

## ABSTRACT

Title of Thesis:

SOCIAL INFRASTRUCTURE:  
CREATING A COMMUNITY PLACE TO  
BRIDGE AN URBAN DIVIDE

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Infrastructure such as railroads have the ability to split communities in half, creating a divide physically and culturally. This divide is historically shown through segregation of race, income and education. The beach front city of Asbury Park, New Jersey was developed in the late 1800s, and was subsequently expanded and developed to the west of the train tracks based off segregation of race and class. This thesis explores how creating a community market space at the point of greatest separation can bridge communities that have long been divided. Along with this, the thesis will look at how community programming can strengthen a city's identity and welcome visitors to promote local businesses and encourage further development in the area.

SOCIAL INFRASTRUCTURE:  
CREATING A COMMUNITY PLACE TO BRIDGE AN URBAN DIVIDE

By

Emily Broxmeyer

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## Chapter 1: Asbury Park – Historical Context

*“The boardwalk was where all of New Jersey came together. Where New Jersey, for better or worse, met itself.”*

*-Junot Diaz, Pulitzer Prize Winner*

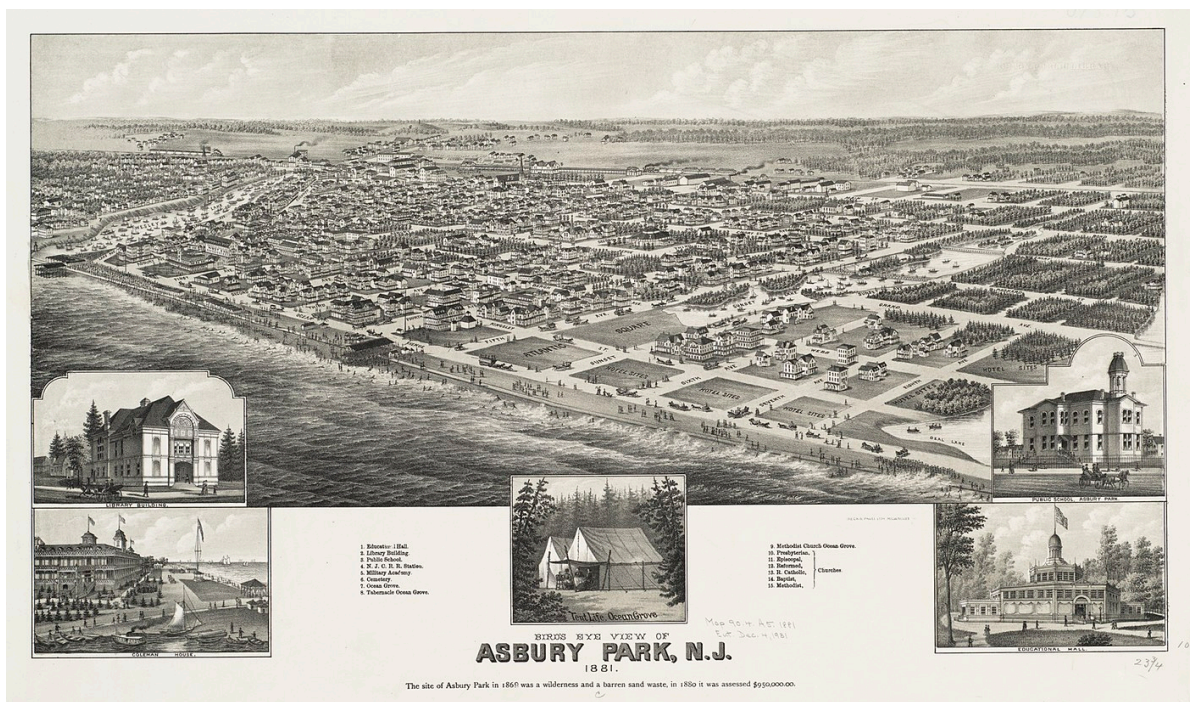


Figure 1 - Birds Eye View of Asbury Park, 1881 Source: <http://maps.bpl.org>

### History

In 1871, James A. Bradley, a brush manufacturer from New York City, bought 500 acres of land to the north of the Methodist town of Ocean Grove on the New Jersey shoreline. Bradley had a vision for the piece of land developing into a Christian resort “dedicated to improving the holy trinity of mind, spirit and body”. The land was

developed into a resort town and was soon one of New Jersey's most popular tourist destinations. In 1912, the summer population reached as much as 200,000. The initial investment in Asbury Park's boardwalk sparked the building of the Asbury Park Merry-Go-Round, which in turn became the city's greatest attraction at the time, Palace Amusements. The amusement park saw thousands of visitors per year and promoted the city as a wholesome, family friendly resort destination. The housing growth in the 1890s is responsible for the Victorian architecture seen throughout the city. The city was built up with single family units, larger toward the beach, which gave the town a unity and character that was fitting for a beach town. <sup>1</sup>

Even today, Asbury Park can be recognized by the two largest building projects on the boardwalk that were constructed in the 1920s. The Convention Hall and Paramount Theater Complex and the Casino building with the Carousel House are two iconic pieces of architecture that contribute to the sense of place and identity of the city. The buildings, designed by Grand Central Station architect Warren Whitney, bookend the boardwalk.<sup>2</sup> The city's development was booming at this time, with hotels like the Berkeley-Carteret Hotel and high school, making strides in not only tourism amenities, but elements like a first-class education system to entice residents in Asbury Park. Asbury Park was not immune from the Great Depression, also happening in the 1920s in America. In the 1930s, development came with the US Housing Act, requiring the construction of affordable housing post-World War I. The city decided to place all the

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<sup>1</sup> Helen Pike, *Asbury Park's Glory Days : The Story of an American Resort*. New Brunswick, N.J.: Rutgers University Press, 2005.

<sup>2</sup> Helen Pike, *Asbury Park's Glory Days : The Story of an American Resort*.

affordable housing on the West side of the train tracks, which was historically the African American side of town, while saving land on the East Side of the tracks for commercial apartments. This exacerbated the racial tensions in the city, which was brought to a peak in the 1970s.

Despite the Great Depression and setbacks of World War I, Asbury Park was a booming city in the early 20<sup>th</sup> century. After this, tourism and residency soon faced a challenge it wasn't prepared for when in 1947, the Garden State Parkway opened. The Parkway shifted travelers from near and far to the west and away from the shoreline. The development dropped rail travel that would normally direct people along the coast and through Asbury Park. The ease of transportation the Parkway offered also drove many families out of cities, much like highway infrastructure did throughout the country. Like many cities, affluent families chose to move out of cities into recently developed suburbs offering more land. Following this in 1960, the Monmouth Mall opened nearby, taking the retail consumers that would normally come to Asbury Park's commercial shopping district away to the compact, suburban mall. Great Adventure's opening down the Turnpike in 1974 was the last straw in a string of issues the city faced, leading to the closure of businesses throughout the city, including the once-popular Palace Amusements in 1988.

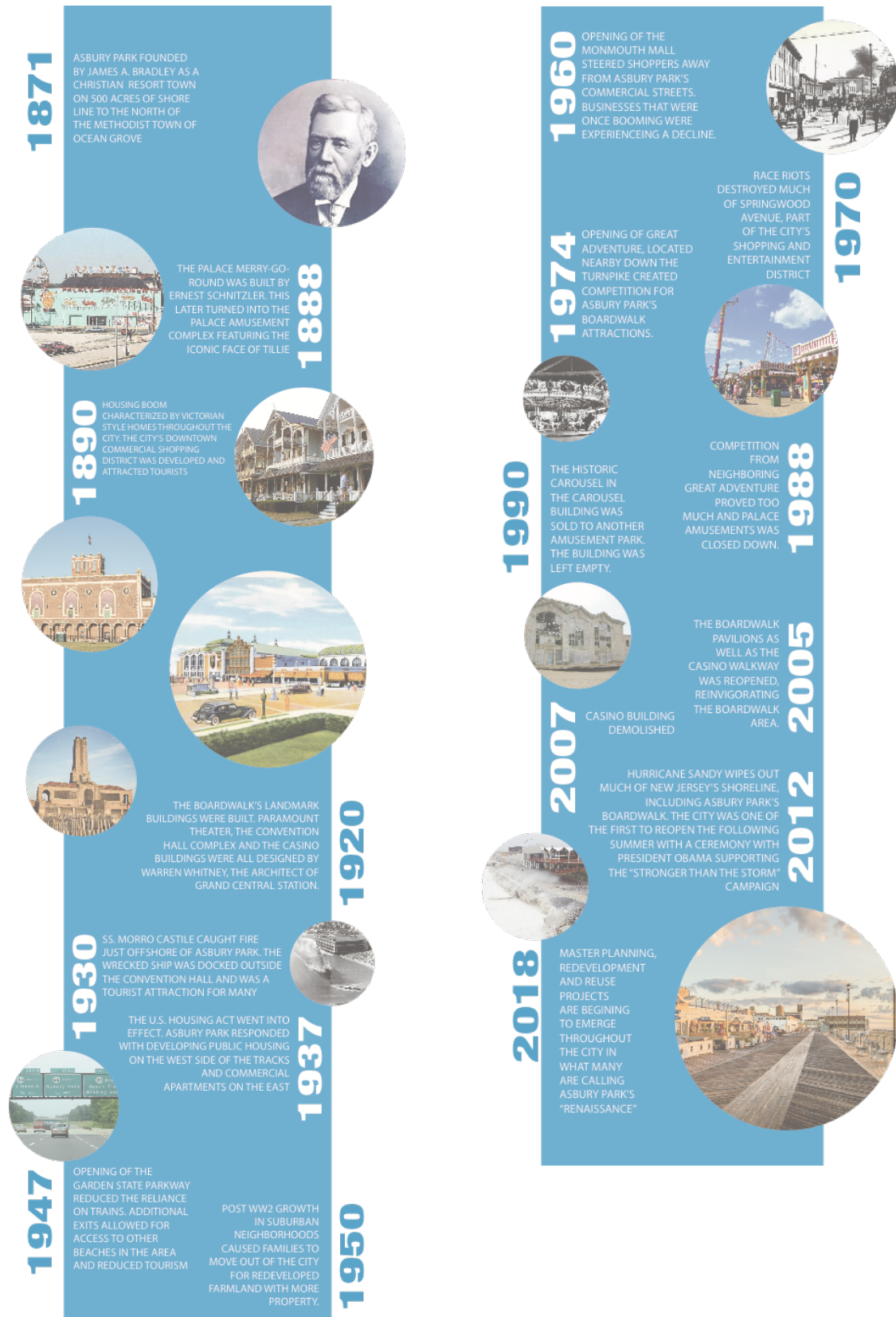


Figure 2 - Asbury Park Timeline. Source by Author

## Historic Segregation and Racial Tensions

Historically, Asbury Park was developed separately on either side of the train tracks. While the resort was developed to the east, West Park was technically outside the city lines, and developed as a working-class district where hotel employees and construction workers lived. The population of West Park was majority African-American, also with a large amount of Italians, Germans and Turks. Amenities and thoughtful urban design moves by James Bradley, such as the sewer lines he prided himself on, stopped at the tracks. Bradley owned a large amount of property on the west side of the tracks, but he did not put any effort into developing the working-class area.<sup>3</sup>

In addition to the financial decline, another trouble that brought Asbury Park to its breaking point were the race riots of the 1970s. The decline of the east side businesses carried over to the economic downturn of their employees living on the west side, causing the deterioration of then-commercial street Springwood Avenue. With the economic decline, the problem of housing vacancies and neglect from the Housing Authority caused properties to fall into a state of disrepair. The nationwide problems alcoholism and drugs post-World War II heightened these issues and created more throughout the city. The Civil Rights Movement sparked violence throughout the country. In 1967, the violence came to New Jersey with riots in Newark. 1968 brought riots into the cities of Trenton, Freehold, Long Branch and Red Bank. Asbury Park, whose government was under scrutiny for neglecting the poor economic conditions of the city's west side, and primarily African-American residents, was greatly affected by a race riot in 1970.

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<sup>3</sup>Glenn Uminowicz. "Sport in a Middle-Class Utopia: Asbury Park, New Jersey, 1871-1895." *Journal of Sport History* (University of Illinois Press) 11, no. 1 (Spring 1984): 51-73.

On the night of July 4, 1970, a riot erupted out of the West Side Community Center. Street fighting led to violence as stores were set on fire along the west side's commercial street of Springwood Avenue. Local police and fire fighters, along with State Troopers, were brought in to contain the violence and damage. In total, 46 people were shot, 100 injured, and 170 arrested during the riots. Along with the effects on the residents, \$5 million in property damage was reported. The damage, much like many of the issues, was contained to the west side, with none of the violence or damage spreading to the east side neighborhood.

After the riots, the remaining buildings along Springwood Avenue and its side streets were bulldozed, leveling the west side's commercial street and causing the neighborhood to go into an even further state of despair. Churches in the area tried to negotiate with the federal government for low income housing. A corrupt city government and federal red tape put these projects on the back burner for decades. When looking along Springwood Avenue now, there are no signs of the commercial district there once was. Housing projects that were eventually built stand on vast lots with little market to occupy the empty spaces.

### Main Attractions

The driving force behind this resort destination was the beach. Developing a boardwalk that stood out from surrounding towns put Asbury Park on the map, and still is what attracts crowds. Asbury Park's beach was named the number two beach in America by Money Magazine in 2018 for its beach as well as its boardwalk.<sup>4</sup> The breakwaters

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<sup>4</sup> Allana Akhtar, "The 14 Best Beaches in the World—and How Much It Costs to Visit Them," *Money Magazine*, May 11, 2018, <http://time.com/money/5272637/best-beaches-us-international/>

make for excellent surfing conditions, while the soft sand and ocean breeze market themselves. The boardwalk is filled with pavilions housing arcades, food vendors and more formal restaurants, shops and entertainment choices. The Boardwalk is also bordered by two of the most historic buildings in the city.



*Figure 3 - Casino Building Gateway - Source by Author*



*Figure 4 - Convention Hall Shopping Area - Source by Author*

The Casino building lies on the southern border of Asbury Park. Bridging across the boardwalk with a grand façade structure, the building serves as the southern gateway to the Asbury Park Boardwalk, which is unlike the towns along the boardwalk to the south in its commercial activity and amusements. Constructed in 1929, the casino building was one of two grand buildings built to bookend the Asbury Park section of the boardwalk.

The building was designed by the firm Warren and Wetmore, who also built Grand Central Station. The famed firm also designed other New York landmarks such as the Biltmore Hotel, the Helmsley Building and Chelsea Piers.

The building is massed as two large, different structures, bridged by a monumental gateway piece that bridges over the boardwalk while leaving it open to pedestrians. To the west, on land adjacent to Ocean Avenue, there is the carousel building. This building was designed for a historic carousel, taking the ride's round shape and ornate detailing to the façade and form of the building. On the east side of the boardwalk, sitting on a platform on the beach was the casino building. This building was filled with arcade games, an ice rink and a performance space.

The carousel was sold in 1940 and the casino building sat empty. In recent years, the building has been used for a variety of different programs. In recent years these programs included a flea market, art display area and a skate park. The building has been badly deteriorated since the 1980s, but there are plans to restore it and turn the whole building into a commercial retail and restaurant building.<sup>5</sup>

The main Casino building was demolished in 2007, after a leaking roof and years of sitting unused left it in a state that could not be rehabilitated. What remains now of the building is the gateway over the boardwalk which has been left as ruins of the casino that once stood there. The now dilapidated 1920s gateway welcomes visitors to the Asbury Park boardwalk and signals a shift in the residential fabric of Ocean Grove to the lively, eclectic boardwalk of Asbury Park.

