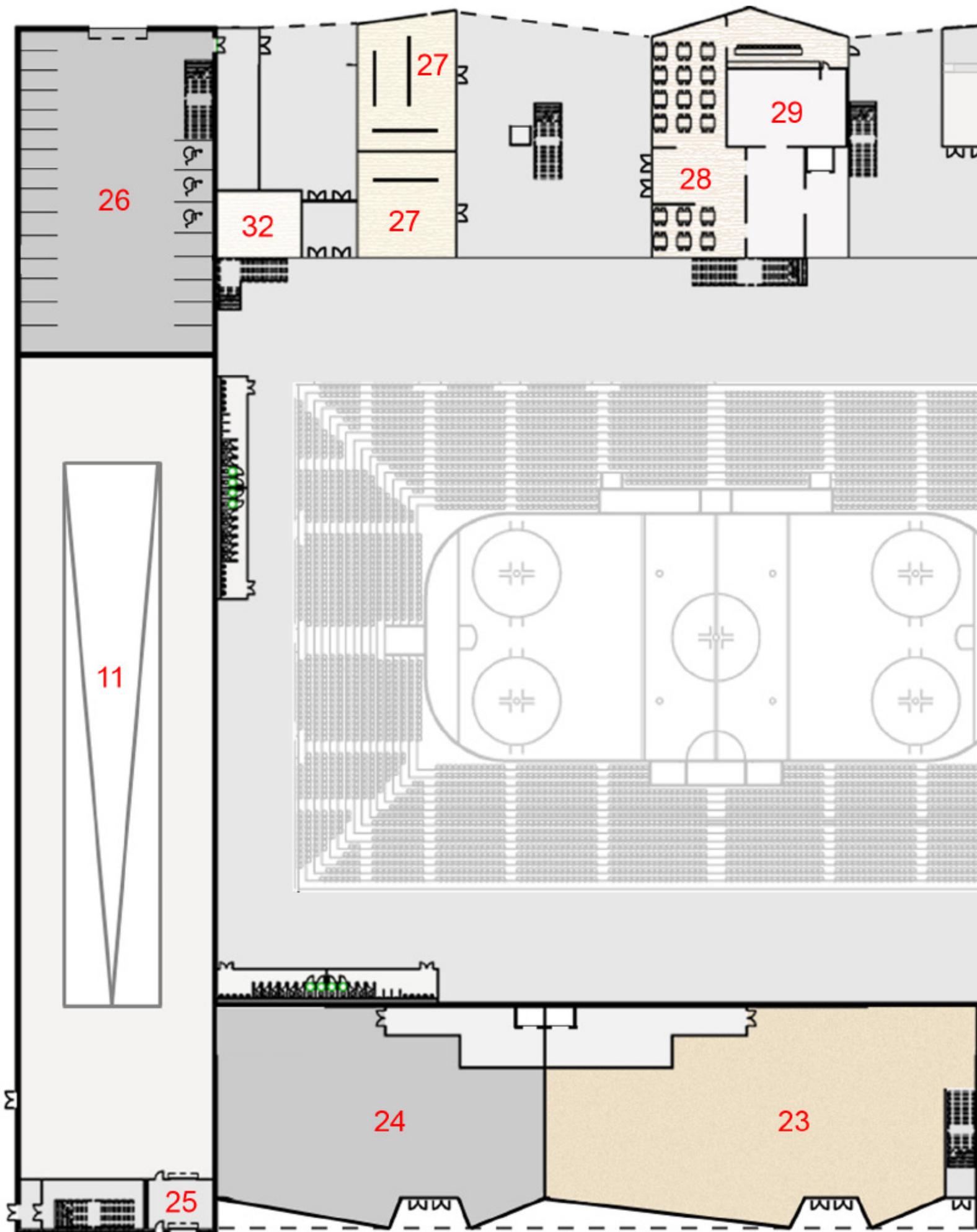
- 1 event floor
- 2 home team locker room
- 3 visiting locker room
- 4 practice court
- 5 water cisterns
- 6 mechanical room
- 7 fire pump room
- 8 zamboni room
- 9 event storage
- 10 office
- 11 service ramp