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<sup>5</sup>Randy Bergmann. *Will Casino be Restored to its Former Glory in Asbury Park*. June 20, 2018. <https://www.app.com/story/opinion/columnists/2018/06/20/asbury-park-casino-restored-madison-marquette/691862002/>

Walking north along the boardwalk, you walk toward the old Convention Center. The building is now used as gallery of shops that you can walk through to the other side of the city's boardwalk, which is quieter than the south end. The tall, detailed ceilings are often covered with string lights, giving it an outdoor shopping street feeling. The shops are all small shops owned by residents featuring handmade art, clothes and souvenirs. There are also coffee and ice cream shops inside. Around the building with the theater inside is a restaurant whose bar spills out onto the covered patio surrounding it and spills further out even onto the beach. The theater still hosts shows, especially in the tourist filled summer months.



*Figure 5 - Carousel Building – Source by Author*

These two notable historic buildings bookend the Asbury Park boardwalk and both act as gateways for the city at the beachfront. Although the two buildings serve different functions than they were intended, and although the Casino Building is worn down, the gateways signify the history and character of the city from the point of entrance. The Casino and the Convention Hall are similar architecturally in their gateway condition, but

also in their style and detailing. The two long masses both cross over the boardwalk to tie the land and the sea together and allowing pedestrians to flow through expressive, detailed gateways. Brick, copper with a patina and glass were all primary materials used in the design of each of the buildings, although implemented differently to create differing but complementary structures at either end of the boardwalk.

Music venues such as the Stone Pony gained fame from famous artists such as Bruce Springsteen and Bon Jovi. The historic music venue is still in use today, putting on concerts that are especially popular in the summer months on their outdoor stage directly on the beach. New development in the area has opened up new bars and restaurants that feature live music as one of their primary attractions.

With the development in the area, Asbury Park is beginning to develop a food scene around the restaurants and bars that are beginning to come to the area, along with the historic restaurants and bars such as the Wonder Bar, featuring Tillie, the former face of Palace Amusements. It is places like this that take cues and elements from the city's history that keep Asbury Park's character tied to its rich past. Most of these bars and restaurants are along the boardwalk or on Cookman Avenue, which leads from the boardwalk to the train station.



*Figure 6 - Wonder Bar Featuring Tillie, an Asbury Park Icon - Source by Author*

### Accessibility and Transportation

One of the major drivers in Asbury Park's initial success was its location relative to New York City. The New Jersey Coast Railway was already built up to Long Branch, and once Asbury Park was developed, the train was extended in 1875. The location of Asbury Park in Northern New Jersey made it a popular vacation destination for people from both New York and Philadelphia.



Figure 7 - Regional, Local and City Transportation – Source by Author

Today, there is a vast number of public transportation options that arrive in Asbury Park. From New York there is the New Jersey Transit Coast Line that brings passengers from New York Penn Station to Point Pleasant, passing through Asbury Park as one of the most popular shore stops. The other stops on this line include Secaucus and Newark, New Jersey, which are popular cities for commuters from Manhattan. The first beach town stop on the line is neighboring Long Branch, which is a much larger township, but with less amenities for visitors than Asbury Park. The line continues through Asbury Park, stopping in smaller, more residential beach towns, and ending in Point Pleasant. Point Pleasant is another commercial beach town, with various arcades and restaurants along the water. Unlike Asbury Park, the amenities are mostly contained to the boardwalk. Recently, the city has been pushing for NJ Transit to offer night service to Asbury Park to provide more accessibility for concerts and events in Asbury Park.

From Philadelphia, there is a bus line that runs from 30<sup>th</sup> Street Station to Asbury Park. This line makes multiple stops throughout New Jersey, so it does take longer than driving. This bus line terminates in Asbury Park. New Jersey Transit also runs buses throughout New Jersey suburbs to Asbury Park.

Within Asbury Park, there is not an efficient transportation system to get from one space in the city to another. The introduction of a Jitney or shuttle bus has been proposed and requested by local business owners. The Jitney could connect Asbury Park and assist the development of the West Side.

Even with the public transportation options, the most popular way to get to Asbury Park is by driving because it is faster than the other options. The Garden State Parkway and the New Jersey Turnpike offer fast, easy ways to get to the beach by car.

This being said, installation of new tolls on surrounding roads and parking prices do encourage the use of public transportation.

### Demographics

Being a city on the beach, Asbury Parks population is very much seasonal. This affects their residential population in terms of employment opportunities and makes it a struggle for business owners to stay open. Asbury Park is a city of 16, 767 residents as of the 2016 US Census. Over 30% of Asbury Park's residents live below the poverty line, with the median household income coming in at \$36,512.<sup>6</sup> This issue stems from the fact that most of the jobs available in the city are service and retail oriented, and when the tourist population slows down in the colder months, people are either slow at work or out of work completely if they work for businesses that close up in the winter.

One of the main problems in the city is the separation of East and West Asbury Park. This separation is reflected in the demographic differences of the two sides as well as the physical state of the two sides of the city. West Asbury Park has a median per-capita income of \$16,450, this is much lower than the New Jersey average of \$37,538 and even lower than the income of East Asbury Park, which has a median income of \$23,428. The median home value on the West side is \$245,561, almost \$150,000 lower than East Asbury Park's median home value of \$393,678. Unemployment rates are high throughout the entire city, with the entire city having a rate of 6.9%, but West Asbury Park is at an

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<sup>6</sup> U.S. Bureau of the Census, *U.S. Census of Population and Housing*, 2016.

11% unemployment rate. This statistic has a direct relationship to the difference in home values and per capita income on the two sides of the city.

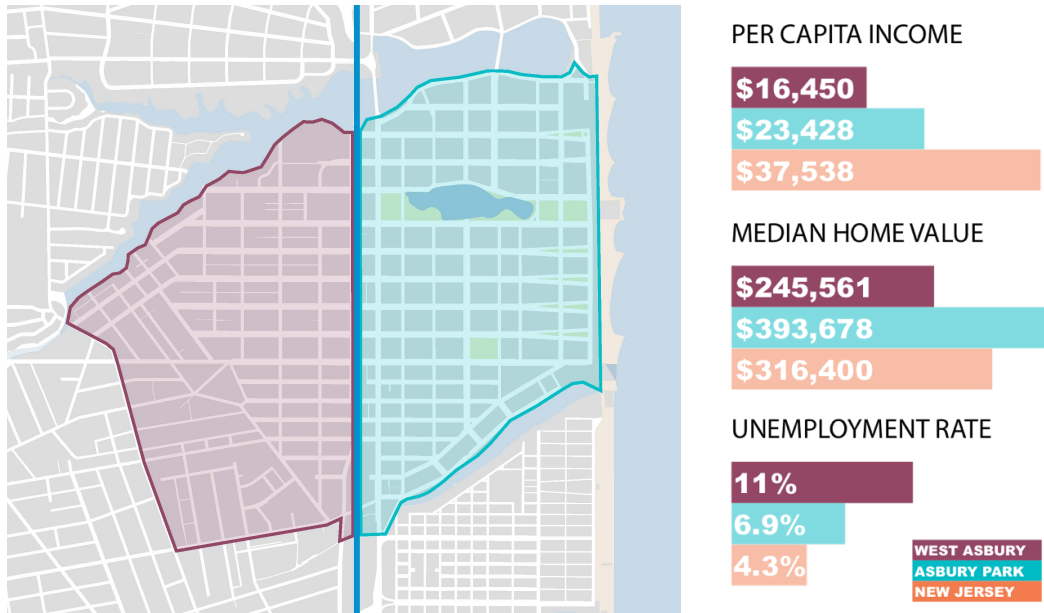


Figure 8 - Map of East and West Asbury Park with Comparative Demographics Charts - Source by Author

## Culture

Music has been at the core of Asbury Park's history since the early 1900s. Many sources credit West Asbury Park, the historically African-American side of town, for founding the Asbury Park music scene. Throughout the 20<sup>th</sup> century, jazz and soul music filled the clubs along Springwood Avenue, which was filled with clubs and music venues.<sup>7</sup> On the east side, popular artists like the Beach Boys and The Doors were playing at the Convention Hall and the Stone Pony throughout the 60s. Music served as a connecting force in often troubled times. Throughout the racially charged 60s and 70s,

<sup>7</sup> K. Phelps. *The Birth of the Sound of Asbury Park: The Musical History of Springwood Avenue and the West-Side*. Prod. Jersey Shore Vibe. Asbury Park, New Jersey, Dec. 23, 2017.

although the city was still very much segregated, the Convention Hall held integrated concerts, where people from both sides of the train tracks came together to listen to musicians like Count Basie and Ray Charles. White artists were known to go to the west side clubs to hear the black artist's innovative music and play at civil rights rallies to advocate for civil rights. What the music couldn't survive, however, was the riots in 1970. Race riots destroyed the West side business and clubs, wiping out the music scene and affecting the rest of the city. Driving out middle-class families meant losing a large amount of the artists that populated the city.<sup>8</sup>

After naming his debut album, "Greetings from Asbury Park" after his home city, Bruce Springsteen is the name most associated with Asbury Park. Throughout his music, Springsteen evokes a sense of place, referencing the highway and the boardwalks that shaped him as an artist. There are many people that come to Asbury Park because of the rich history of music, with walking tours available to walk through the history of how music shaped the city.

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<sup>8</sup> Austin Bogues. "In 1968, Music Saved Asbury Park." *USA Today*. Asbury Park, New Jersey, July 10, 2018.

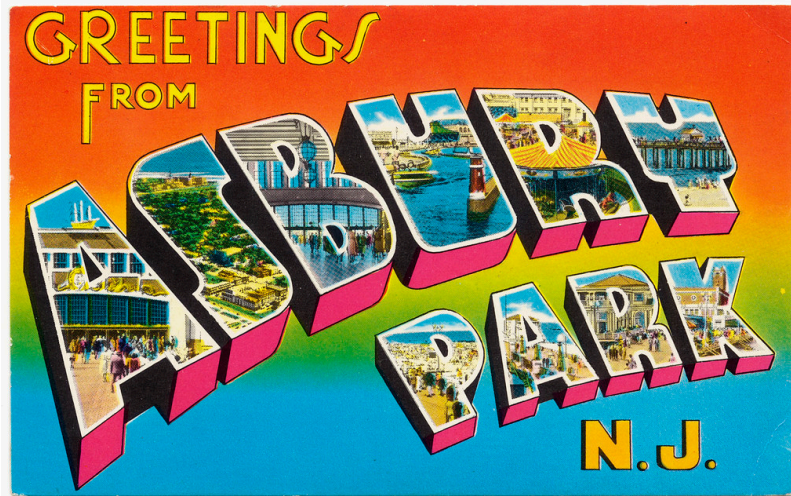


Figure 9 - Bruce Springsteen "Greetings from Asbury Park" Album Cover -

Source: [https://www.flickr.com/photos/boston\\_public\\_library/8391479647](https://www.flickr.com/photos/boston_public_library/8391479647)



Figure 10 - The Stone Pony - Source: Wikimedia Commons

Now, in the 21<sup>st</sup> century, after years of struggle and development attempts, Asbury Park's music scene is coming back alive along with the city. The influx of LGBT residents that brought money to rehabilitate the houses also brought artists back into the city, once again populating the concert board in the Convention Hall. Asbury Park was

known for its music scene in its former heyday, and now shirts and hats throughout the town claim that “Music Saved Asbury Park.”<sup>9</sup>

The city’s dilapidated landmarks and beach pavilions have gained a new life due to a public art initiative that has created a new art culture in Asbury Park. In 2015, the Wooden Walls Project was founded, bringing art to the city’s construction sites and run-down building facades.<sup>10</sup> The art can be seen throughout the city, but especially along the boardwalk, where the Sunset Avenue beach pavilion’s east façade facing the boardwalk is covered in murals by local artists. Walking through the Casino building, which serves as the south gateway to the boardwalk, visitors are surrounded by large scale murals that show the character of the city from the beginning of their visit. These art installations create points of interest throughout the city and create opportunities for local artists to show their work on a large scale. Art galleries are beginning to pop up in the city along with an initiative in the 2017 Master Plan to create an Arts District along Asbury Avenue.<sup>11</sup> Along with talent in the city, there is also the accessibility for artists in Philadelphia and New York, as well as throughout the rest of the state.

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<sup>9</sup> Austin Bogues. "In 1968, Music Saved Asbury Park."

<sup>10</sup> Jacqueline Klecak. "See by the Sea: The Asbury Park Art Scene." *New Jersey Monthly*. Asbury Park, NJ, June 29, 2018.

<sup>11</sup> Clarke Caton Hintz. *Asbury Park Master Plan Reexamination Report*. Master Plan, Asbury Park, NJ.



*Figure 11 - Asbury Park Murals on Pavilion and Casino Building - Source: By Author*

Asbury Underground, a festival taking place in the fall every year, celebrates the arts community with events like pop up art shows, a city art crawl and music performances. The sites for the events are located throughout the central business district adjacent to the train station, allowing for easy access for artists from throughout the region. This festival, along with the initiatives in the town show the importance of the newly found art scene to Asbury Park's development.

## Chapter 2: Site Analysis

### City Organization

Asbury Park was developed in the 1870s based on a rigid grid running perpendicular to the shoreline. Along the beach, behind the boardwalk is Ocean Avenue, which continues through all of the beach towns in this region of the coast, although it is interrupted by the lakes at the town's borders. The average block measures approximately 350 feet by 420 feet, aligned with traditional city grid spacing. This dimension varies as the grid gets closer to the shoreline. Moving from the train tracks to the beach, the blocks get larger and the streets get smaller. Even the smaller streets are some of the widest along this stretch of the shoreline.<sup>12</sup> At the beach ends of the east-west streets, the streets widen and flare out to 200 feet toward the boardwalk and meet Ocean Avenue. This design directed sea breezes to move through the streets into the city and provided grand views of the ocean and boardwalk as visitors approached the water. The space created between the lanes from this gesture create space for parks and car parking adjacent to the boardwalk and beach.

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<sup>12</sup> Uminowicz, Glenn. "Sport in a Middle-Class Utopia: Asbury Park, New Jersey, 1871-1895." *Journal of Sport History* 11, no. 1 (1984): 51-73. <http://www.jstor.org.proxy-um.researchport.umd.edu/stable/43609290>.