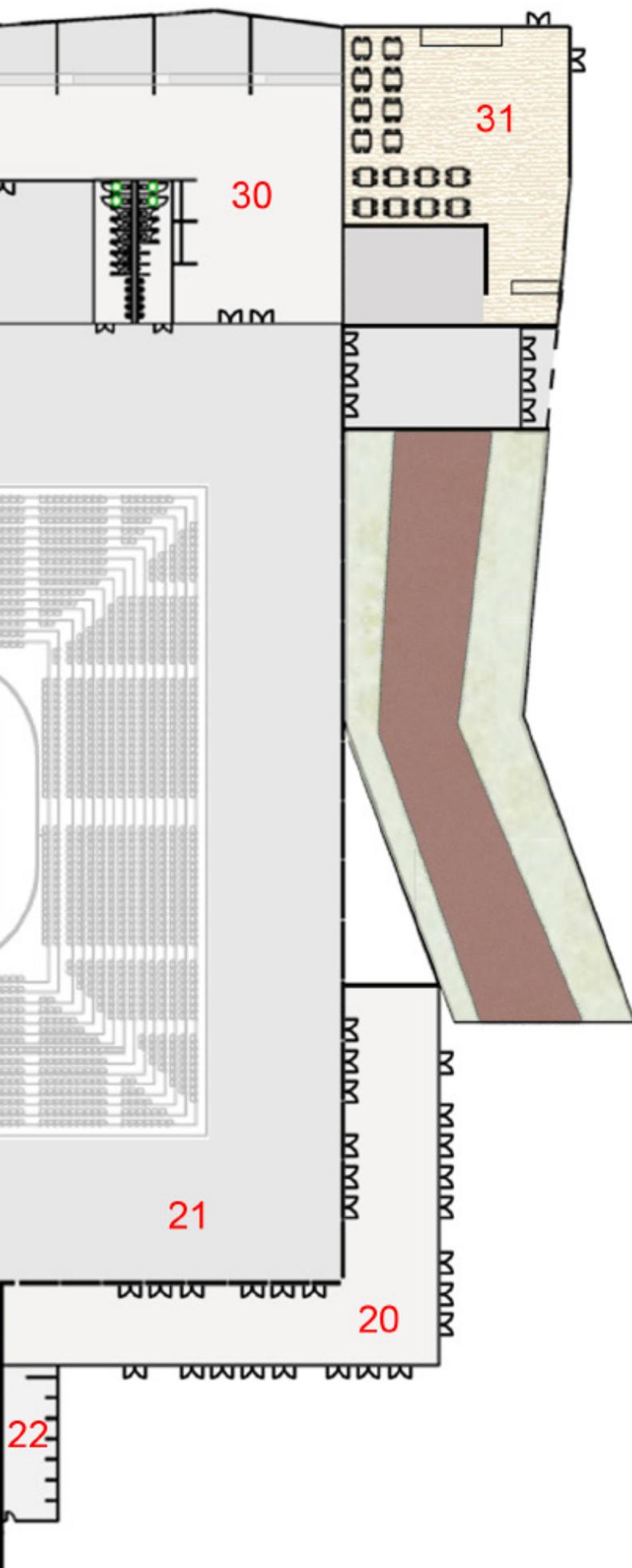




1 - floor

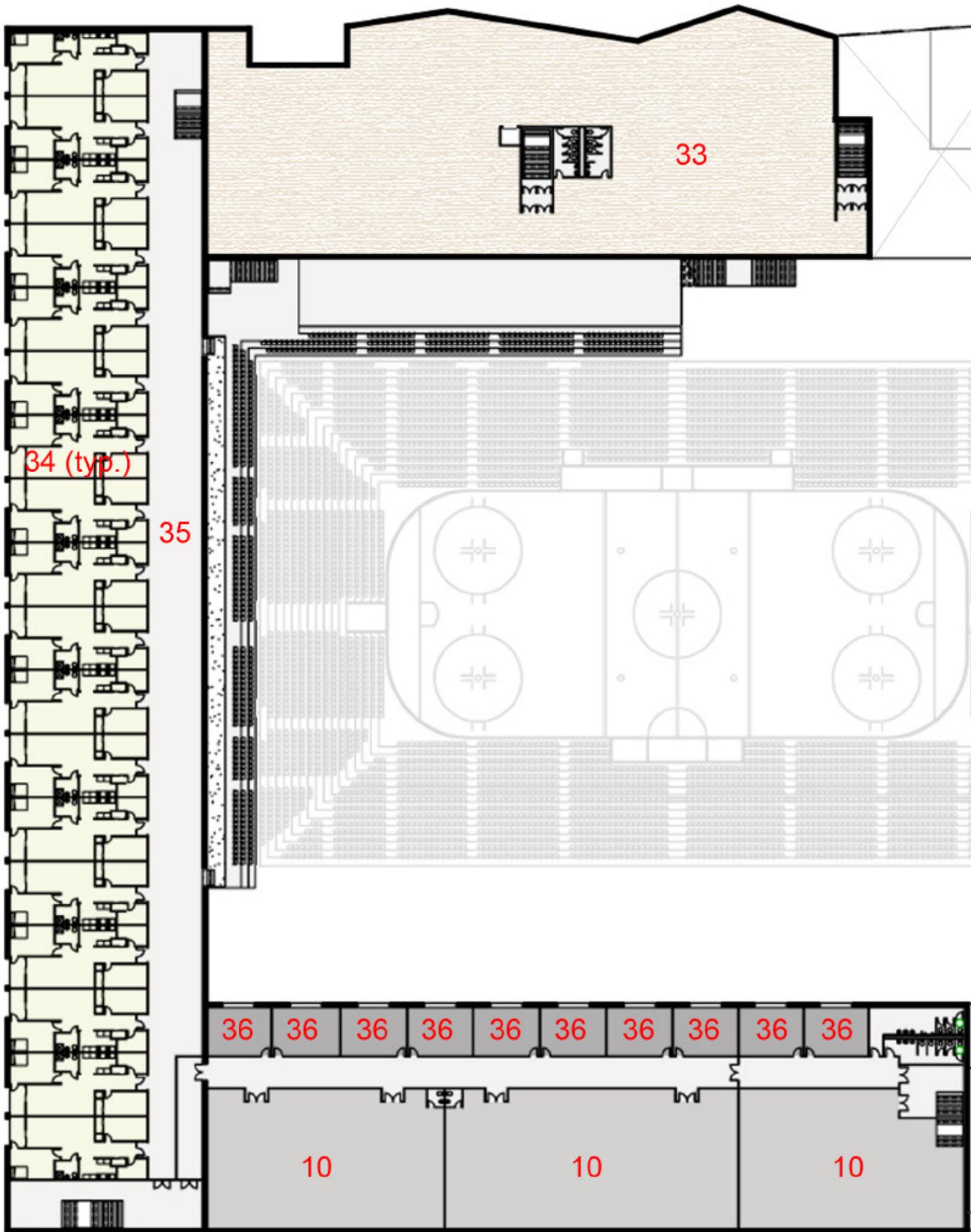
- 12 trash room
- 13 employee lounge
- 14 laundry room
- 15 event production
- 16 storage
- 17 facility support
- 18 niketown product storage
- 19 apple product storage

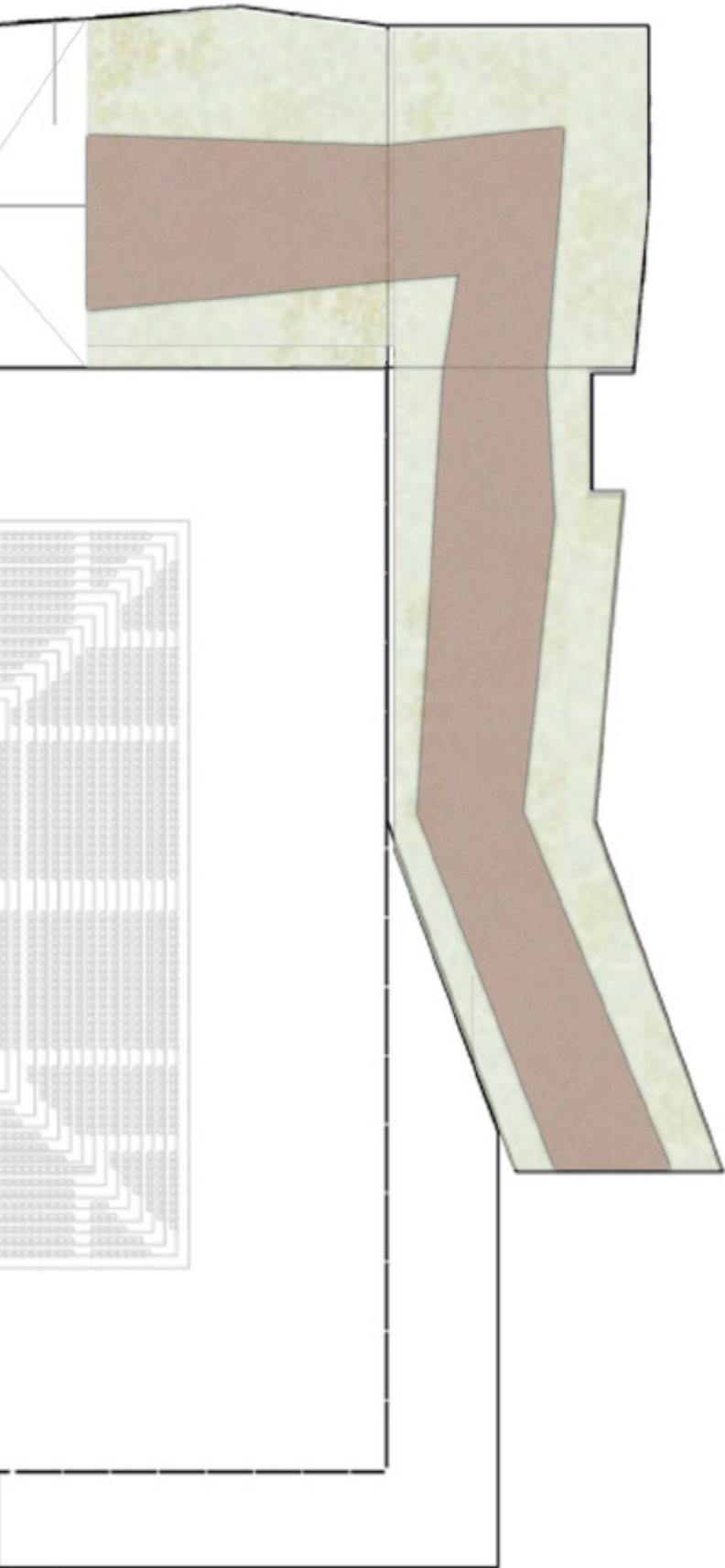