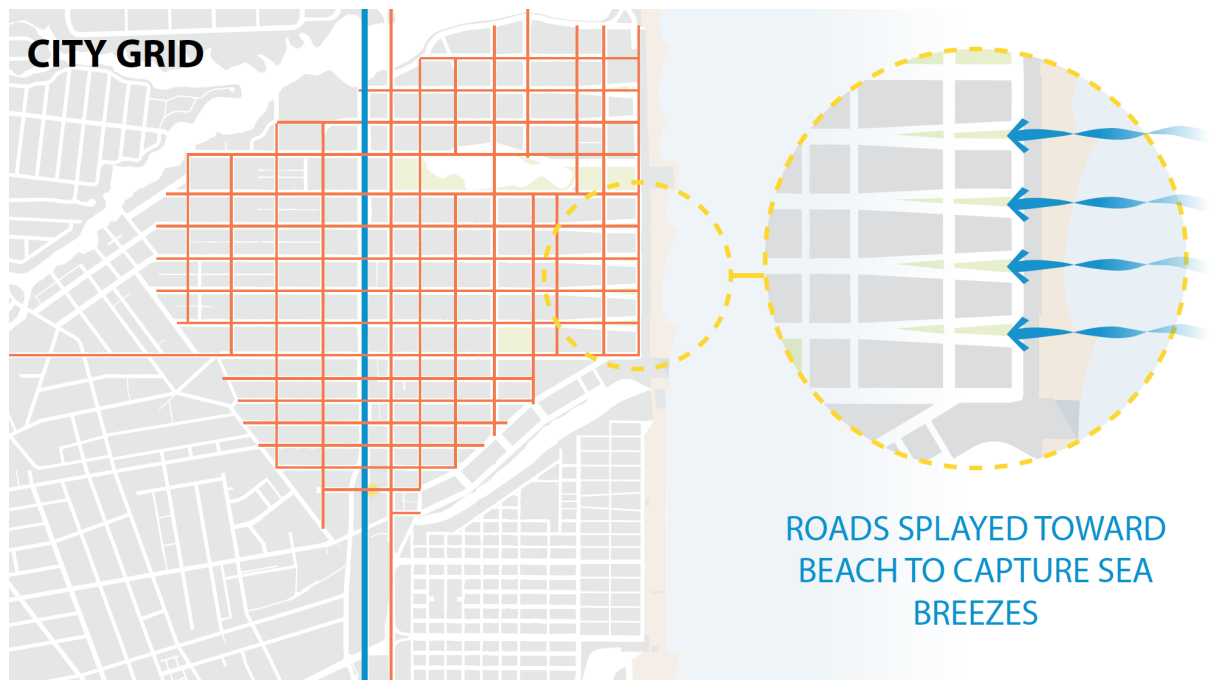


Figure 12 - City Grid Diagram showing splaying of roads toward beach - Source by author

Grand Avenue was one of the Bradley’s visions for a central main street cutting through the city. The street was defined by larger scale institutional buildings such as a variety of churches, a library, and an education hall. Liberty Park is also located on this main road, contributing to Bradley’s affinity for public green space. The entirety of Grand Avenue was supposed to be seen as a sort of play space that ran through the city. Today, there are still the churches and the library lining this street, along with a few newer schools.

Asbury Park has access to 3 lakes. Wesley Lake creates Asbury Park’s south boarder. Lake Avenue runs adjacent to the lake, but cars are not permitted to cross. The old Steam Plant is located at the Eastern end of Wesley Lake, with the train station at the west end. Sunset Lake runs perpendicular to the ocean in the middle of the city. This lake cuts the eastern end of the city in half. Sunset lake has a ring of park space around it and public parks to the east and west ends, creating a natural strip through the center of the

city. Originally, Bradley did not want to develop the area to the north of the lake, leaving it as forested land to keep the city adjacent to nature and full of fresh air. The north boundary of Asbury Park is created by the larger of the three lakes, Deal Lake. Deal Lake is a large lake that separates Asbury Park and Long Branch, two of the more commercial towns along the coast.

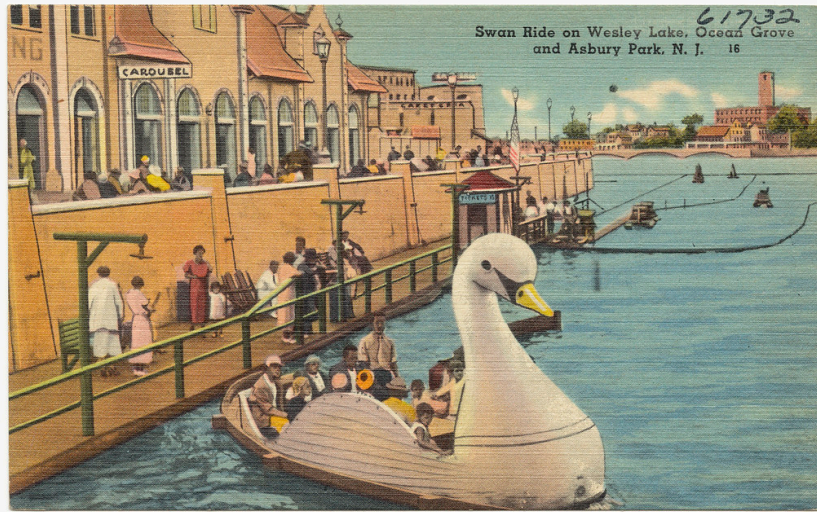


Figure 13 - Wesley Lake in Old Postcard - Source: [https://www.flickr.com/photos/boston\\_public\\_library/8391487085](https://www.flickr.com/photos/boston_public_library/8391487085)

The urban planning of the city breaks down to the west of the train tracks, where the historically “working population” at the time of Bradley’s planning was housed after the need for local housing for the help became apparent. This population was historically African-American, showing the times segregation in the urban design of the city. This area was more scattered and had less access to Bradley’s idealized play spaces and the beach.



Figure 14 - City Grid Broken to West - Source: By Author

### Train Station

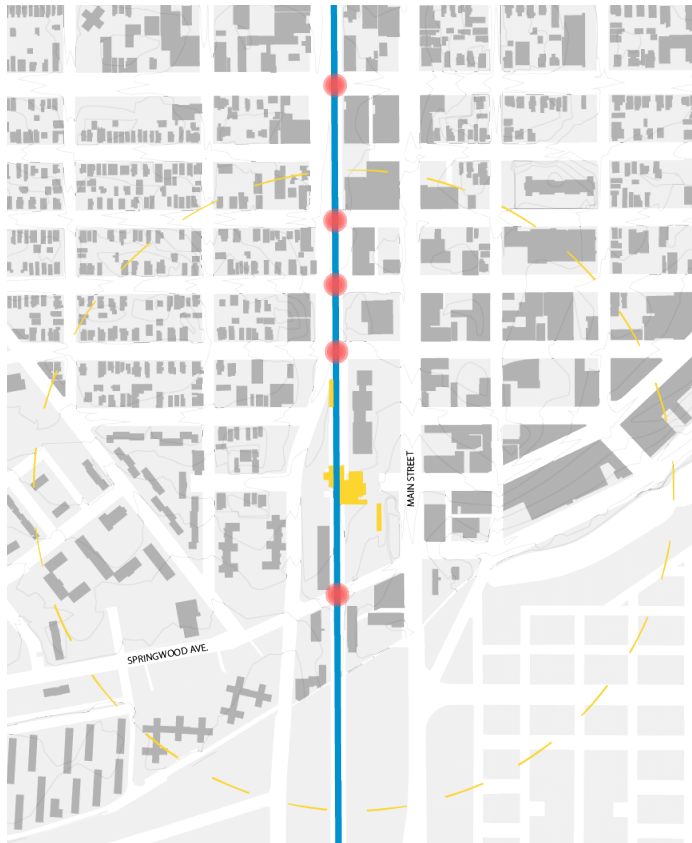
The New Jersey Transit train tracks run through the city three quarters of a mile inland, splitting the city in half. The Asbury Park Station is located at the intersection of Main Street, which runs parallel to the train tracks, and Cookman Avenue, which runs adjacent to Wesley Lake from the boardwalk. This location is at the south end of the city lines, making the station accessible from Asbury Park as well as Ocean Grove.

Asbury Park Station is one of only 10 multimodal transit centers in the state of New Jersey, and one of only four that serve as both a commuter rail stop and bus terminal. Metropark, New Brunswick, and Atlantic City are the three other stations that serve both of these functions. This makes Asbury Park a good option for a transit village

due to its accessibility to both New York City and Philadelphia due to these two modes of transportation.

The train tracks that run through the city are located at-grade, which poses a safety challenge. Within a half mile radius of the train station there are 4 at-grade crossing points. These points A total of 34 trains pass on week days and 22 trains on weekends. Train ridership is reported at an average of around 800 passengers per day. This number increases during the summer months, especially on weekends. The condition crossing the tracks is delineated with lighter concrete filling in the gaps in the tracks to walk across, as well as flashing lights and gates that come down when a train is approaching. There is no designated walking area across the tracks, as the entire width of the street has the same conditions for pedestrians, cyclists and vehicles. This method is certainly not the best solution and this is a primary area of concern in terms of safety in the city. The dangerous points of connection between the east and west side of the tracks also reinforces the feeling of disconnect between the two sides of the city.





*Figure 15 - Track Crossing Locations and Conditions - Source by Author*

The current Asbury Park Station building is a one story, 6,500 square foot building located at the end of Cookman Avenue. The station serves an average of 800 train riders daily, with this number increasing on weekends in the summer months. Amenities of the station include outdoor bike racks and a ticket office that operates on weekday mornings, otherwise users use outdoor ticket vending machines that sell both train tickets and bus passes. There are two parking lots on the site. The parking lot on the east of the tracks has 29 parking spaces that are free every day. The parking lot on the west side has 40 metered parking spaces.



*Figure 16 - Asbury Park Station - Source: By Author*

The current train station platform measures 210 feet long on the east side and 380 feet long on the west side. Passengers arriving from the North disembark on the west side of the tracks, meaning that they need to navigate across the platform, through a parking lot and then cross the tracks at grade to begin to make their way to the commercial shopping district and the beach. This also means that passengers from the west side of Asbury Park that are boarding the train in the northbound direction, which is on the east side of the tracks, need to cross the tracks at grade, navigate through a parking lot area with a kiss and ride and a bus stop and down the platform in order to board the train. Since most of the permanent residents of Asbury Park live on the west side of the tracks, this would be the route for most commuters traveling to Northern New Jersey or New York City. The two routes described here are both of the primary circulation routes to

consider when designing and highlight the importance of creating a solution for crossing the tracks in a safer, more enjoyable way.

### Current Municipal Building

The current Asbury Park municipal building sits on the same site as the transportation center. The building and parking lot associated with the municipal building are to the north of the station building. The large municipal building and the transportation center sit on a 191,300 square foot site with approximately 800 feet of frontage on Main Street. Along Main Street, 100 parking spaces in a surface parking lot occupy 56,900 square feet of the site. The two-story municipal building itself is approximately 47,000 square feet and has 350 feet of frontage pulled back from Main Street. The site also has a 2,600 square foot community garden that occupies the area between the municipal building and the train tracks. This community garden is maintained by The Environmental Shade Tree Commission.



*Figure 17 - Asbury Park Municipal Building - Source: Asbury Park Sun*

This site is one of the only parcels of land owned by the city, giving them an opportunity to redevelop this site. The city sees the value in this location, specifically for

the development of a Transit Village and recognizes that the site is being underutilized currently.

The city is looking to enhance the area as part of the Main Street Redevelopment Plan. This plan labels this site as the Civic Core/South Gateway area. In June of 2017, the city was calling for Request for Proposals (RFPs) for the municipal building site. The RFP outlined their needs as 60,000 square feet of space for municipal offices and a police station, as well as 5,000 square feet for the train station. There is also a need for a parking garage to address the downtown parking shortage. The building design requested cannot exceed eight stories and must be of “exemplary design aesthetic.”<sup>13</sup>

### Environmental Considerations

Asbury Park was the first in Monmouth County to be awarded Silver level certification from Sustainable Jersey, a nonprofit that aims to encourage sustainable communities. The organization supports communities by providing training and financial resources to drive sustainable development. Winning this certification puts Asbury Park in the running for green grants in the future, encouraging further development. One of the keys to the city’s documentation of initiatives was the Mayor’s Wellness Program which was developed to build healthy communities within the city. Bike Share and Safe Routes to School programs are among the innovative categories awarded points in this certification process.

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<sup>13</sup> Michelle Gladden, “Proposals Sought to Transform City Hall,” *Asbury Park Sun*, June 12, 2018, <http://asburyparksun.com/proposals-sought-to-transform-city-hall/>

Asbury Park's master plan was redeveloped in December of 2017 for the first time since the 2006 master plan. The previous master plan did not have sustainability as a category in the plan but, because of increased environmental and political changes in the 11 years, this was changed. Hurricane Sandy's demolition of the boardwalk as well as the massive effects along the entire New Jersey coastline contributed, if not sparked, the push for sustainable development in the region.

The 2017 Master Plan focuses on sustainability in section 5.8, with main points of city wide green streets, storm water management, energy conservation and tracking, and sustainable design and infrastructure in new developments. Green streets include a vegetated buffer along sidewalks that create a more enjoyable pedestrian experience as well as filtering storm water runoff from the streets. Storm water management is especially important along the beach area as well as near the city's three lakes. There was also a desire to track energy use and conservation throughout this initiative in order to see how the city progresses over time. Implementing and promoting sustainable development, infrastructure and buildings that produce and conserve energy will be reflected in the tracking process and can be used to earn grants and funding in the future for sustainable development.

Also outlined in the sustainability section of the master plan is the goal to "encourage local food production through community gardens and permitting urban agriculture." The city does have a small community garden run by residents behind the municipal building to promote this initiative. Kula Farms is a restaurant and urban farm located on the west side of Asbury Park that grows its own produce for their restaurant as well as employs locals.

Storm water runoff is particularly important for this site due to its proximity to Wesley Lake to the southeast. Due to the industrial nature of the train tracks, paying close attention to the topography sloping toward the lake and looking at the path of the water runoff, there will need to be buffer areas to filter the water before reaching the lake. Currently, there is a rain garden on the east of the site that collects and filters the water. If the design proposed removing this, there would need to be a replacement to remedy the water and assure the safety of the lake.

### Asbury Park Master Plan

The Asbury Park Master Plan was rewritten in December of 2017 as a comprehensive review for how the city responded to the 2006 master plan as well as how the city can move forward. The main takeaways from this master plan are the redevelopment areas that are being focused on. These are areas that will have a focused development and a lot of investment in the coming years.<sup>14</sup>

The first of these redevelopment efforts is the Main Street Redevelopment Plan was developed in September 2008, but even ten years later, few of the suggestions have been implemented. The plan focuses on the Main Street corridor, which runs from north to south, parallel to the train tracks, only separated by one block. This thesis will focus on the development site called out as the “Civic Core/South Gateway,” which encompasses the train station and municipal complex. This plan recommends the use of transit-oriented

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<sup>14</sup> Clarke Caton Hintz. *Asbury Park Master Plan Reexamination Report*. Master Plan, Asbury Park, NJ: Clarke Caton Hintz, 2017.

development for this area, due to its inclusion of the train station. Creating active public spaces as well as celebrating the historic Post Office are also primary visions laid out for this area. “The beacon Project” is mentioned here, expressing the desire for a tall, lighted element that motorists can recognize as Asbury Park. There is also a primary desire throughout the redevelopment plan to provide retail street frontage on Main Street to create a more active public shopping street.

The second of the redevelopment efforts is the Central Business District redevelopment area. This plan was created in 2003, so while some of the information and ideas are out of date, there is still a lot that the city wants to move forward with. The central business zone spans from Lake Avenue to Monroe Avenue, ending where the two intersect about halfway from the train station to the beach. This district meets with the Main Street Redevelopment Plan directly behind the buildings facing main street to the east. The focus of this plan was to create a retail corridor along Cookman Avenue and to continue to develop mixed use buildings throughout the rest of the area. Creating additional retail, higher density residential and office space could bring more people into the city and promote local businesses. It is an ideal zone for apartment or town house development because of its proximity to the train station.

The third redevelopment zone is Springwood Avenue. A former commercial street before the riots, the Springwood Redevelopment Plan hopes to bring that character and activity back to the west side corridor. This plan is introduced in the document with the history of the site and the riots that destroyed the commercial corridor. Highlighting this, the redevelopment hopes to bring the life back to Springwood Avenue with mixed use and commercial buildings, parks and public plazas. With the streets proximity to the

transportation center, there is an opportunity to generate activity around increasing density and adding amenities for commuters to move into the area.<sup>15</sup>

The 2017 Master Plan also points out the transportation center as a redevelopment site. In section 5.4.1.9, they have proposed to “upgrade and renovate the transportation center to be a more user-friendly and efficient facility that would include expanded parking, enhanced site amenities and commercial/community space.”<sup>16</sup> The transportation center is also mentioned in the development of a bike program, which is proposed to be integrated into the transportation center with secure bike storage or a bike share program space. Lastly, the transportation center is mentioned in section 5.4.2.10 where the plan proposes preparing a gateway study. This aims at creating attractive entrances to the city. Sitting on a site that is the entrance to the city via public transportation as well as car and pedestrian traffic coming from the southern towns, the transportation center is an ideal location for a gateway into the city.

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<sup>15</sup> The City of Asbury Park Department of Planning and Redevelopment. "Springwood Avenue Redevelopment Plan." Asbury Park, NJ, April 2016.

<sup>16</sup> Clarke Caton Hintz. *Asbury Park Master Plan Reexamination Report*. Master Plan, Asbury Park, NJ: Clarke Caton Hintz, 2017.

## Chapter 3: Transit Oriented Development

*“The Transit-Oriented Development concept is simple: moderate high-density housing, along with complementary public uses, jobs, retail and services, are concentrated in mixed-use developments at strategic points along the regional transit system”<sup>17</sup>*

- Peter Calthorpe

### Suburban Sprawl in the US

Sprawl is characterized by low density development with segregated land uses. Suburbs are the result of this sprawl with the lack of town centers and a disconnected street network.<sup>18</sup> The development of highways spurred the flight of citizens from city centers to previously open, rural land due to the new accessibility. These developments were designed based on cars and increased the country’s reliance on fossil fuels. As climate change becomes an ever-increasing risk and cities turn to sustainable development, low density suburbs are a place to begin the change.

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<sup>17</sup> Peter Calthorpe, *The Next American Metropolis: Ecology, Community, and the American Dream*. New York: Princeton Architectural Press, 1993.

<sup>18</sup> Yingling Fan, Song Yan. "Is Sprawl Associated with a Widening Urban-Suburban Morality Gap?" *Journal of Urban Health* 86, no. 5 (2009): 708

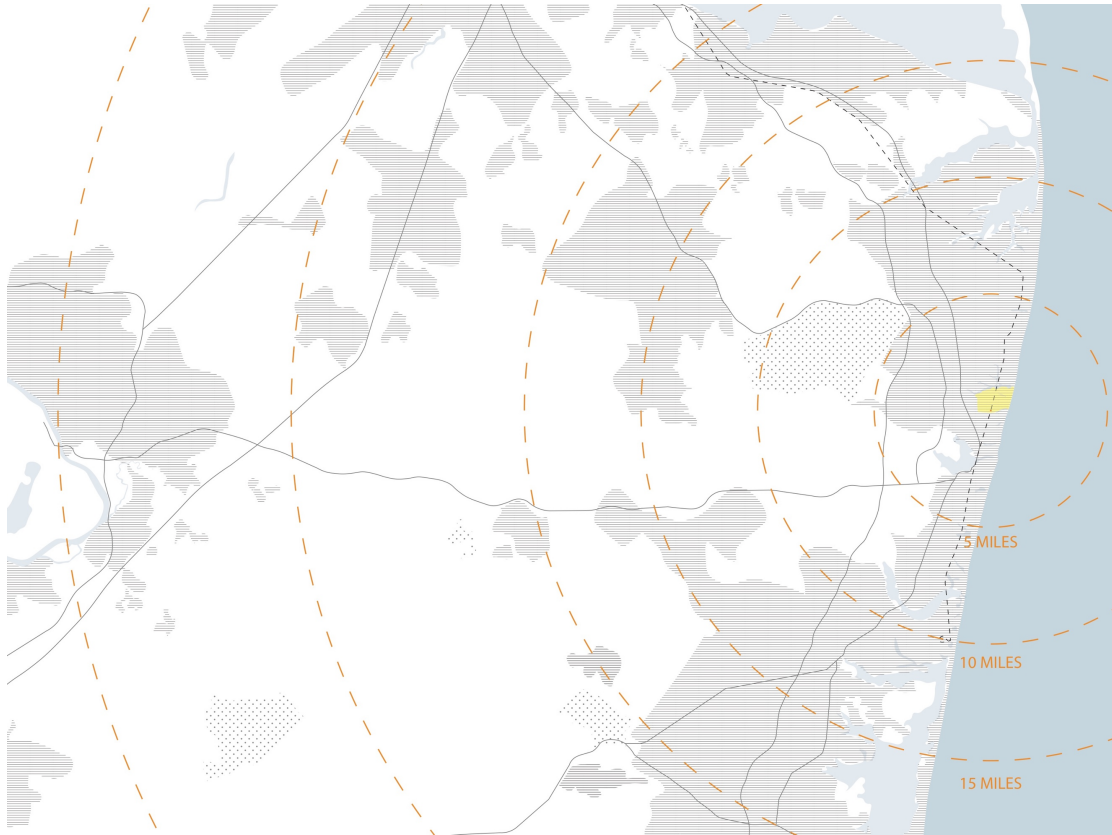


Figure 18 - Suburban Sprawl in New Jersey - Source: By Author

The effects that sprawl has on our environment can be concentrated to the dependency on the automobile. Decreased density means less accessibility to jobs and shops by foot or public transportation. This leads to an increase in automobile use and therefore an increase in fuel use. Sprawl has also affected communities socially, cutting people off from one another by separating them physically and giving few places for people to come together. This leads to a decrease in the sense of community by the lack of shared spaces and interaction between citizens.<sup>19</sup>

In her book, “Retrofitting Suburbia,” Ellen Dunham-Jones describes the process of retrofitting as inserting new elements that were not available at the time of initial

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<sup>19</sup> Michael Lewyn. "Sprawl in Canada and the United States." *The Urban Lawyer* 44, no. 1 (2012): 87

development. In the suburbs, this would be seen as strategic infill potentially located around public transportation, following the principles of smart growth and transit oriented development.<sup>20</sup>

### Defining Transit-Oriented Development

In 1993, Peter Calthorpe published his book “The Next American Metropolis,” which defined Transit Oriented Development (TOD) created a set of guiding principles. Living in San Francisco, Calthorpe was inspired by the long commutes, traffic congestion, and unaffordable housing prices in the Bay Area. He saw the problem as one affecting communities as well as the environment to their detriment. While not immune to critique, the book set forth a new era in community planning, one centered around the economic and ecological benefits of mass transit. The accessibility to transit, along with all of the other guidelines are based on one key concept of the walkable neighborhood.<sup>21</sup>

The guiding principles behind Transit-Oriented development are not complicated, but provide a structure for planners and architects to work off of to create better communities. The first set of guidelines is the centralization of public transportation in urban design. Calthorpe believed that a one-quarter mile radius around a station made for the best walkable neighborhood and that development should be focused within this area. Within this radius, he believed, should be access to commercial, housing and office building types, referencing the ability to run some of the normal day to day errands during lunch breaks or walks on either end of a person’s commute. Other key ideas are

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<sup>20</sup> Ellen Dunham-Jones, and June Williamson. *Retrofitting Suburbia : Urban Design Solutions for Redesigning Suburbs*. Somerset: John Wiley & Sons, Incorporated, 2011. 58

<sup>21</sup> Calthorpe, Peter. *The Next American Metropolis: Ecology, Community, and the American Dream*.

those of pedestrian friendly streets and mixed housing typologies in order to create a pleasant, diverse community. Open green space of high quality and the creation and importance of public spaces was a primary focus to bring these communities together. Finally, while the guidelines talk a lot about regional planning and design along transit corridors, there is also the point of implementing these ideas in existing neighborhoods with infill.<sup>22</sup>

With the primary idea of development occurring around a transit stop, it is at the train station or transportation center that the design of Transit-oriented development begins. On one side of the transit stop, Calthorpe argues, should be green space or some form of public space, bound on the remaining three sides with mixed density residential uses stemming from this public square. On the opposite side of the train station would be the commercial activity. Primary commercial uses should be placed directly adjacent to the station, bound on the opposite side by a main arterial road. On the opposite side of this road is where higher density residential and office uses are placed. In this scheme, the transit stop, public square or green space, and core commercial uses are placed at the heart of the design, providing easy access to public transportation and commercial activity for all.

The ideal development will have the transit stop with a road running along it, as well as a main arterial road parallel a block away. Within that block should be the primary area for commercial activity such as retail and restaurants. Moving past the arterial road, away from the transit stop, is where higher density residential and office space are placed.

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<sup>22</sup> Calthorpe, Peter. *The Next American Metropolis: Ecology, Community, and the American Dream*. New York: Princeton Architectural Press, 1993.

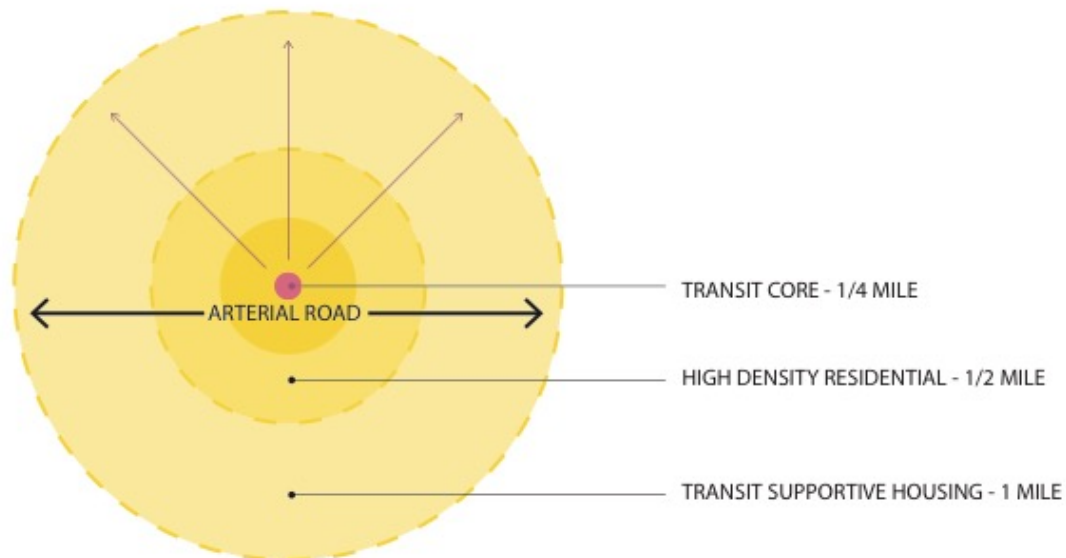


Figure 19 - Transit Oriented Development Principles - Source by Author

In the implementation of Transit Oriented Development, Calthorpe hoped to create more sustainable, enjoyable communities. Studies in the Journal of Transport and Land Use show that the principles that Calthorpe focused TOD on do achieve some of the sustainable goals. New Jersey's planning is moving toward transit oriented development in many places, especially in the northern part of the state with train and bus access to jobs in New York City. Studying these developments in different towns throughout New Jersey, one study found interesting facts that support Calthorpe's design ideas relating to design and frequency of transit use. The study found that denser local street networks lead to an increase in walking frequency. The more connections there are between different zones, the easier it is for pedestrians to access the amenities by foot and more likely they are to do this. There was also data to support that the closer someone lived to

the train station, the less frequently they drove.<sup>23</sup> Supporting residential and mixed use developments near train stations has the backing of research and data within the state and the country.

**Table 4:** Cross-tabulations of modal use frequency and distance from train station

Frequency	Walking Frequency			Public Transit Use Frequency			Driving Frequency		
	Lives in TOD or within 0.5 mi	0.5 to 2 mi	Total	Lives in TOD or within 0.5 mi	0.5 to 2 mi	Total	Lives in TOD or within 0.5 mi	0.5 to 2 mi	Total
Never to a few times a year row %	174 41.6%	244 58.4%	418	345 46.7%	393 53.3%	738	101 67.3%	49 32.7%	150
Once to a few times a week row %	334 62.4%	201 37.6%	535	155 70.5%	65 29.5%	220	297 65.4%	157 34.6%	454
Every workday row %	313 72.1%	121 27.9%	434	256 71.1%	104 28.9%	360	468 53.0%	415 47.0%	883
Total row %	866 58.6%	612 41.4%	1478	901 8.8%	631 41.2%	1532	900 58.3%	643 41.7%	1543

### Critiques of Transit Oriented Development

Calthorpe’s transit oriented development outline looked at many factors that could influence this development model at different scales, from regional to local. While looking at the various scales is necessary, critics have pointed out that his views on the regional planning of transit oriented development districts might be jaded. Calthorpe mentions networks of transit villages and changes to regional planning policy, which is the ideal situation. Realistically, Brian Quinn states in his critique of the book, traditional developers would take over this land and develop it as they see fit. The competition to make more money from the plan would disturb Calthorpe’s ideal plan. There is also the issue of land assembly which could stand in the way of the ideal network. Securing a

<sup>23</sup> Robert B Noland, "Transit-Oriented Development and the Frequency of Modal Use." *Journal of Transport and Land Use* 8, no. 2 (2015): 28

large enough piece of land is rare and would prove difficult. Looking at his plan in more of an adaptive way could make the ideas applicable to existing communities, where only smaller parcels of land can be acquired.<sup>24</sup>

Quinn also points out the lack of research Calthorpe did relating to the reason for car dependency. Throughout the book, Calthorpe speaks relating to transit, but not relating to cars. No matter how close someone lives to a train stop, the truth, Quinn argues, is that Americans are still dependent on their cars. Transit oriented development strategies can help to lessen the daily use of cars, but it will not eliminate the need or desire of American's to use cars. In Asbury Park, there are not enough trains per day to eliminate the need for cars. The bus networks help, but because of the infrastructure of the entire region being built on car dependency, it will still not completely eliminate cars. Quinn writes that the focus of design as well as the politics that surround it should be to encourage public transportation rather than try to eliminate cars.<sup>25</sup>

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<sup>24</sup> Brian Quinn. "Transit-Oriented Development: Lessons from California." *Built Environment* 32, no. 3 (2006): 312

<sup>25</sup> Brian Quinn. "Transit-Oriented Development: Lessons from California." 317

## Chapter 4: Railroads and Cities

*“Railroads – the strong clamps which are destined to bind together with ribs of steel the whole of this great country; may they be multiplied and extended till they shall have cemented this Union beyond the possibility of severance”*

- Reverend Dr. Flint<sup>26</sup>

### Railroads as Regional Connectors

The development of the railroad system in America brought opportunity and excitement throughout the country. The early novelty of rail travel can be seen in old diaries and letters, where people wrote about the memorable trips and fast-passing landscapes they were able to see from the new mode of transportation. Railroads were seen as “strong clamps” that would bind America’s cities together and create unity across the nation. Providing transportation of goods as well as giving people the ability to travel to new places was seen as a way to extend the reach of urban areas.