1 floor

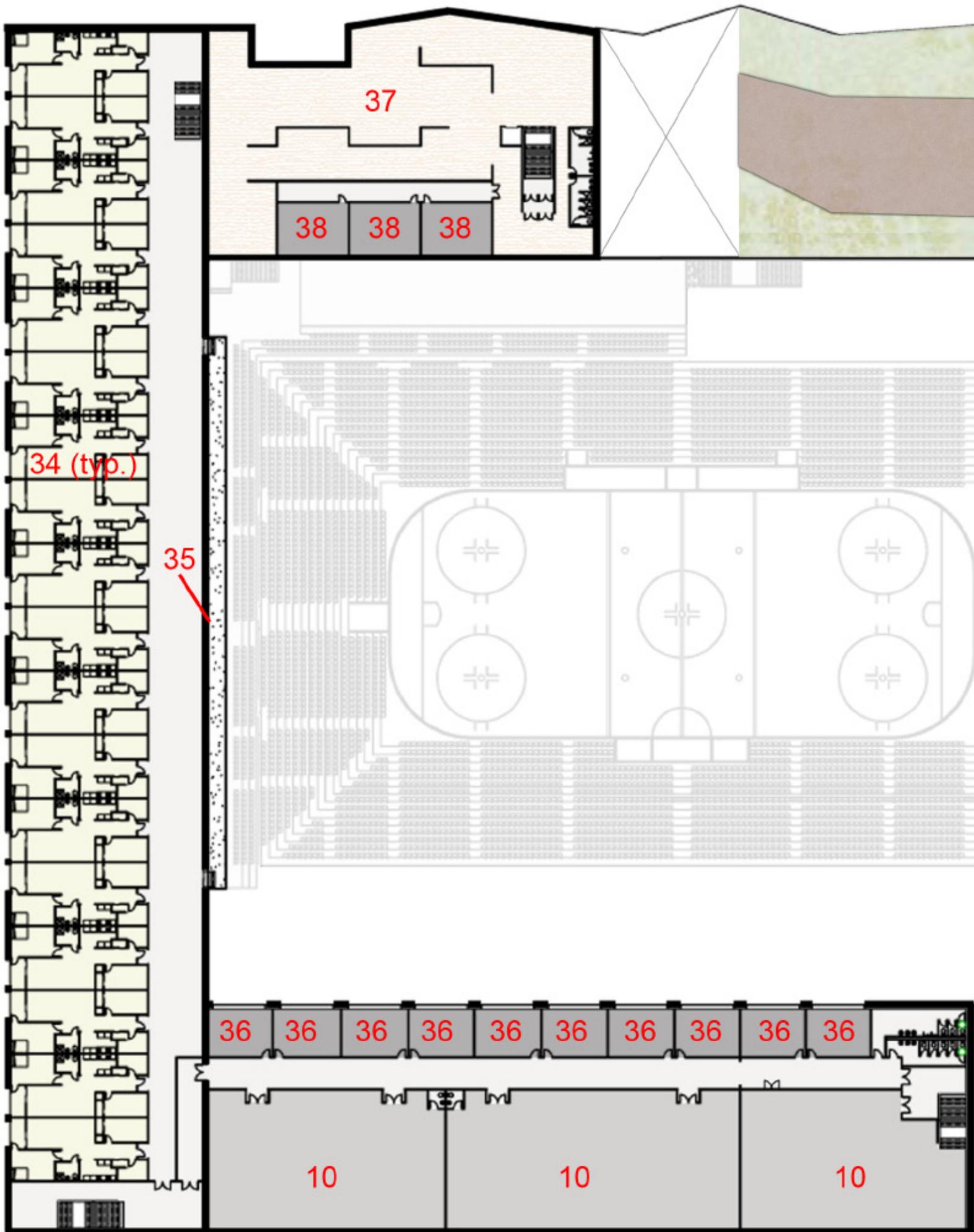
- 20 lobby
- 21 main concourse
- 22 ticket sales
- 23 niketown store
- 24 apple store
- 25 deliveries
- 26 resident parking
- 27 community space
- 28 organic restaurant
- 29 kitchen
- 30 concessions
- 31 coffee shop
- 32 facility security