Growth came with railroad development as cities reoriented or completely moved themselves to be near the railroad and all of the opportunities it was seen to have brought. Towns would now have the ability to access the city on a daily basis, creating the commuter lifestyle that is prevalent in America’s suburbs. Connection across the northeast corridor by the Baltimore-Ohio Railroad sparked development between the cities of New York and Philadelphia, building up the framework for New Jersey’s

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<sup>26</sup> Grant, Roger. *Railroads and the American People*. Edited by Project MUSE Database. Bloomington: Indiana University Press, 2012.

suburbs. New Jersey is in between these two major cities, but before rail travel, it would not have been possible for New Jersey's residents to access jobs in these cities. The development of the rail gave families the opportunity to live outside of the dirty, loud city but still have access to the employment opportunities in the city. There was also the increased ability to transport the products of the New Jersey farms in a faster way. The farms that are dispersed throughout the state could now send their grain and produce into the larger cities via rail.

The towns that developed along these transit routes took a similar shape to each other. In a basic town development, the train depot was used as the main public space, emphasizing the importance of the train on the social life of the community. Connections between the station area and the business core was a primary focus, as developers saw the power of the train to encourage development and support business. Uses such as restaurants and hotels began popping up near stations, welcoming overnight guests and travelers in need of food.<sup>27</sup>

There was also a social connection aspect to railroads. Train travel was seen as an agent of social life, a way for American citizens to come together. Creating a faster, easier way for people to traverse the country meant giving people more access to each other. Families that once did not live close to each other now had a way to connect that was faster and easier than before the development of the railroad system.

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<sup>27</sup> Grant, Roger. *Railroads and the American People*. Edited by Project MUSE Database. Bloomington: Indiana University Press, 2012.

## Railroads as Community Dividers

Aside from historically political and cultural divisions, multiple physical urban design markers have been shown to create or exacerbate segregation in the United States.<sup>28</sup> Historically, the idea of the “wrong side of the tracks” has shown the power of infrastructure such as railroads in dividing communities. When the phrase was first coined, it pointed to the fact that, traditionally, African Americans were housed on the east side of the train tracks. This was due to the air pollution that trains used to cause and the prevailing winds that would blow that soot and debris to the east side of the tracks. In Asbury Park, due to its proximity to the eastern shoreline, the “wrong side” was to the west. This area was undeveloped at first founding of the city, with development to the west of the tracks only occurring in order to house African American workers that served the white families vacationing on the east side of the tracks.

Racial dot maps created from the 2010 US Census show the divide by railways and highways that is prevalent throughout the country. Looking at the region containing Asbury Park, it is immediately apparent that the segregation that the west side was built on is still very much in effect today. To the west is a majority African American population, with Hispanics and Whites contained to the east of the train tracks. Even more dramatic is the difference between the more urban Asbury Park and the primarily white population of the more residential communities that surround the city.

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<sup>28</sup> Emily Badger, Darla Cameron, “How Railroads, Highways and Other Man-Made Lines Racially Divide America’s Cities,” *The Washington Post*, July 16, 2015, [https://www.washingtonpost.com/news/wonk/wp/2015/07/16/how-railroads-highways-and-other-man-made-lines-rationally-divide-americas-cities/?noredirect=on&utm\\_term=.8e3747218feb](https://www.washingtonpost.com/news/wonk/wp/2015/07/16/how-railroads-highways-and-other-man-made-lines-rationally-divide-americas-cities/?noredirect=on&utm_term=.8e3747218feb)

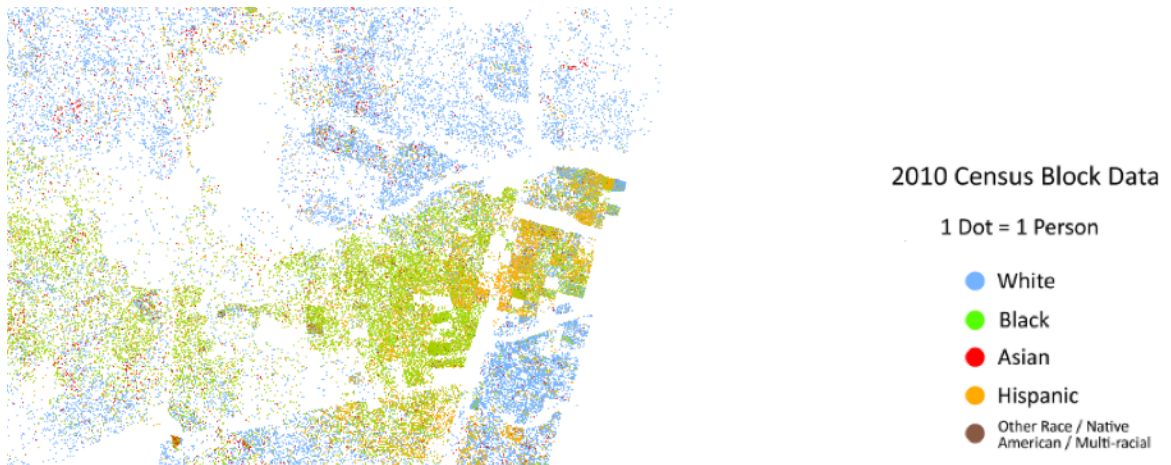


Figure 20 - Racial Dot Map of Asbury Park Region, Courtesy of the Virginia Weldon Cooper Center for Public Service

Before the early 1900s when the railroads were built, 90 percent of African Americans still lived in the southern United States. Due to the fact that the majority of northern US railroads were laid prior to the migration of African Americans from the southern states, it is believed that railroad tracks were not placed intentionally to segregate, even though that is what eventually came to be the case. The Great Migration occurred from 1915 to 1950, when African Americans began to move North. States in the north were generally more tolerant of African Americans, but became highly segregated, often by use of railroad tracks to divide communities. After the 1970s and the Civil Rights Movements, the Fair Housing Act prohibited discrimination, but segregation was still very much apparent.<sup>29</sup> In Asbury Park, this can be seen along Springwood Avenue and the adjacent streets, where housing projects took the place of burned down buildings,

<sup>29</sup> Ananat, Elizabeth Oltmans. "The Wrong Side(s) of the Tracks: The Causal Effects of Racial Segregation on Urban Poverty and Inequality." *American Economic Journal: Applied Economics* 3, no. 2 (2011): 34-66. <http://www.jstor.org/stable/41288628>.

but development of these affordable housing projects was completely segregated to the west of the train tracks.



*Figure 21 – Asbury Park Affordable Housing Projects Proximity to Train Station - Source by Author*

This physical segregation has created a black “underclass” in these cities that affects income, education and skill levels. While the west side of Asbury Park does have easier access to school systems, they are at a disadvantage due to the seasonality and nature of jobs in a beach town. Most of these jobs are service related, harking back to the segregated city the west side was initially developed as. Creating spaces for this

community to learn skills that would otherwise be unavailable can help boost the local economy and pride of place in the city.

### Train Stations as Community Bridge

In the beginning of the rail systems development, as towns would be built up around the railroad, plazas and commercial districts would develop around the train station as a point of connection within the community. The train station served once as a point of connection in the heart of the rail-based towns. Train station plazas served as the main public gathering spaces in the towns, and the stations had large, tall waiting halls where people could congregate. These stations also served as the entrance to these towns for visitors. Today, train stations are often located at the heart of a town for ease and accessibility. This prominent location also places it close to the municipal building in most cases. Creating a shared space for these programs creates a town center area that can incorporate public programs.<sup>30</sup>

Today, many smaller town stations, such as Asbury Park and the other towns along the coast, are composed more around parking spaces than community spaces. Combining the necessary train station program with additional community based programming can bring back the culture of train stations as a space for the community to come together.

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<sup>30</sup> Village Well. "Train Stations as Places for Community Wellbeing." *VicHealth*. July 2006. 16



*Figure 22 - Arnhem Station - Photo by Hufton+Crow*

“Railroad stations are our contemporary architecture of democracy.” Aaron Betsky, dean of the Frank Lloyd Wright School of Architecture. Looking at the transition from airports to railroads, railroads act as a more publically accessible gathering point in a community. Open to all and affordable to most, railroad stations are one of few locations where people of all income levels come together regularly. These structures can also serve as catalysts for urban development. Many stations architecture embraces this with transparent materials or complete lack of exterior walls, like the Zurich Central Station. Celebrating the openness and accessibility of the railroad can inform design decisions that welcome people from all different backgrounds.<sup>31</sup>

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<sup>31</sup>Aaron Betsky. *Railroad Stations are Our Contemporary Architecture of Democracy*. May 17, 2016. <https://www.dezeen.com/2016/05/17/railroad-stations-architecture-democracy-transport-aaron-betsky-opinion/> (accessed Dec. 13, 2018).

## Chapter 5: Transportation Center Design

*“The characteristics of the commuter rail station are similar to those of the original steam-powered railroad stations, in that the architecture reflects an image the community is seeking to present.”*

- Kenneth W. Griffin<sup>32</sup>

### Train Station History and Vernacular

Historically, the train station began as a building typology in England in 1830, mainly providing shelter for waiting passengers. The US followed very closely behind, with the first passenger train station opening in Mount Clare, Baltimore, Maryland servicing the Baltimore and Ohio Rail Line. In urban areas, the station would usually be situated at the end of downtown business centers, these structures were typically large span cast iron and steel structures. Large roofs spanned the structure with openings that allowed the harmful gases from trains at the time to escape, and glass fenestration on the roof allowed light in. These are some basic characteristics, but the architecture varied greatly as the architecture of these stations were used as the entrance to the city and were inspired by the community it served. Originally, these structures were meant primarily to shield passengers from the weather while waiting for the train, but as the technology and communities changed, so did the programming of the station. Travel increased and stations added programs such as waiting rooms, baggage handling, mail rooms and spaces for food and ticket sales. In larger stations, the functional requirement challenges

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<sup>32</sup>Kenneth W. Griffin. *Building Type Basics for Transit Facilities*. Hoboken, New Jersey: John Wiley & Sons, 2004.

of the rail led to the creation of large public spaces, such as those in the Original Penn Station or Grand Central Terminal.<sup>33</sup>

### Basic Elements of a Transportation Center

While functions for a train station have remained relatively the same throughout the years, the integration of other types of transportation make a transportation center more complicated. In Asbury Park, the modes of transportation that will be handled are commuter rail, bus, automobile, and bicycle. While not a type of transportation, focusing on the pedestrian experience in and around the transportation center will also be of primary importance. With all of the different modes of transportation, the passenger experience must be smooth and circulation clear. Due to the varied program requirements from station to station, there are no national or international design standards, only common design guidelines.<sup>34</sup>

Typical small-scale train stations are composed of few program elements thoughtfully arranged to create a clear pathway for passengers. Ticket offices, while still needed and used, are able to be smaller due to the prevalence of ticketing machines. A service desk can replace a ticket office for smaller, modern stations to assist with wayfinding and troubleshooting. A waiting area is a key component in a train station. Providing a waiting area with access to seating and amenities like shopping or food creates a comfortable environment for passengers. In Asbury Park, trains come an average of once an hour, so there may be passengers with a longer wait time if they miss

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<sup>33</sup> Griffin, Kenneth W. *Building Type Basics for Transit Facilities*. Hoboken, New Jersey: John Wiley & Sons, 2004.

<sup>34</sup> Griffin, Kenneth W. *Building Type Basics for Transit Facilities*. Hoboken, New Jersey: John Wiley & Sons, 2004.

a train or haven't checked the schedule. Public restrooms will need to be provided and should be sized, in the case of a seasonal area such as Asbury Park, for summer counts. There will also be back of house areas such as offices for personnel, storage, and janitorial supplies. Additional amenities can include baggage storage and bike lockers.<sup>35</sup>

For bus use, there is typically a covered waiting area. Typical bus dimensions to consider are 10 feet in width, 42 feet in length, and 10 feet in height. Most importantly for bus transit, turning radii will need to be properly figured into the street network design within the site. Bus turn around areas will need to have an interior radius of 27 feet and exterior turning radius of 55 feet from the central point before paving or obstacles.

Vehicle access and storage are also considerations, especially when handling commuter rail. Parking can be provided for commuters in either surface lots or garages. The pedestrian access to the station from these garages should be simple and clear to visitors unfamiliar with the site. Vehicular access will also need to be provided for short term parking, which should be located close to the station entrance, as well as kiss and ride access. A vehicular path for private cars, car services or taxis to pick up and drop off passengers should be provided in a loop to ease circulation.

More flexible transportation uses that need to be considered in transportation center design are bikes and pedestrian circulation. Bike storage can be provided by means of bike racks, or bike lockers. Bike racks work best for short term storage, or longer-term storage in areas of low crime. Bike lockers are best for long term storage, although they do require more space and money to build, they can encourage local users to bike,

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<sup>35</sup> Griffin, Kenneth W. *Building Type Basics for Transit Facilities*. Hoboken, New Jersey: John Wiley & Sons, 2004.

increasing the use of the train and bus system and lessening the need for car parking. Pedestrian pathways, especially when facing on-grade tracks, needs to be carefully thought through. Strategic positioning and well as paving pattern changes can create a safer station area. These paths should work with the surrounding context in aligning pathways with existing sidewalks and bike paths.

The entrance to a train station should be in a building or in a public plaza when possible. Either way, the entrance needs to be made clearly visible from the outside to allow for the clearest wayfinding. Like the train station itself, the entrance should reflect the character of the surrounding neighborhood, as it serves as an entrance for visitors.<sup>36</sup>

These generic guidelines are applicable at multiple scales and can be adapted to multiple sites and contexts. The main points to take away are that the train station should reflect its context, and that there are a lot of moving parts, meaning that clear circulation is key to a successful transportation center.

### Precedents

Located in a 377,000 square foot redevelopment area, Solana Beach station is an Amtrak station in Solana Beach, California, that will include the rail station, a parking garage, retail and restaurant space as well as housing. The building was developed to start further development to the north of the station. The building is 3,300 square feet, a scale that comfortably accommodates 1,175 passengers a day on the commuter rail line. The rail, similar to Asbury Park, has 2 tracks with side platforms. Unlike Asbury Park, the city invested money into lowering the tracks in order to eliminate at grade crossings. The

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<sup>36</sup> Kenneth W Griffin. *Building Type Basics for Transit Facilities*. Hoboken, New Jersey: John Wiley & Sons, 2004.

railroad was depressed to eliminate railroad crossings for pedestrians and cars. Vernacular forms of the huts in the area were used to fit into the context. Because of its smaller scale, the level of detail in this project is important and the materiality and light quality create a bright, welcoming space. The east and west walls are all glass curtain walls, and a skylight runs continuously across the building. The roof plane curves around to create a semicircular space in section which forms a gateway into the city.

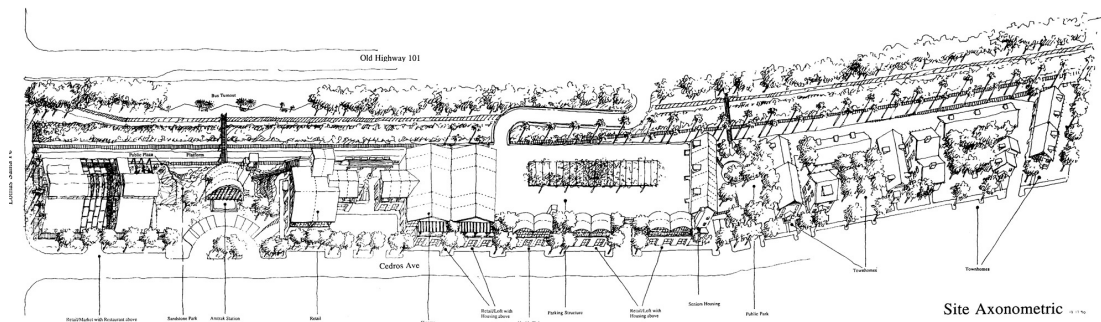


Figure 23 - Solana Beach Station Master Plan - Source: Rob Wellington Quigley Architects

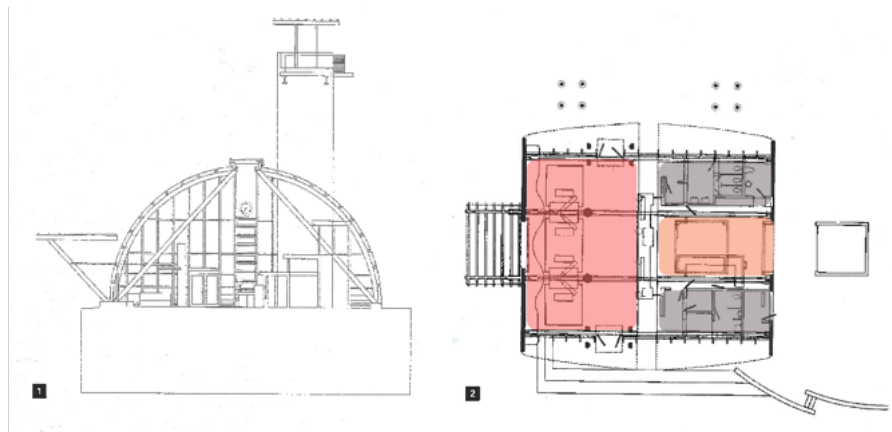


Figure 24 - Solano Beach Section and Program Plan - Source: Rob Wellington Quigley Architects, Author

## Chapter 6: Community Focused Design

### Consequences of Ignoring Community

Throughout the world, cities are attempting to revitalize by building high end buildings by world famous architects. The effect of this approach is known as the Bilbao Effect, named after Frank Gehry's famous building in Spain. Large scale, expensive buildings are built not for the community they are situated in, but as markers to draw in tourism. While this raises the local economy, the shift drives out the residents of the community and creates a hostile environment that does not welcome everyone. This can be compared to large medieval buildings such as churches, which also used massive amounts of public money to build. The difference lies in the programming. While medieval churches were built as a gathering space for everyone in the town, modern "Bilbao-like" buildings are designed for a small percentage of the population that can afford things like operas and plays.<sup>37</sup>

It is not enough to design beautiful civic and cultural buildings. The buildings effects on the community must be carefully thought through and designed to welcome residents for the community that is paying for and living with the building. In Asbury Park, the new Asbury Park Ocean Club is a sculptural building located along the shoreline. The building is meant to catalyze development in the area and create opportunities for the city.<sup>38</sup> But in a city facing poverty and low job rates, a building selling \$6 million apartments threatens the rest of the community. Raising nearby house

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<sup>37</sup> Alex Cocotas, "Design for the One Percent," Jacobin. June 2016

<sup>38</sup> Nick Corasaniti, "A Bet That Luxury Can Be a Part of Asbury Park's Comeback Story," New York Times. June 2018

prices can begin to drive the current residents out of Asbury Park, and threaten to further the segregation of the city. As the Bilbao effect demonstrates, building buildings for the one percent of people that can afford these prices risks driving out the rest of the community who cannot. This will change the culture of the city immensely, threatening to lose the artistic and historical characteristics that make Asbury Park what it is.

### Designing for Community

Contrasting the modern Bilbao effect, design that focuses on the communities they are in has benefits that create more vibrant, livable communities. Creating places that encourage social interaction within and between neighborhoods create social networks that share resources and knowledge, growing the social capital of the community. The Performance Innovation Unit reports that this increase in social capital increases gross domestic product, labor markets and education. These are all areas that are struggling in Asbury Park. The report also showed benefits such as lower crime, better health and a better functioning government. With the crime and corruption that has faced Asbury in the past, the increase in social capital should be a primary focus of development in the city at the master planning and building scales.<sup>39</sup>

Connection within communities has different elements at different scales that should be examined and designed for. Local connections happen within local community groups and are normally stronger, more personal connections. In Asbury Park, most of

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<sup>39</sup> Jo Williams, "Designing Neighbourhoods for Social Interaction: The Case of Cohousing," *Journal of Urban Design*. August 2006

these connections would happen within groups such as the community garden keepers or within the many churches located throughout the city. Local-local connections happen between community groups or between communities. These connections can become higher level institutions with the aim to connect or organize the different groups. Local-external connections have a vertical connection that connects local and external groups. Represented by the municipal building, the local government within Asbury Park serves as a connector between the different groups. External-external connections often lead to partnerships that collaborate for a common goal, sometimes at a larger scale than local-local connections. And finally, external connections are strong connections between the individual and an external agency.<sup>40</sup> Individuals living in Asbury Park who bring in external visitors begin to bridge the gap in external and internal connections.

Centrally located facilities that are highly accessible are key in creating successful community spaces that encourage interaction. The most successful community spaces are flexible to accommodate a variety of uses and people. Smaller communities lead to a higher intensity of use in social spaces, and due to the relatively small permanent population of Asbury Park, the sense of closeness of the community has the ability to be higher. This will change in the summer when long and short-term visitors also begin to become part of the population of the city. Hierarchy of spaces can provide different use potentials for different organizations and populations within the community.<sup>41</sup>

There are also personal factors which affect the engagement in community spaces. People's backgrounds such as their social class, education and income can affect the interpersonal dynamics and desire to participate in community events and come to

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<sup>40</sup> Jules Pretty, Hugh Ward "Social Capital and the Environment," World Development. Feb. 2001. 212

<sup>41</sup> Williams, "Designing Neighbourhoods for Social Interaction: The Case of Cohousing,"

community spaces.<sup>42</sup> Asbury Park's history of segregation and current wage discrepancy highly differentiate the populations of east and west Asbury Park, as well as the population of visitors. Programming a space that is accessible and useful for all three populations will be imperative in creating a space for all of the people in the community to come together.

A study on cohousing provided a list of design principles to encourage social contact in community spaces. These principles include the presence of indoor and outdoor areas, visibility into public spaces, car free communities and transitions between public and private spaces being gradual shifts with different levels of privacy and buffer zones. Shared walkways between nodes of activity provide greater chance of sporadic run-ins and therefore greater social interaction.

### Community Benefits

Communities and individuals benefit from buildings designed to be open to the community they are situated in. Community recreation buildings and programs have benefits that reach to different age groups within communities. On top of these buildings and programs improving the physical wellbeing of individuals, there are also community wide benefits. One of the primary benefits of this programming is crime reduction. Providing a safe space for youth to come and engage in physical activity keeps them occupied and creates a positive network of role models in their community. These

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<sup>42</sup> Williams, "Designing Neighbourhoods for Social Interaction: The Case of Cohousing,"

programs also assist in building community by providing times and places for people to come together and be a part of a team.<sup>43</sup>

With arts programming, the community benefits from the positive impacts of art on health and the economy. Studies have shown that the arts attract tourists from outside of the city, which brings outside revenue to the local economy. Arts have also been shown to attract residents as well as businesses, creating a stronger local economy and more investment in the city that can be used for improvements. At the scale of the individual, the arts have been shown to improve health and psychological well-being. A large factor in this is the social engagement that art creates and stronger social bonds have been shown to benefit physical and psychological health. The educational benefits that come with local art benefit the community by improving student performance and attendance in local schools.<sup>44</sup>

### Precedents

The Providence Neighborhood Center is a community center located in Providence, Australia, designed by Ellivio Architects in 2016. Stretching across the landscape and focusing on blending the indoors and outdoors, the program features both enclosed and open-air spaces. The building is designed to be flexible for multiple uses and programs within the community.

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<sup>43</sup> Perfect Mind. *The Many Benefits of Youth Sports in Your Community*. Oct. 3, 2017. <https://blog.perfectmind.com/the-many-benefits-of-youth-sports-in-your-community>

<sup>44</sup> Joshua Guetzkow. "How the Arts Impact Communities: An Introduction to the Literature on Arts Impact Studies." *Taking the Measure of Culture Conference*. Princeton: Princeton University, 2002. 7-11

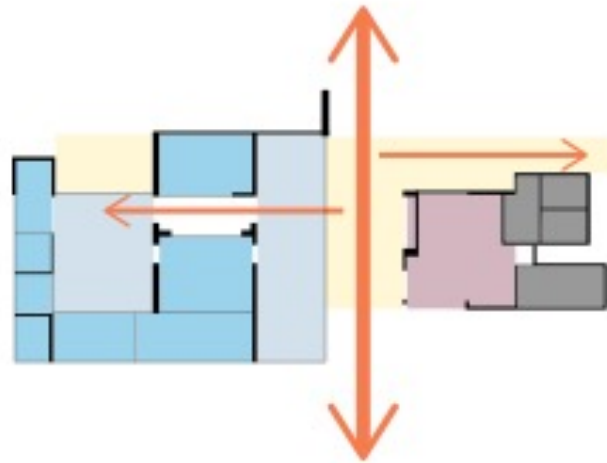


Figure 25 - Providence Neighborhood Center Program Diagram - Source: By Author

There are meeting rooms that surround and open to event spaces with large folding doors, giving the ability to join the two rooms into a larger space depending on the function. The central connection is covered but open air, with program stemming off of it. There is a cafe that spills onto a patio and terraced landscape features that create an outdoor space. This building is mainly based in the landscape and took cues from those features, but there are spatial and contextual cues that were taken that could be applicable in Asbury Park.

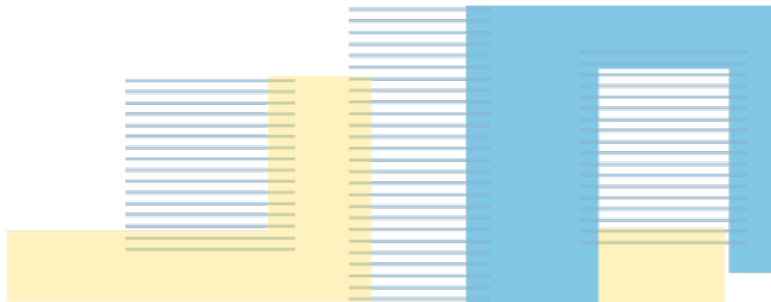


Figure 26 - Providence Neighborhood Center Spatial Relationships - Source: By Author



*Figure 27 - Silver Spring Civic Center Plaza - Source:*

*[https://commons.wikimedia.org/wiki/File:Veterans\\_Plaza\\_SS\\_MD.JPG](https://commons.wikimedia.org/wiki/File:Veterans_Plaza_SS_MD.JPG)*

The Silver Spring Civic Center and Veterans' Plaza, located in Silver Spring, Maryland, was completed in 2010 by Machado Silvetti Architects. The Civic Building is designed to align with the sidewalk to and the composition of public and private spaces inside welcome citizens into the space. The plaza bleeds into the building with a covered portico created from a wrapping roof plane. This space invites visitors into the pre-function space which leads into the Great Hall. These spaces face the public plaza to create an open, inviting civic center, connecting residents with the municipality.

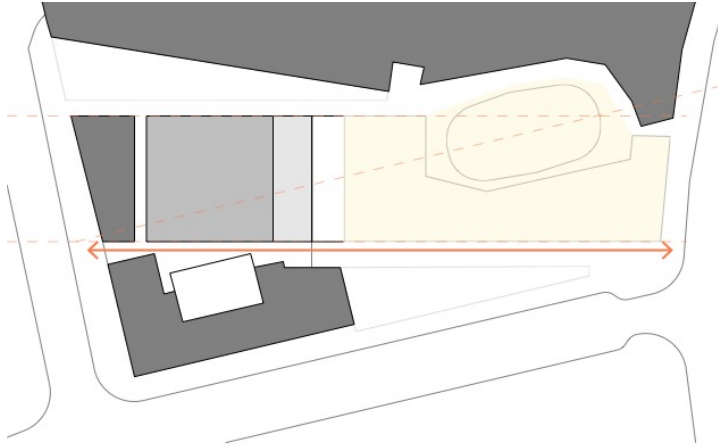


Figure 28 - Silver Spring Civic Center Public Private Diagram - Source: By Author

The Veterans' Plaza is an open space that connects with the pedestrian shopping street of Ellsworth Drive and terminates in the Civic Building. The plaza provides an open space for dining and provides seating for visitors to relax. On the north side of the plaza there is a recessed space covered by an expressive roof structure. This multifunctional space can be filled with tables for normal days, acts as a music venue on weekends during the nice weather, and is filled with water to function as an ice skating rink to keep the space active in the winter time. This one area provides a space that keeps the plaza active at all times of the day and year.

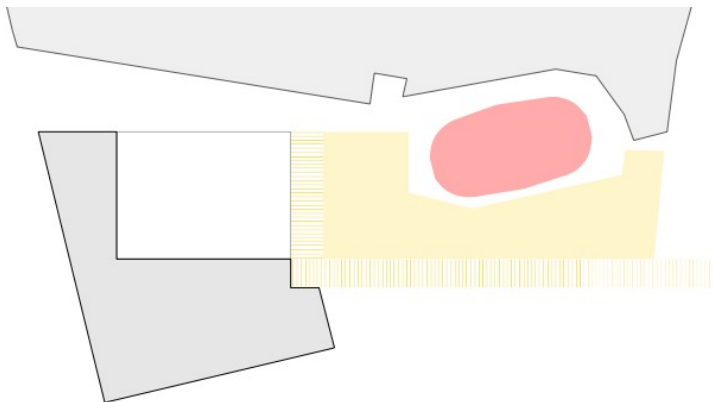


Figure 29 - Silver Spring Civic Center Veterans' Plaza - Source: By Author

## Chapter 7: Farmers Markets

### Food Deserts

The USDA defines a “food desert” as “parts of the country vapid of fresh fruit, vegetables, and other healthful whole foods, usually found in impoverished areas. This is largely due to a lack of grocery stores, farmers’ markets, and healthy food providers.”<sup>45</sup>

Throughout the world, population growth is increasing while land resources are decreasing. As the population grows, so does the demand for food resources to sustain the population. Studies have shown that current consumption trends indicate an increase of people eating an increase of food per person. If this continues on the same path, globally there will be a consumption rate that is double that of the replacement rate for food resources. This poses a serious problem to communities throughout the world.<sup>46</sup>

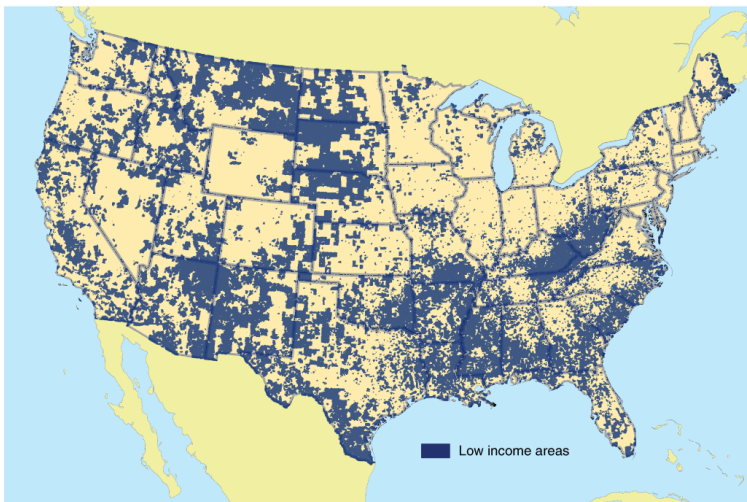


Figure 30 - Poverty in America

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<sup>45</sup> USDA Defines Food Deserts. n.d. <http://americannutritionassociation.org/newsletter/usda-defines-food-deserts> (accessed 11 19, 2018).