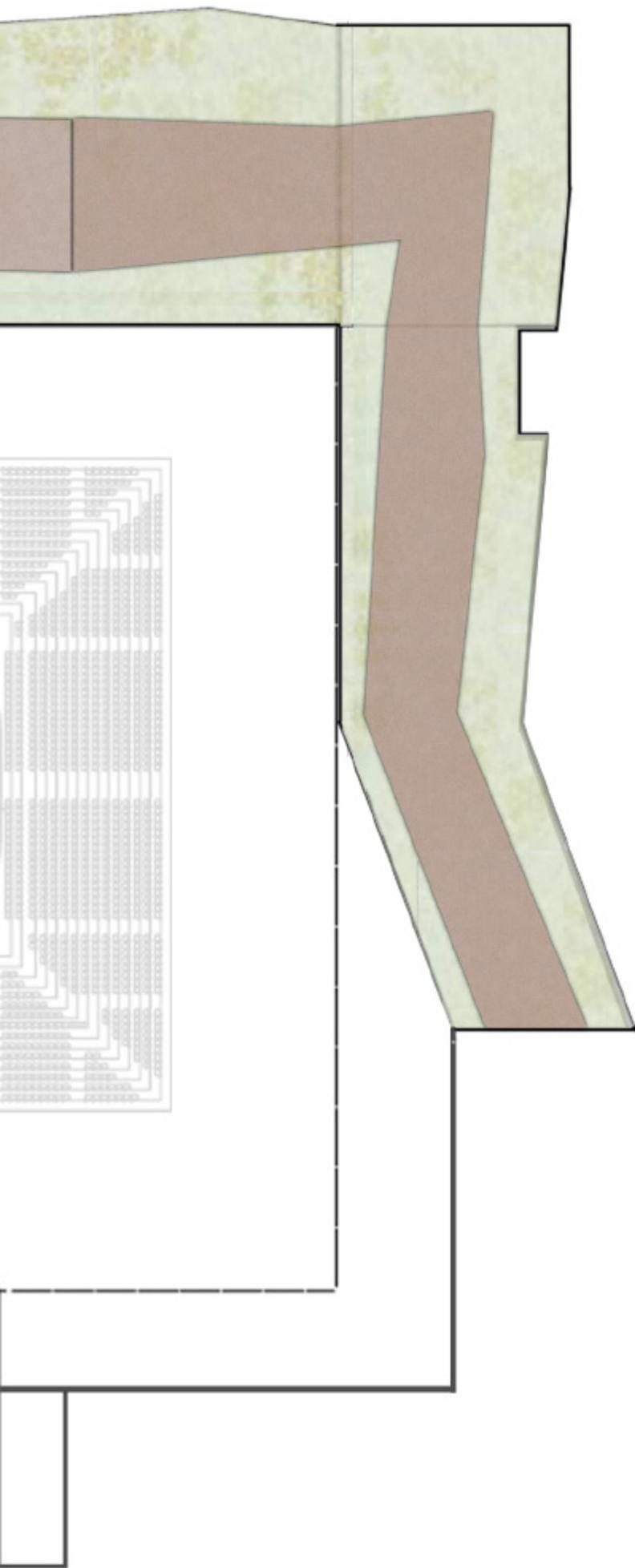




floor 2

- 33 book store
- 34 studio apartment
- 35 apartment viewing
- 36 luxury suite



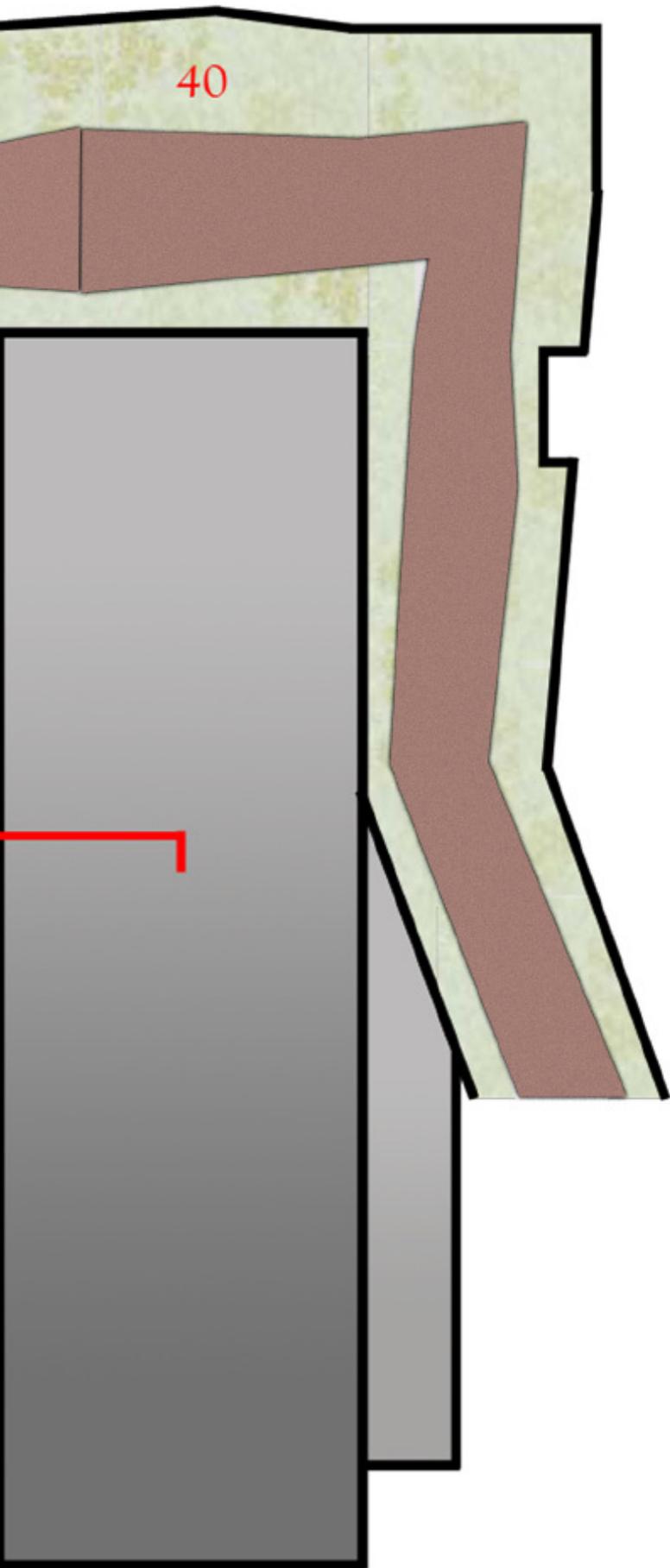


floor 3

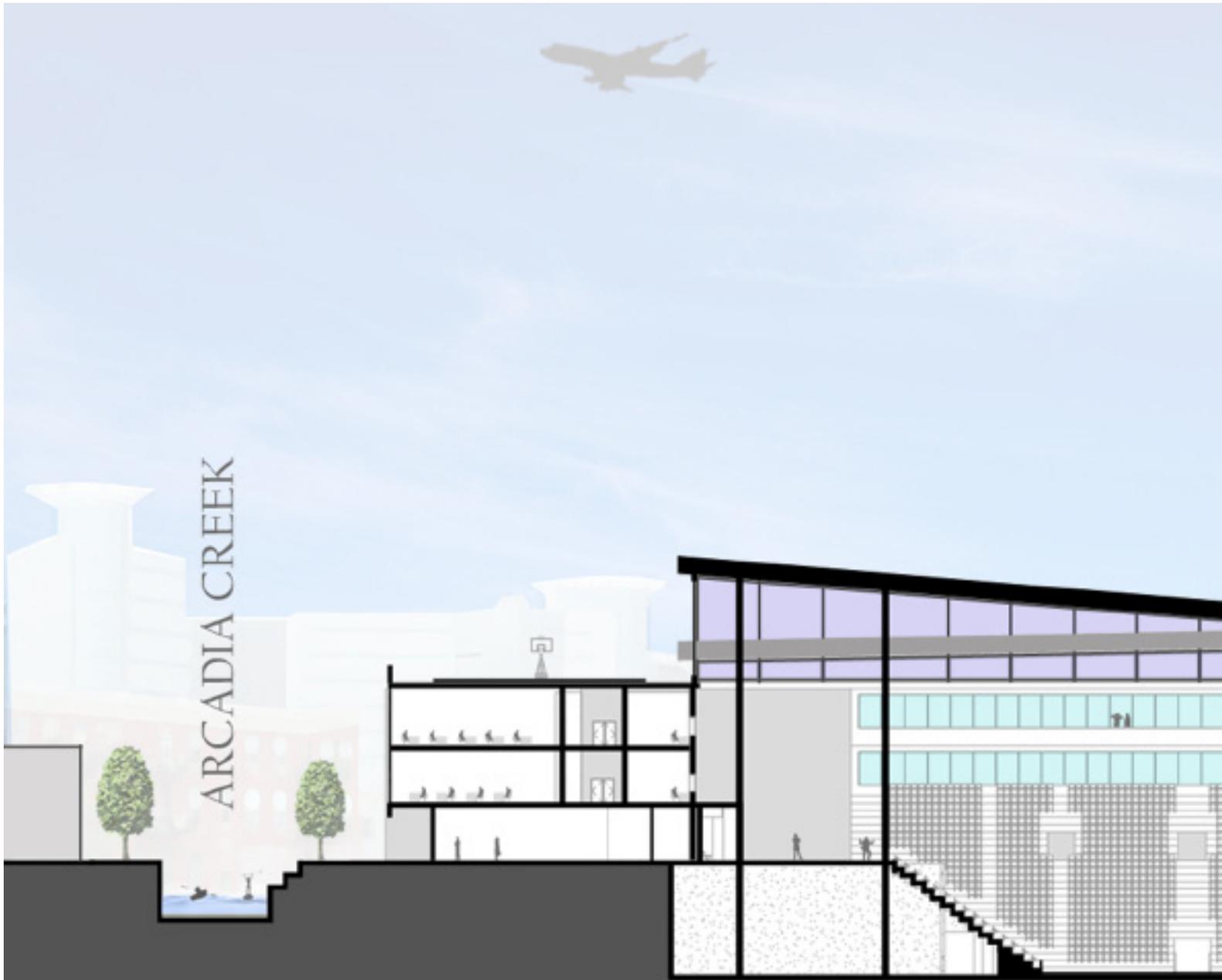
- 37 art gallery
- 38 press box



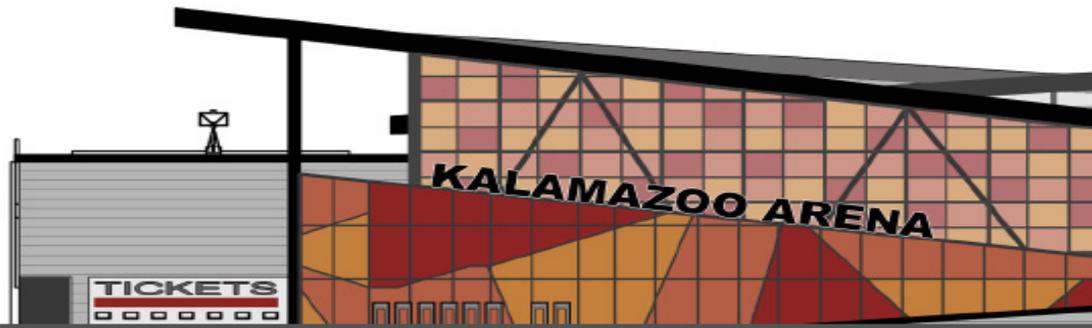
roof



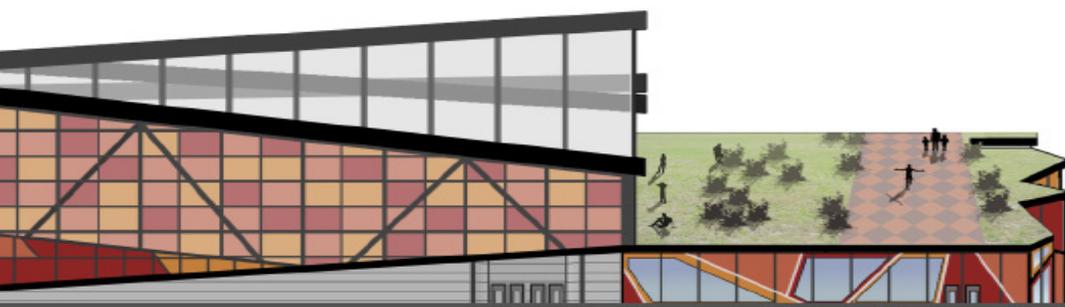
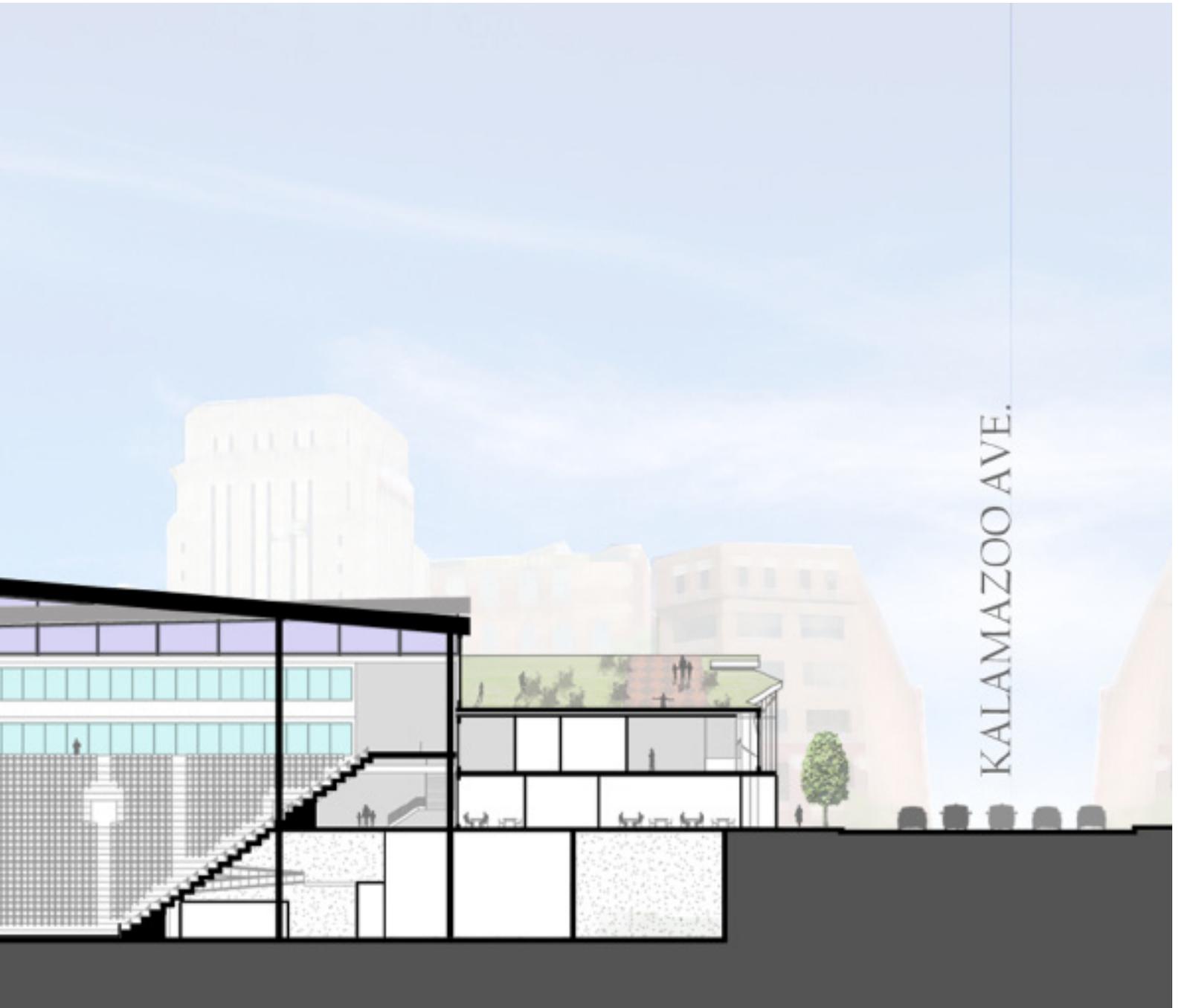
- 39 pedestrian roof path
- 40 sustainable roof
- 41 tennis courts
- 42 basketball courts
- 43 arena roof