<sup>46</sup> Jenny Donovan, "Architecture, Planning and Food." *Environment Design Guide*, (Royal Australian Institute of Architects), July 2012: 4

While the population continues to increase, land availability and resources are diminishing. Urbanization and suburban sprawl have affected the amount of farmland available. Land is also being used for alternate purposes such as mining and fuel resources to keep up with increasing demand in energy resources. The land that has been used for farming is also being affected by climate change. The changes in weather and increase in natural disasters due to climate change has decreased production of food.<sup>47</sup>

A case study in south London explored the remediation of a food desert by means of providing a farmer's market. The authors noted that food costs in and around lower-income, lower-availability food deserts are higher than costs in neighboring, wealthier areas, which have more access to food. In the study, the implementation of a farmers' market in the neighborhood brought food costs down 12% after 3 years. The farmers' market provided more availability and better variety to the citizens living in these areas, as well.<sup>48</sup>

According to the USDA's food desert map, the majority of Asbury Park is considered a "Low income & Low Access area at ½ mile."<sup>49</sup> This statistic means that the majority of Asbury Park lives over half a mile from a supermarket. While there are mini markets scattered throughout the city, these are not healthy options for families living in the area. And, due to the fact that most of the city residents do not own a car, accessing a supermarket with healthy options is extremely difficult.

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<sup>47</sup> Donovan, "Architecture, Planning and Food," 4

<sup>48</sup> Larsen, Kristian, and Jason Gilliland. "A farmers' market in a food desert: Evaluating impacts on the price and availability of healthy food." *Health & Place* 15, no. 4 (2009): 1158-1162.

<sup>49</sup> United States Department of Agriculture. *Economic Research Service Food Access Research Atlas*. May 18, 2017. <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/> (accessed Nov. 19, 2018).

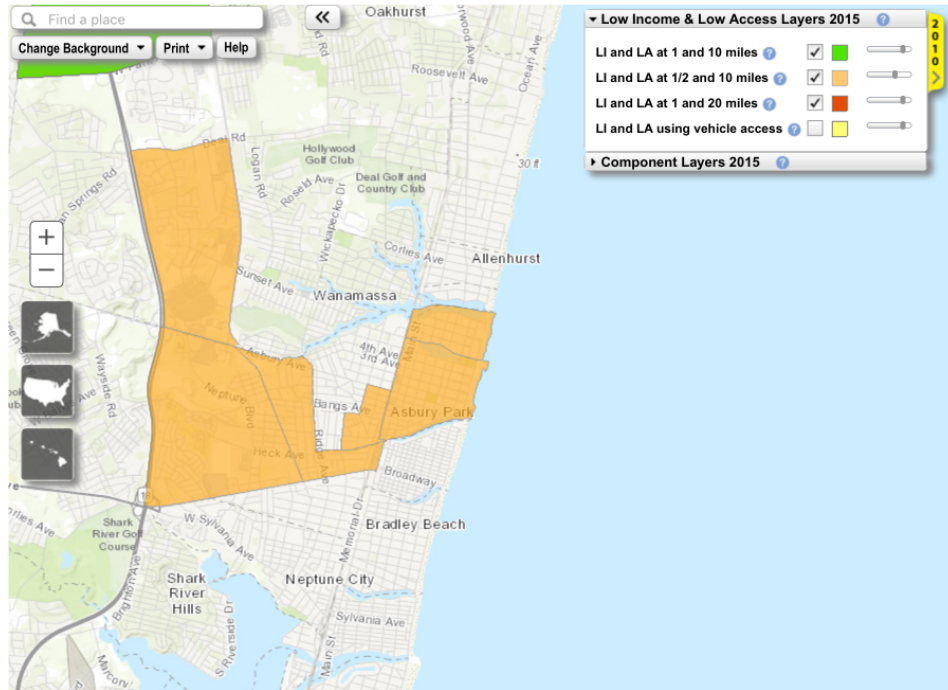


Figure 31 - Food Desert Designation – Source: USDA

## Market History

Markets have been an important part of many European cities since their founding, and many still function as some of the most important public spaces in the cities. Historically, these markets were located in central plazas near important civic buildings. These markets served functional and social purposes and both contributed to and reflected the character of the city they were in.<sup>50</sup>

Markets in America initially served a similar function, but developed differently throughout the years. The first American markets were open air. Like the European

<sup>50</sup> Lennard, Suzanne H. Crowhurst, and Henry L Lennard. *Public Life in Urban Places : Social and Architectural Characteristics Conducive to Public Life in European Cities*. Southampton, N.Y.: Gondolier Press, 1984.

markets, they were typically located near town centers and, where possible, wharves. During the times of the first colonies, access to waterways was an important aspect of transportation of goods to the markets. Where water access was not possible, the markets were central to the town. The temporality of the open-air market typology caused them to be seen as an event in the town, even when they happened regularly.<sup>51</sup>

When the citizens and the government pushed for more permanence of the markets, market houses were developed. These increased the sanitation of the markets and allowed inspectors to ensure regulations were being followed. As opposed to the spontaneity of the open-air markets, the permanent market houses made the market into an organized social institution. Markets soon became a part of everyday life in America, and the country's economic and political status was reflected in market activity.<sup>52</sup>

Initially these market houses were located in the middle of streets. This street market house typology was popular due to the governments rights to the land. Locating the market on public property meant they did not have to buy or sell any land, making this location more affordable. Locations were limited due to the need for the streets to remain functioning with the market in the middle. This building type varied based on location but were generally 25 to 30 feet wide to accommodate a stall on either side and a circulation path through the middle and were up to 300 feet long depending on the size of the town and their needs. The vendors were divided by type, with categories such as meat, seafood, and produce grouped together. The buildings were built as structural bays,

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<sup>51</sup> James Mayo, "The American Public Market." *Journal of Architectural Education* (Association of Collegiate Schools of Architecture, Inc.) 45, no. 1 (Nov. 1991): 41

<sup>52</sup> Mayo, "The American Public Market," 42

with each bay housing a vendor and repeating for as many as were needed. This allowed them to be flexible to the context and allowed for expansion when necessary.<sup>53</sup>

The market houses also served as community buildings at the time. Typically, a two to three story structure would be located at the end of the market hall. These structures would house a civic use such as a fire or police station at the top floor, retaining its market use on the ground floor and community meeting space on the second floor. In his study of markets, James Mayo says that “by including other public facilities with the market house, city officials strengthened the common notion that the public market was the local community center.”<sup>54</sup>

As dependency on automobiles increased, the market house like many building typologies, changed. Instead of being located in the street, market houses began to occupy entire blocks. This building type had two fundamental approaches, the first was retaining the organization of the street market house, and the second was a new plan. The block market houses still had the two to three story community structure and program, but because of the increase in land available, markets increased in width. Square buildings meant less cost due to less exterior wall linear footage needing to be built. These buildings were organized with the market stalls around the perimeter and an interior court in the center. Due to the increase in width, new elements needed to be added. Gable roofs allowed light to permeate into the central space through clear stories. The structure also needed to be adjusted with this new width. This was possible by the technical advances in steel and iron trusses, which were normally filled in along the perimeter with brick and glass. This was expensive, so in many market houses, reinforced

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<sup>53</sup> Mayo, "The American Public Market," 42

<sup>54</sup> Mayo, "The American Public Market," 42

concrete was used as structure and enclosure, becoming the typical construction method at the time.<sup>55</sup>

Throughout the years, markets have retained their primary urban function as some of the most dynamic, lively public spaces within cities. This is due mainly to their accessibility for residents of the city, the providing of a needed resource, and their organization. In America, markets began starting up in temporary conditions in open public spaces such as parking lots, abandoned lots, under highways, etc. They were becoming a popular amenity to the community, but were rarely planned into public spaces by urban and landscape designers. The resurgence of markets reflects back to how food was distributed in the past, and provides a resource and a social function for users. Markets have continued to grow throughout the United States. In 2009, the US had 5274 registered farmers markets, a 300 percent increase from 1994, when there were only 1755 registered markets. This growth is thought to be due to the increased awareness surrounding healthy food choices throughout those years.<sup>56</sup>

### Community Revitalization Potential

When looking at urban public space, markets play a vital role in the support of community. The social life of markets also has the ability to play a vital role in the resurgence or revitalization of a struggling community. The market's entirely public, open function makes it a place for everyone. People of different income levels, backgrounds and interests are welcome into the marketplace, and a well-designed and

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<sup>55</sup> Mayo, "The American Public Market," 51

<sup>56</sup> Francis, Mark, and Lucas Griffith. "The Meaning and Design of Farmers' Markets as Public Space: An Issue-Based Case Study." *Landscape Journal* (University of Wisconsin) 30, no. 2 (2011): 262

programmed market has something for everyone. The market is an essential space for community to come together formally and informally.

Different programming can draw people into a market from different distances. Everyday farmers markets encourage and foster closer relationships within the community. Often neighbors will cross paths, or patrons will develop friendships with vendors that they see regularly. Weekend markets draw local visitors to the town, forming more connections outside of the immediate neighborhood scale. Markets can also host larger scale events that draw in visitors from around the region. Holiday markets, festivals, and parades can occur within the public space of the market and spark interest in a community. Bringing people together at different scales is essential for developing businesses and encouraging community in a seasonal resort town. The scaling and organization of programs and spaces can respond to the different scales of these functions and events, creating unique, dynamic public spaces that encourage interaction.

### Design Guidelines

At the neighborhood scale, access to public transportation allows for local and regional patrons of the market to have easy, affordable access to fresh food and community space. Revitalization of the community can happen when more visitors are drawn to the area and support the commercial businesses within the city. By creating engaging spaces that draw visitors in and providing spaces for a wide variety of programs, events can be held to attract visitors from outside the city. At the landscaping scale, the area around the market should have urban furniture such as trees, lighting and

seating areas. These can be in any variety of forms such as sitting walls, steps or a lawn for gathering larger groups of people.<sup>57</sup>

Within the market, layout of market stalls creates the main spaces. Typical vending spaces are set out on a 10-foot by 10-foot grid, with the functions organized linearly along a circulation path. A back access is necessary for loading and unloading the market and keeping the process efficient and sanitary. Within the market, organizing stalls by use creates an understandable circulation pattern.<sup>58</sup>

The flexibility of market design allows the building to respond to the needs and desires of a community. Market corridors can range anywhere from 12 to 40 feet wide, with vendors on either side. Aisles spaced closer together encourage a more intimate market experience where, especially on a busy day, patrons interact with each other constantly. Narrower aisles also allow customers to see the products being displayed on either side of the market. As the corridor width increases, casual run-ins become less frequent and more transverse movement must occur to circulate to each of the stalls.<sup>59</sup>

### Precedents

Lexington Market, located in Baltimore, Maryland, is the oldest market in the United States, first established in 1782. In addition to produce and meat, the market featured hay, farm equipment and animals for sale upon first opening. The market was used for many democratic social purposes after the Civil War. The flexibility of the market place allowed for a variety of functions, much like today's modern ideal market.

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<sup>57</sup> Mark Francis & Loucas Griffith, "The Meaning and Design of Farmers' Markets as Public Space," 266

<sup>58</sup> Mark Francis & Loucas Griffith, "The Meaning and Design of Farmers' Markets as Public Space," 266

<sup>59</sup> Mark Francis & Loucas Griffith, "The Meaning and Design of Farmers' Markets as Public Space," 268

The market grew continually through 1925, where the shed buildings spanned 3 blocks. A fire in 1949 destroyed the historic market structures, as well as millions of dollars' worth of merchandise.



*Figure 32 - Historic Lexington Market -*

[https://commons.wikimedia.org/wiki/File:Lexington\\_Market\\_Baltimore\\_LOC\\_4a10972u.jpg](https://commons.wikimedia.org/wiki/File:Lexington_Market_Baltimore_LOC_4a10972u.jpg)

Architecturally, the original market structure was a street market typology. The market building sat between two major roads with structures running under the superstructure of the roof as well as tents that came out of the sides of the structure. The three superstructures held hundreds of vendors. The current market that was built after the original burned down is a block typology. The square superstructure is filled with smaller market stalls in a grid formation, allowing circulation around all sides of the stalls. At the entrance, there are larger enclosed spaces surrounding a public dining and gathering space.

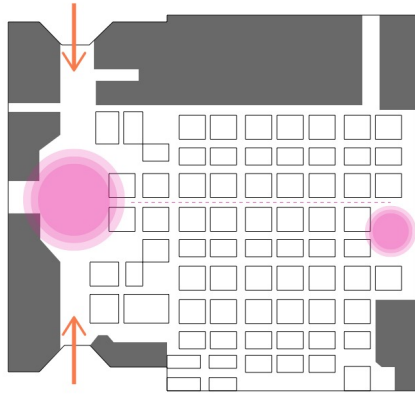


Figure 33 - Lexington Market Social Spaces - Source: By Author

Covent Garden is one of London's most historic locations. The plot of the market was used as a market plaza since it was first built up as a residential square. Although it was used as a market, the market building that stands today was not built until 1828, when a Duke petitioned for a bill to enclose the noisy, rapidly growing market space. The building that was built expressed the functionality required for the program.<sup>60</sup>

Covent Garden's market building picks up on surrounding context as regulating lines that informed the building structure and circulation. The building faces St. Paul's Church, taking the form of the building and the surrounding residential buildings that wrap behind it. The church's portico sticks out further into the plaza than the surrounding facades, with the Covent Garden building responds by setting back the facades of the interior enclosed buildings. This setback creates an open plaza in front of the church that captures visitors. The narrower, central circulation path through the enclosed shops connects Russel Street through the building to the church.

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<sup>60</sup> Capital & Counties Properties PLC. *History of the Market Building*. 2018. <https://www.coventgarden.london/whats-on/history-market-building> (accessed Dec. 12, 2018).

The larger building structure is composed of enclosed stores as well as covered but open-air spaces that sink into the ground to create more storefronts below grade. The open spaces between the enclosed stalls are clearly defined by arcades that simultaneously create the circulation spaces. The interstitial spaces created to the outside of the enclosed spaces are also used for pop up tents that come during busier times of the year.