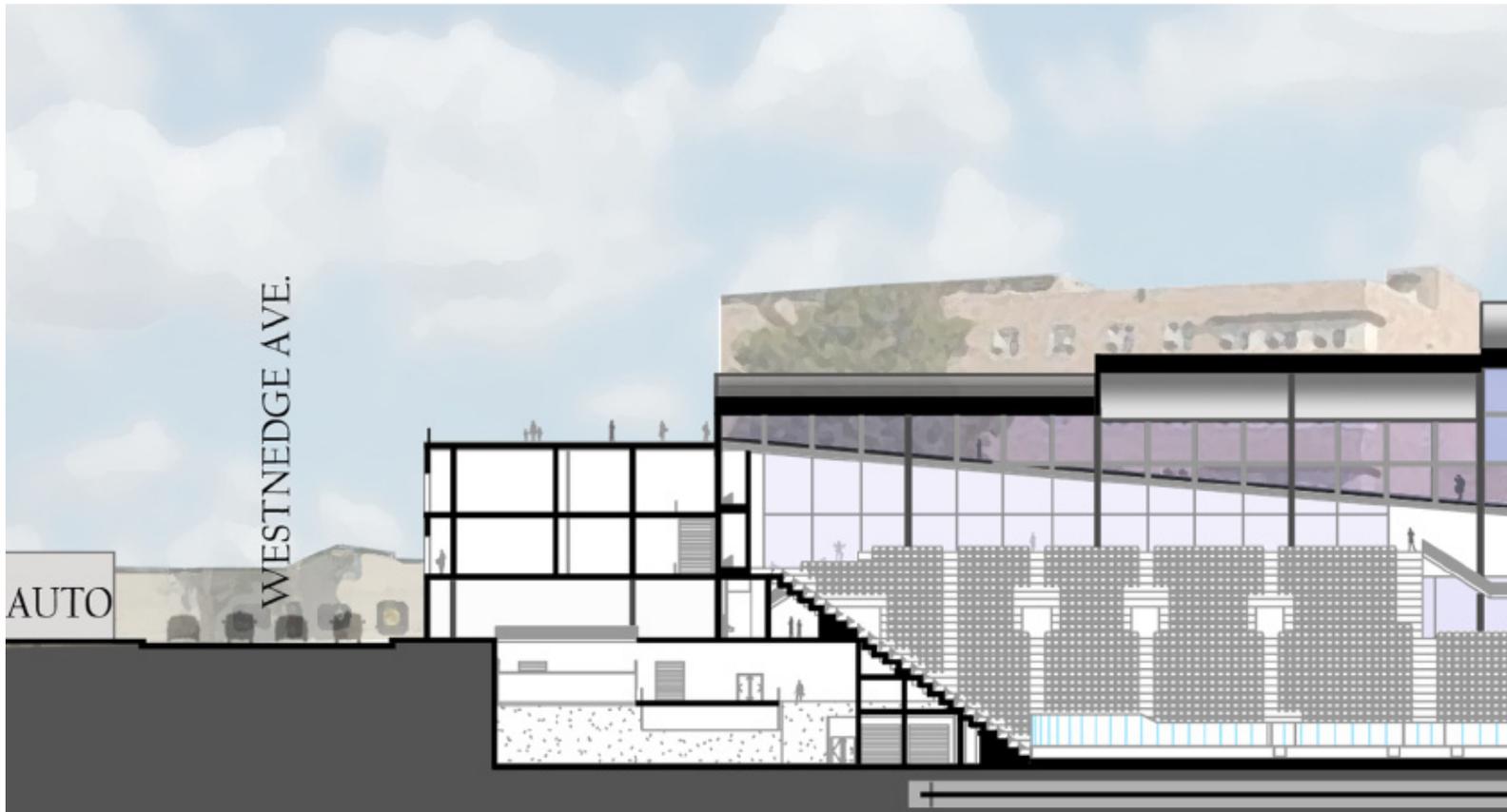


Section A

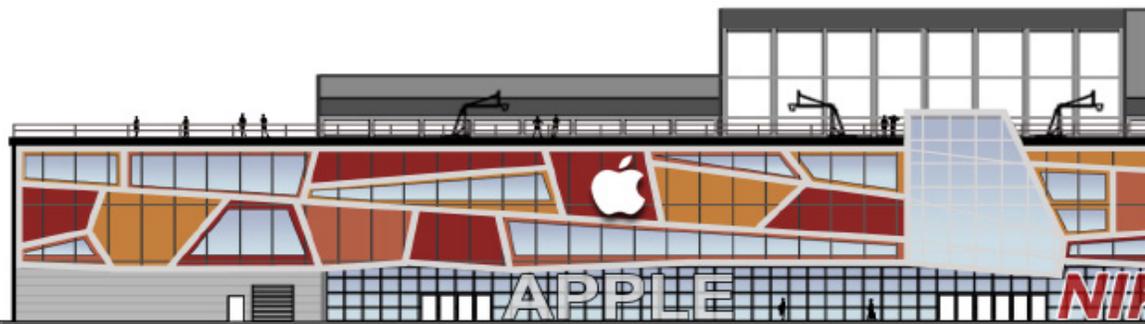


East Elevation

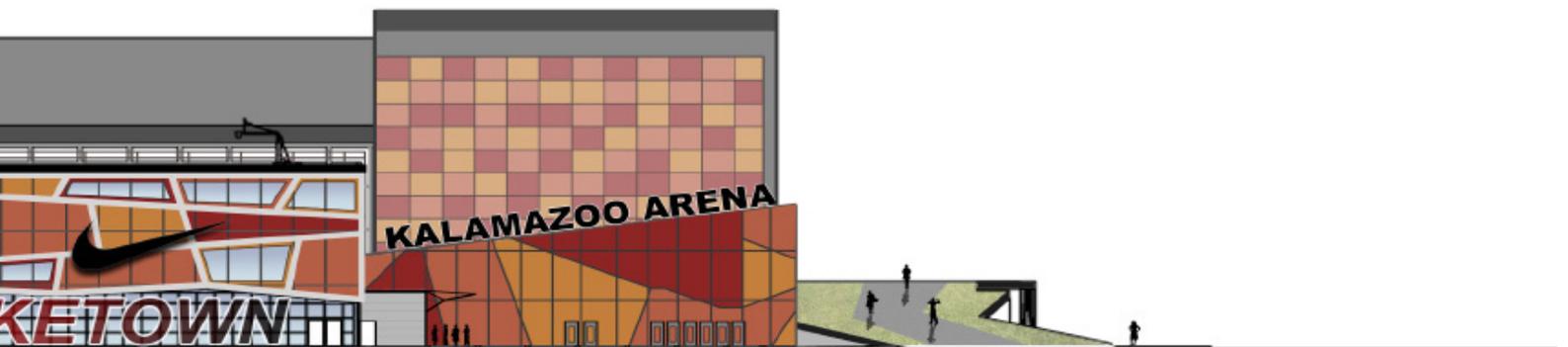


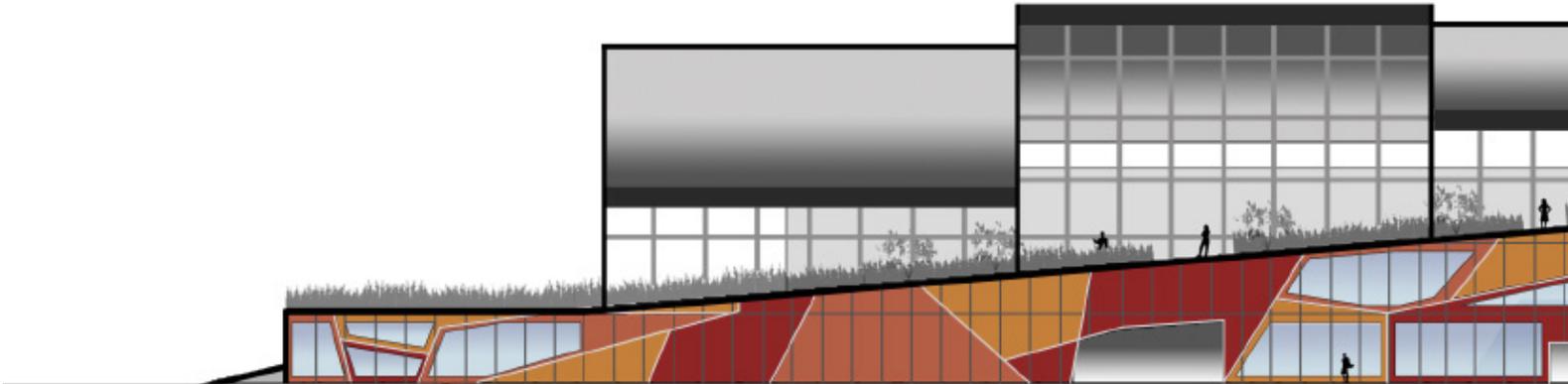
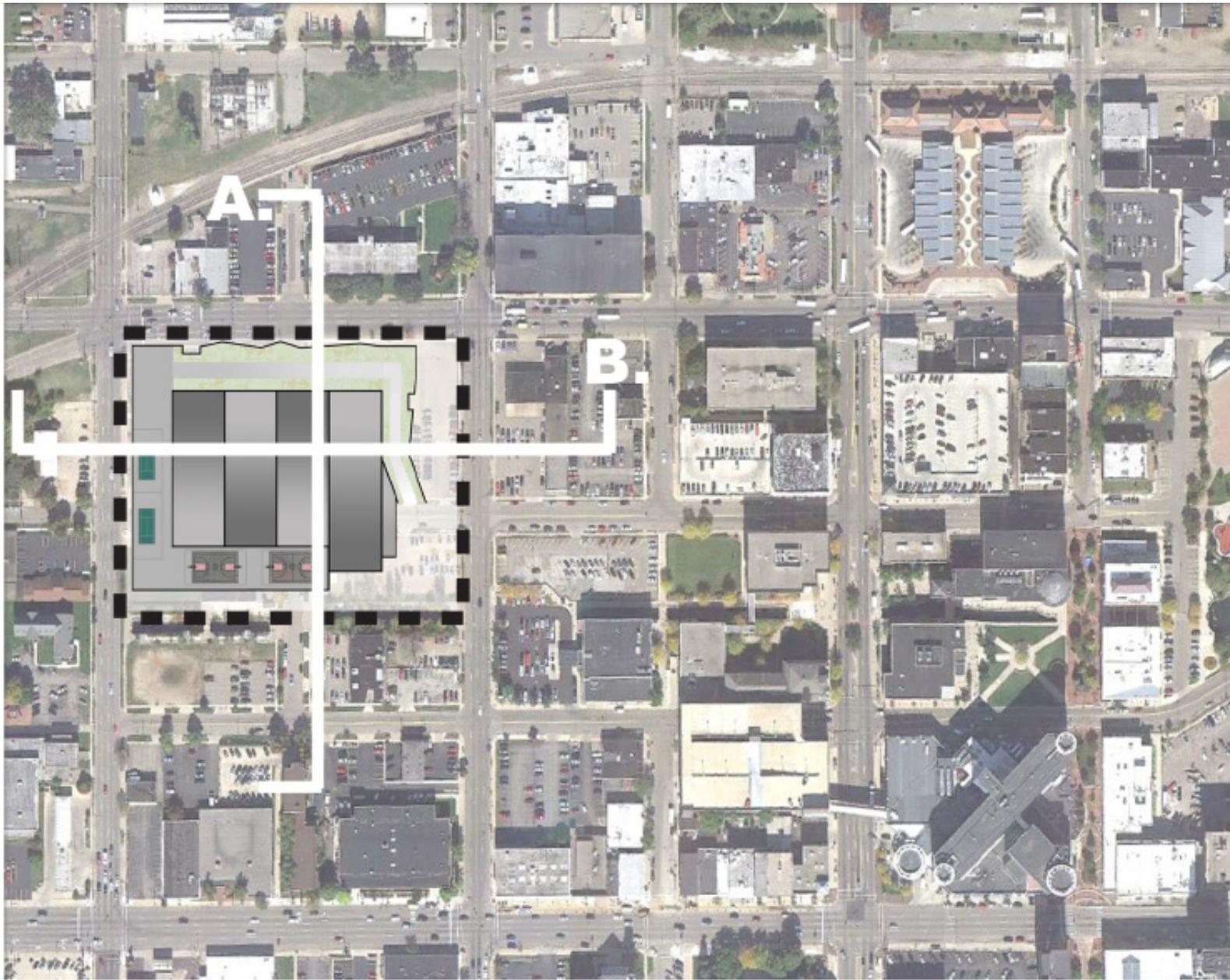


Section B

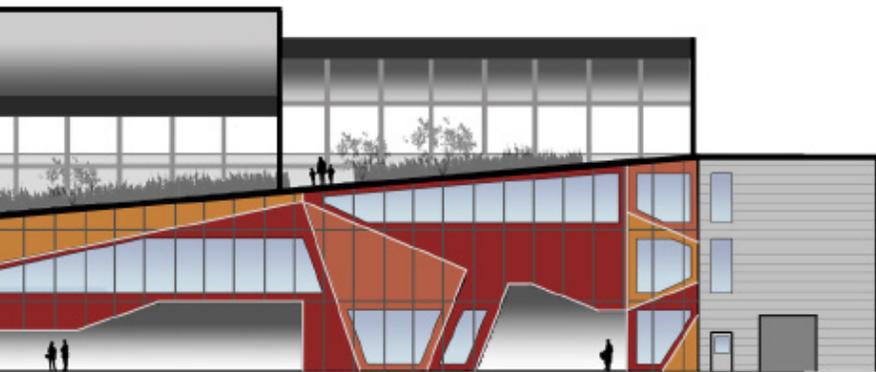


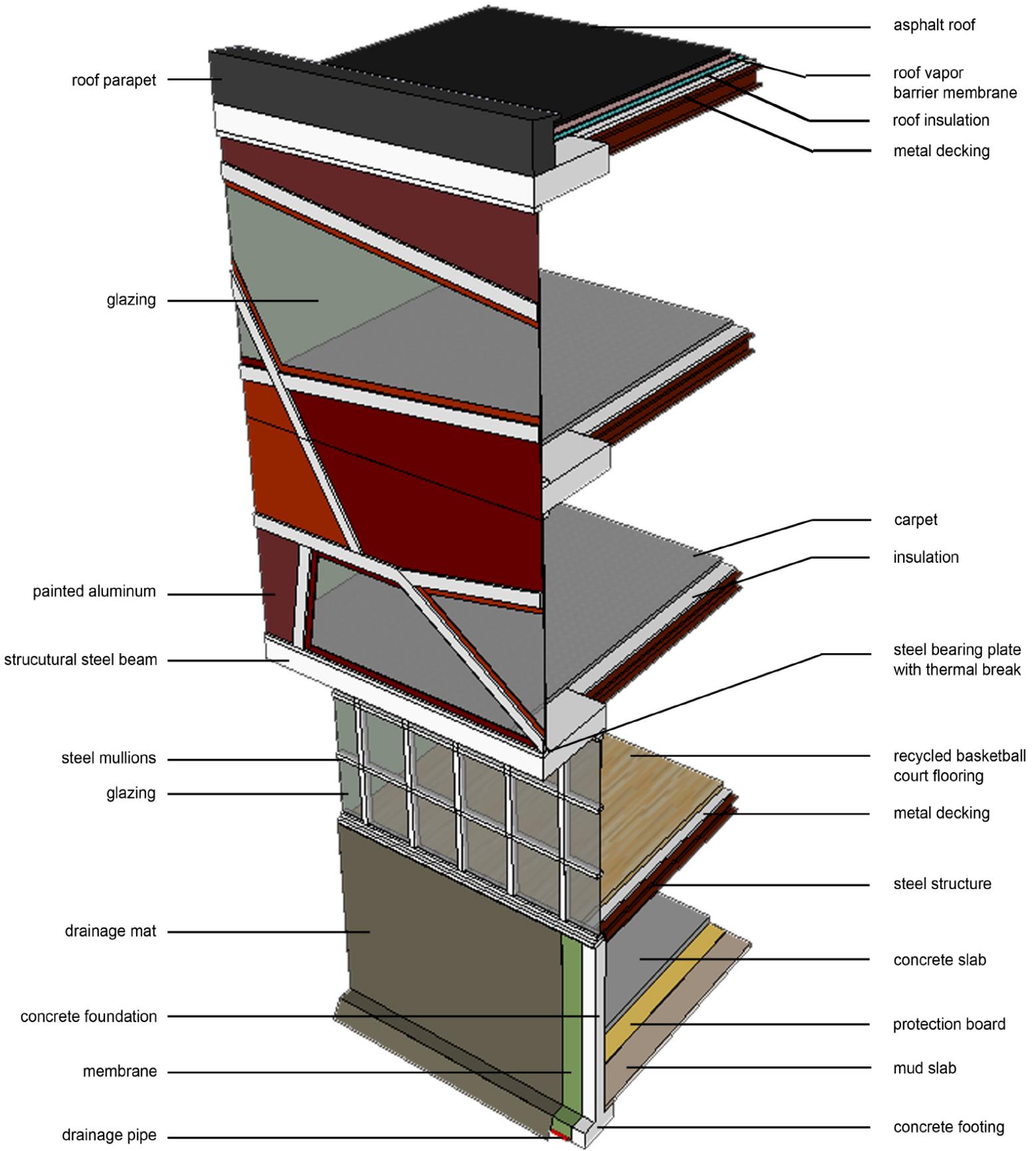
South Elevation





North Elevation





5.04_{technology}

Utilizing cutting edge technology, the Kalamazoo Arena takes advantage of various products and systems available. Some of the technology used on this thesis project are: switchable glass, rooftop solar panels, space frame trusses, sustainable roof technology, water cisterns for grey water use, and using recycled or rehabilitated materials.

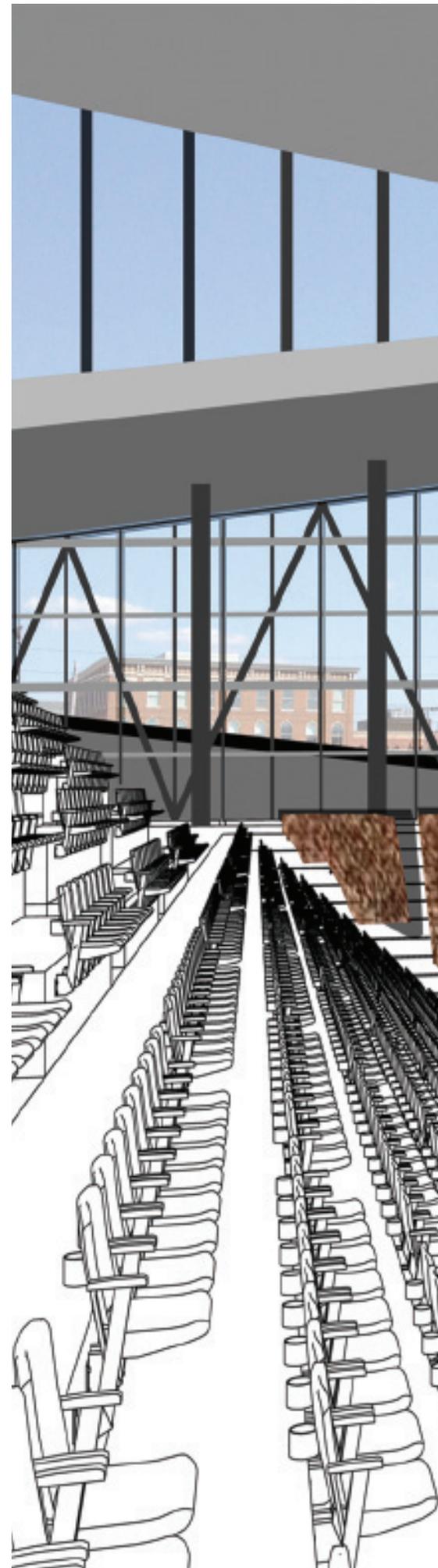
In the design of the coffee shop and organic restaurant, recycled materials are being used to decorate the interior and give the interior space a natural and warm feel. The recycled wood components would come from early 19th century floor boards that would be saved from nearby Kalamazoo homes. Also, the flooring in the Niketown store would be a recycled wood gymnasium floor. This would give Niketown an additional feel of sports retail and would also reuse the embodied energy of the flooring.

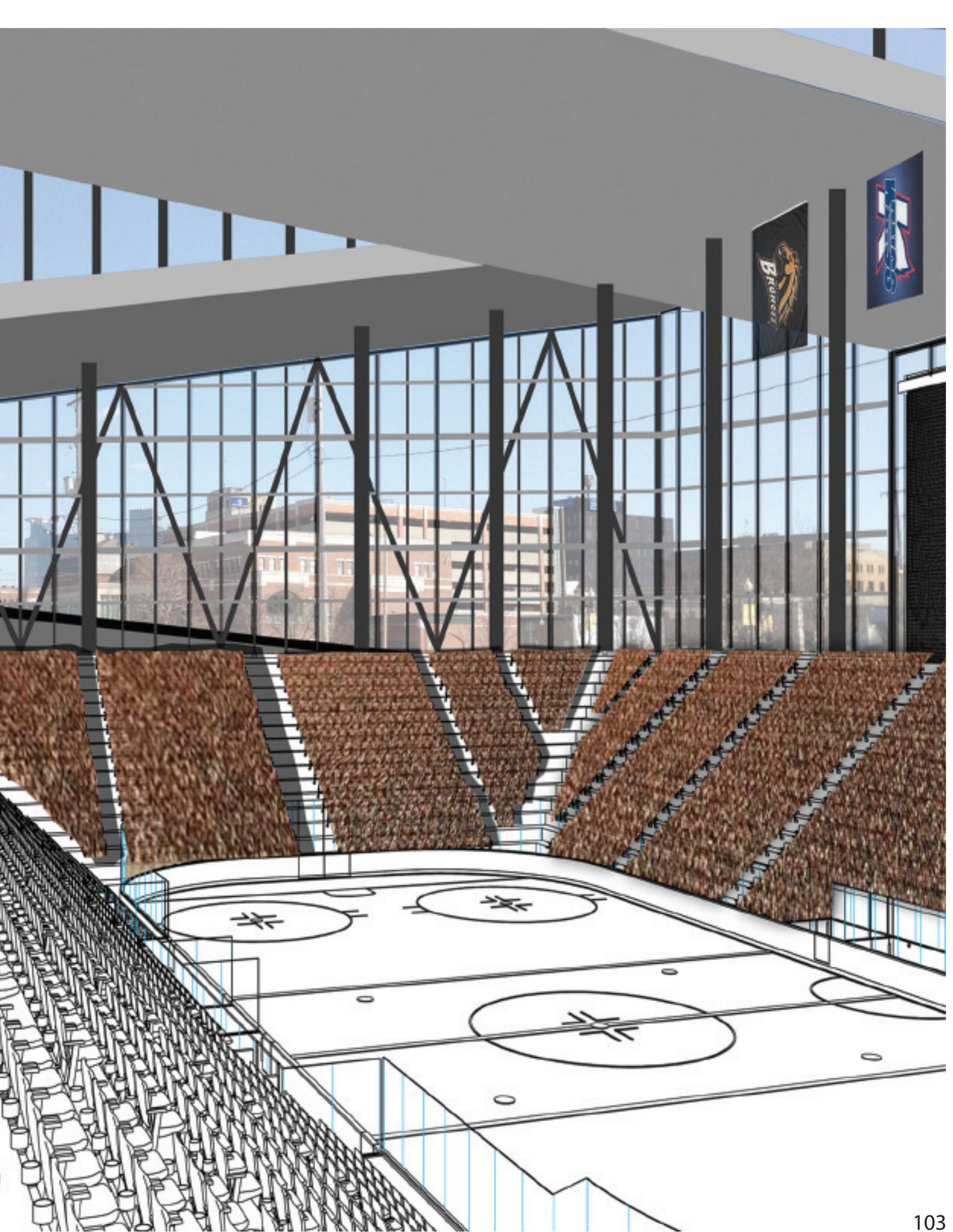
The space frame technology would be used to span the entire width of the arena and minimize the depth of the roof. With a span of nearly 140 feet, the roof needed to be strong yet minimal to preserve views out onto the city and without blocking any views of the events due to support beams.

Another system used is to store water runoff from the site and building in water cisterns and using it for grey water purposes. The sustainable roof would aid in capturing and directing precipitation to the water cisterns and would also add to the useable floor space of the Kalamazoo Arena facility.

Opposite Left (wall section) The components of the wall section on the opposite page are just one of the many features of the hybrid Kalamazoo Arena that make it unlike any sports arena seen today.

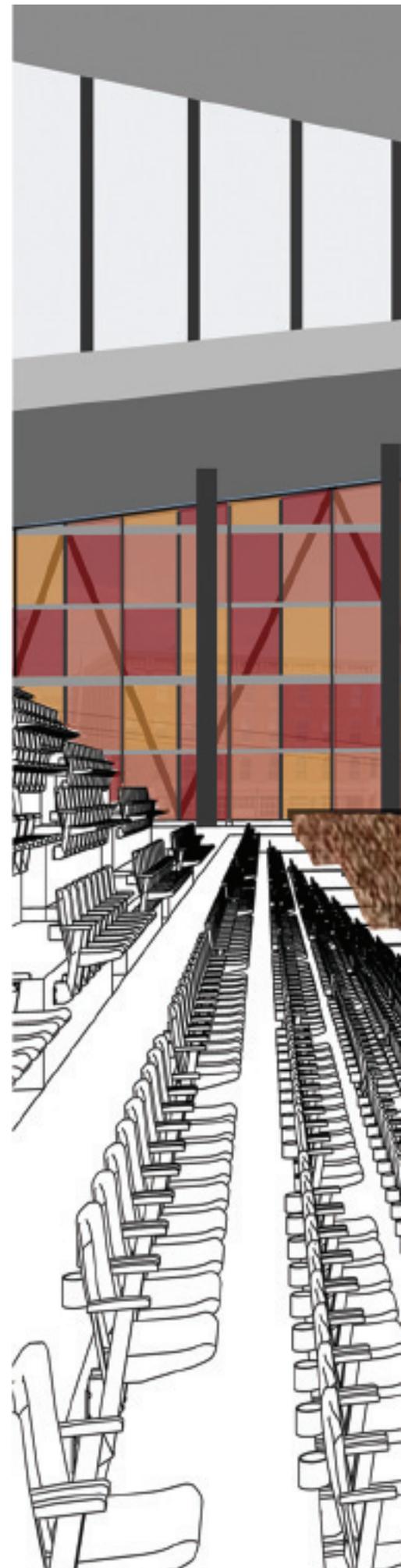
Right When the switchable glass is 'OFF', meaning there is no electrical current, the glass facade is 100% transparent and views into and out of the arena are preserved.

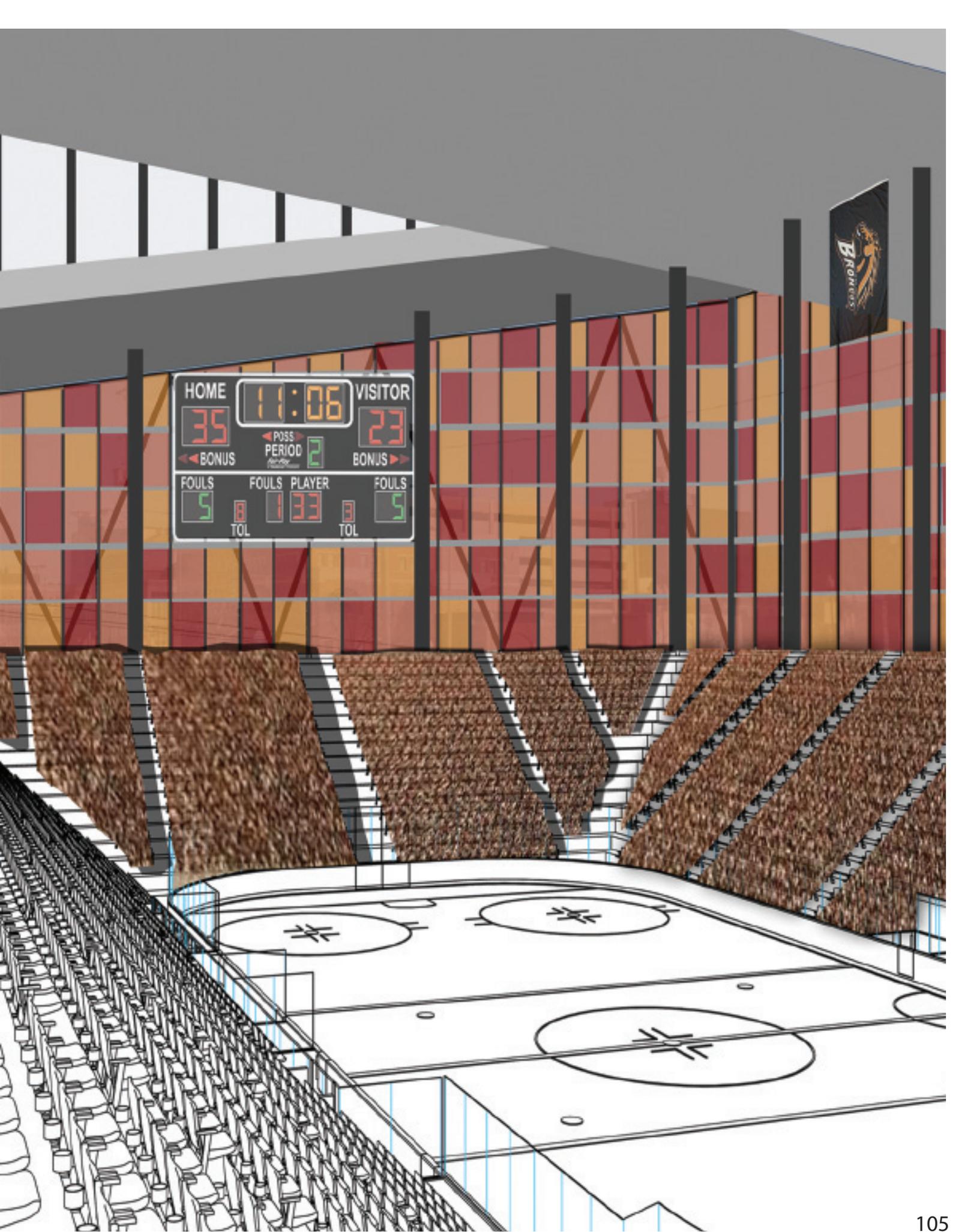




Right When the switchable glass is 'ON', and current is running through the polymer dispersed liquid crystals, the glass facade becomes opaque and lighting becomes controlled. This enables different events to meet varying degrees of requirements in terms of natural and artificial light within the arena.

Another feature when the switchable glass is 'ON', the ability to project images or videos onto the facade becomes possible, eliminating the need for a physical scoreboard. Also, the entire facade can become an advertising board for local businesses and events.





HOME	11:06	VISITOR
35	POSS PERIOD 2	23
BONUS		BONUS
FOULS 5	FOULS 1	FOULS 5
TOL 8	PLAYER 33	TOL 8











14.



6.01 conclusion

The goal of my thesis project, "Sport as a Regenerative Urban Catalyst: Kalamazoo Arena" was meant to be more than just an investigation into sports stadia and arena typology. My interests have always been to play more than just the role of an architect, but also a developer, city planner, and businessman. This project enabled insight into consumer spending trends, retail markets, land acquisition, sports facility design, and community development in Kalamazoo, Michigan.

The idea developed from the realistic notion that Kalamazoo's existing sports facilities are currently outdated, outgrown, and located outside the Central Business District. By consolidating the three arenas into a single multi-use arena and placing it in the heart of Kalamazoo's culture, the city and arena would mutually benefit from one another.

Incorporating mixed-uses by adding in residential, retail, and community spaces allowed the facility to be fully integrated into the urban context of the city. By developing a strategy to analyze how the surrounding communities and businesses would be affected, I was able to understand the important implications of my actions. My design was not to disturb a culture, but rather to enhance it by partnering with many of the industries and neighborhoods that define Kalamazoo.

In conclusion, this thesis project was just the beginning of my professional career as I set out to continually explore what interests me and benefits the public through design, business acumen, and passion.



6.02 thank you

This thesis project and my entire academic career would not have been possible without the help and support of countless individuals. My life and education has been shaped and molded by many people who have dedicated their lives to enrich the future generations and for that I am forever grateful. I would like to pay special acknowledgment to several people who have helped me become the person I am today.

1. My parents, Mark and Gretchen and the rest of my incredible family for always being there with their constant love and support.
2. My studio professors, especially John Mueller, Tadd Heidgerken, Joe Odoerfer, and Amy Deines for their resourceful abundance of knowledge.
3. Dave Jarl, Jeff Eckert, and Rick Wordell at Eckert Wordell for providing me with an amazing opportunity to work and professionally develop at a great architecture firm.
4. Donzetta Jones at the University of Detroit Mercy for everything she does for the students and always being there for me throughout my time at the School of Architecture.
5. My friends, who provided life-long memories that I will never forget and for being there when I needed it the most.

Sláinte!
Trevor Michael Wilson

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