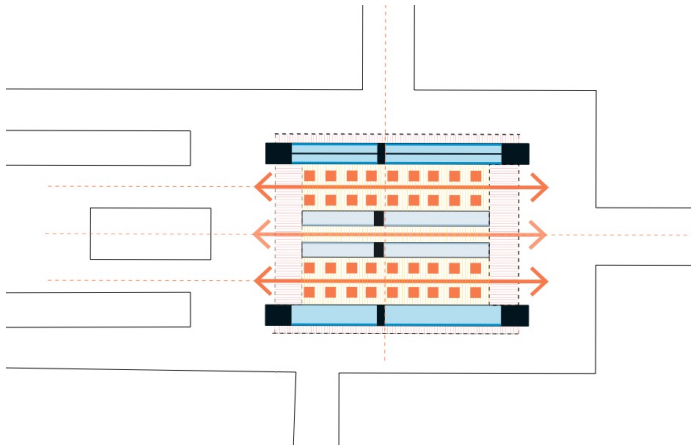
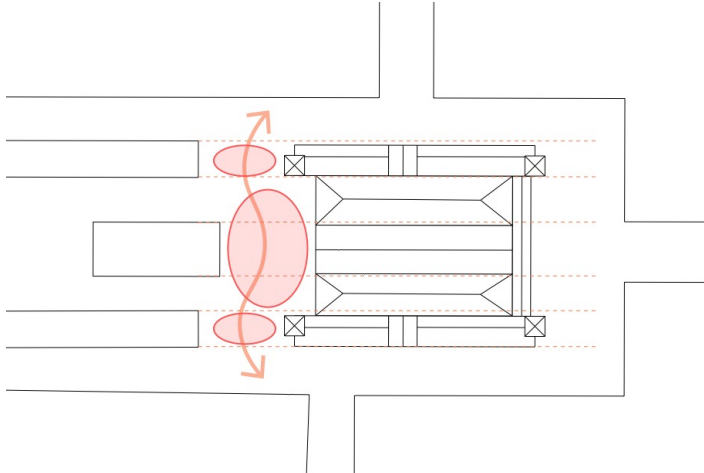


Figure 34 - Covent Garden Space Types, Circulation and Axes - Source: By Author

The roof treatments above the open market spaces allow light into these spaces even when they are further from the exterior edges. The roof structures appear to hover over the spaces, supported by the enclosed, stone buildings. The structure also is used to hold the signage for different spaces. The exposed structure adds character and a rhythm to the space. The transparent roof creates a light, vibrant interior space.



*Figure 35 - Covent Garden Exterior Spaces - Source: By Author*

Torvehallerne, Copenhagen's first central food hall, was opened in 2011. Located to the north of Israelsplads, the market extends into the public square. The market is divided into two glass warehouse structures which house different types of market programs. The first market hall is filled with fresh produce and meats, with the second filled with prepared foods and drinks. In the open space between the two halls, temporary stalls have space, including stalls with prepared foods and fresh vegetable stands. The central open space also has tables for dining tables and gathering.

Inside each of the halls there is a regular arrangement of stands. The stands are arranged to form a main central hall as well as circulation spaces along the exterior walls. The main, central circulation zone is reflected in the roof with the skylight, highlighting the space. The market stands are grouped in packs of four that create transverse circulation paths with access to the exterior spaces regularly. The circulation patterns created by the stands inside the building inform the spaces created outside of the building.

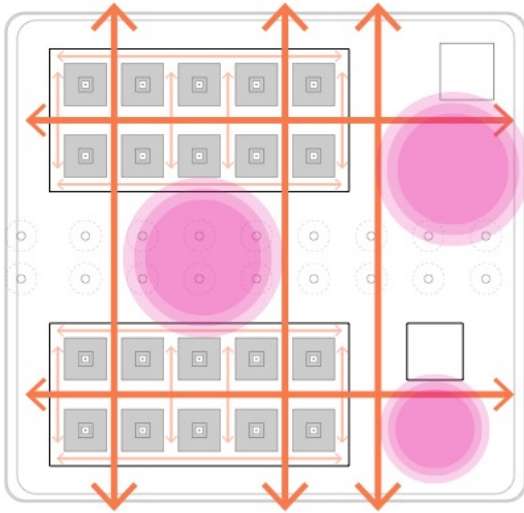


Figure 36 - Torvehallerne Circulation and Social Spaces - Source: By Author

The structure is simple and reminiscent of a traditional market hall from the exterior, but the exposed structural system inside makes the space unique. The arrangement of the four-packs of stands surrounds the columns, creating the illusion of a column-less space inside. The steel supports cross the spaces and tie into the columns, branching off from the beams along the exterior walls and along the skylight through the middle of the space.

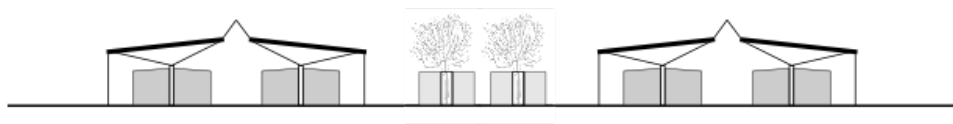


Figure 37 - Torvehallerne Section - Source: By Author

Architect Hans Peter Hagens researched markets in the area extensively, but also studied more historic examples dating back to Roman times. He made the connection that the Romans would combine the market and the theater space because they were both spaces to bring people together. This market does not have a designated performance space, but the open spaces are flexible to accommodate pop up events.

While the building is very successful at the building and urban design scale, the all glass facades pose some issues currently. The owners have put shades on the building to the dismay of the architect due to the complaint that the sun was too strong in the space.<sup>61</sup> Addressing the sun with built in shading devices from the start could have avoided this issue.

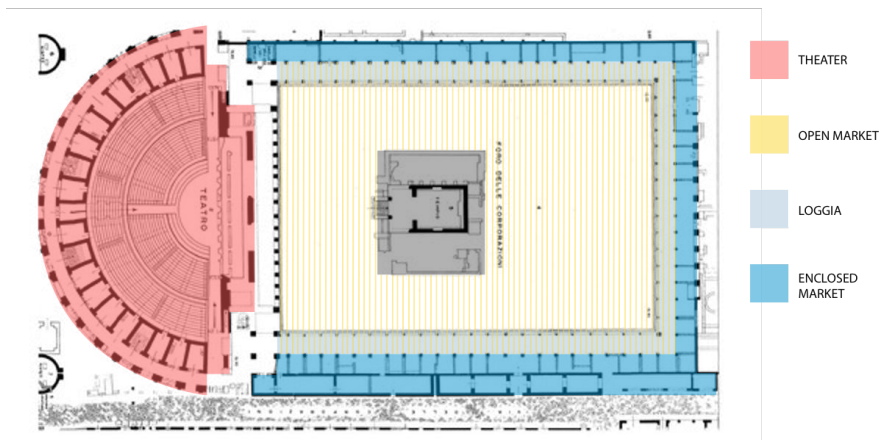


Figure 38 - Roman Market Theater - Source: By Author

<sup>61</sup> Chris DeHenzel. *Stocking the City: The Architecture and Infrastructure of Public Food Markets*. Aug. 3, 2012. <https://archinect.com/blog/article/54676637/10-in-copenhagen-the-hottest-thing-since-sliced-rugbr-d>

## Chapter 8: Programming

### Master Plan

The problem must first be approached from the master planning scale of the block. As stated in the redevelopment plan, this superblock located at the train station will be redeveloped to include a new municipal building and transportation center. This thesis will explore the value added to the community with the addition of a market. The beginning of the process will look at reestablishing the grid to connect the east and west sides of the train tracks. Locating a formal green space on the site will create an addition to Asbury Park's green network that begins to address the city's west side neighborhood. The municipal building will be placed in order to respond to the existing post office, creating an institutional zone that can create a hierarchy for both buildings.

Providing high density, mixed use buildings, as well as commercial spaces along Springwood Avenue will start the transit oriented development plan for the area. Recreating a street edge along the historic commercial corridor can strengthen the connection from the west side to the east side of the train tracks, as well as address the importance the street had throughout the west side's history.

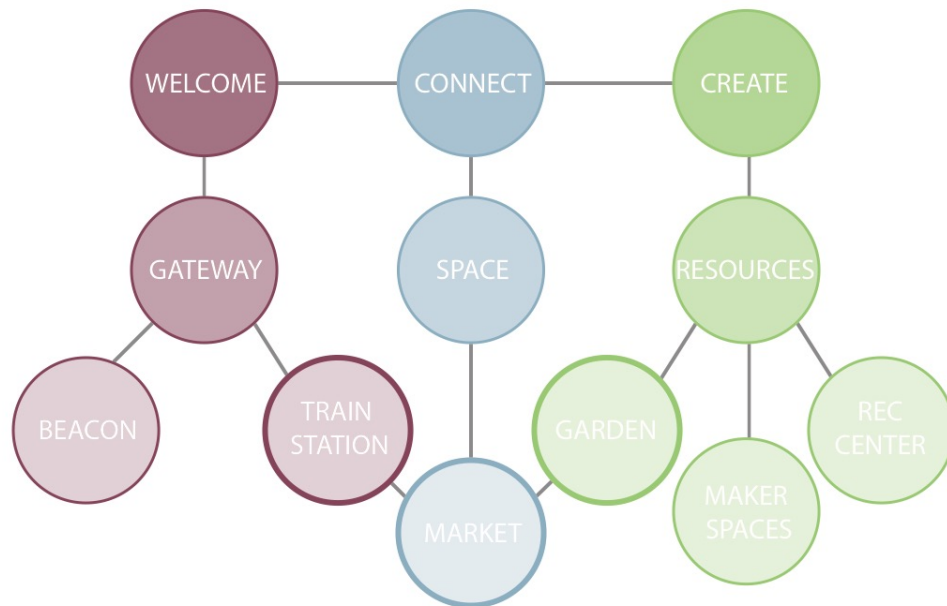


Figure 39 - Program Elements - Source: By Author

### Transportation Center

Asbury Park has a low population that uses the transportation center regularly. The design will need to address the functional needs of commuters in terms of easy circulation and amenities, but will need to function as a guiding space for tourists entering the city.

Within the transportation center there will be common amenities such as a small ticket office, supplementing individual ticketing machines. Due to the increase in other public spaces, the train station program itself will not need to be large.

### Market

With mixed use development and reestablishment of the street edge along Springwood Avenue, and the existing commercial street of Cookman Avenue, the

transportation center and market space will act as a node between the two commercial streets. The market will respond to the reestablishment of the street grid to create a clear circulation path that extends the commercial programming of Springwood and Cookman Avenue.

Due to the commercial arts activity along the boardwalk and possible development of an arts district, this market will focus primarily on food, but will also create spaces for local crafts men and women to display and sell their work.

### Plaza

An open plaza located adjacent to the market building is essential as a spill out space as well as a public gathering space for a variety of different functions. The Plaza should also respond to the municipal building location in order to engage the community with the government building that can represent change and progress in the city. The plaza should be tied into the surrounding building using paving patterns, careful placement of vegetation as well as seating and other urban furniture throughout. Plazas are most effective with a defined edge to create an enclosed space. The plaza can respond to Main Street or Springwood Avenue or potentially both prominent streets.

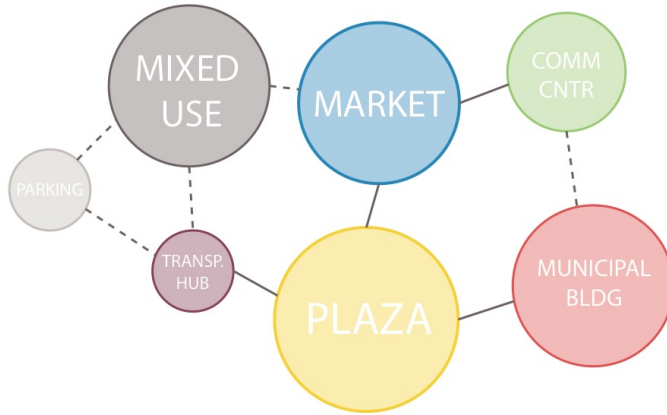


Figure 40 - Adjacency Bubble Diagram - Source: By Author

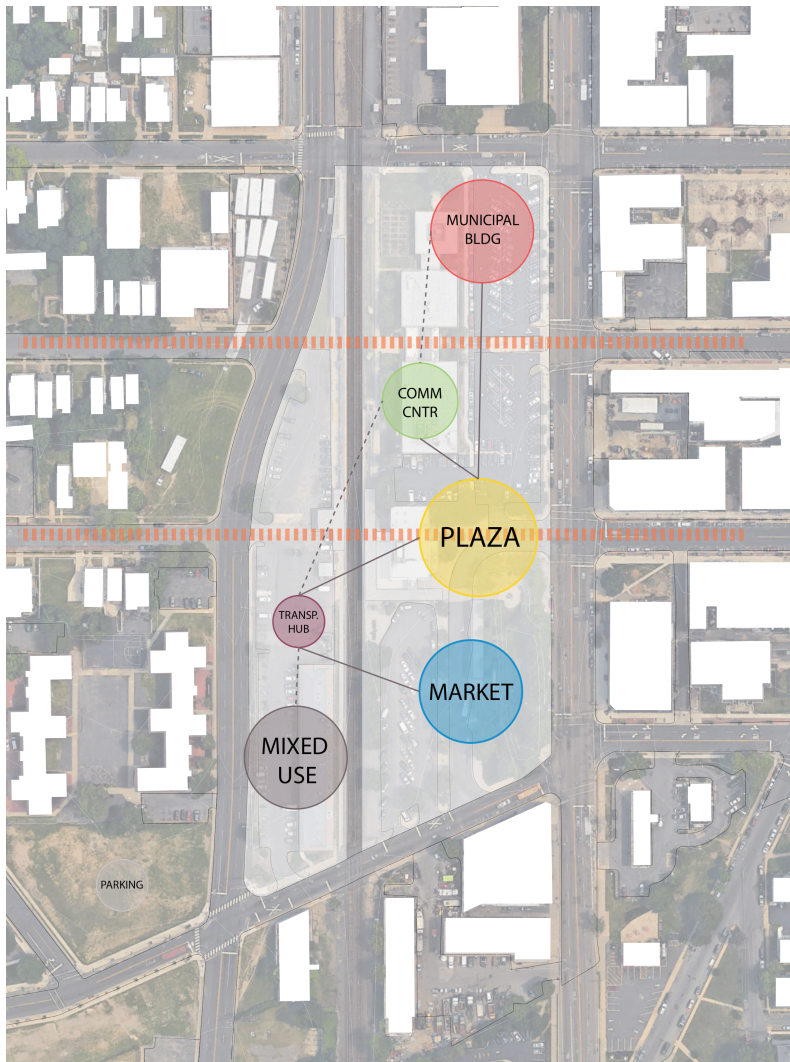


Figure 41 - Adjacency Bubble Diagram on Site - Source: By Author

## REVERSE ENGINEER PROGRAM

<b>SOLANO TRAIN</b>	Restrooms	260 SF	
	Reception	540 SF	
	Waiting	1200 SF	
	Drop Off Area	9000 SF	
	Surface Parking	157000 SF	
<b>TOTAL NET</b>	<b>11000 SF</b>		
<b>TOTAL GROSS</b>	<b>15950 SF</b>		
<b>PROVIDENCE NEIGHBORHOOD CENTER</b>	Reception	1300 SF	
	Community Room	460 SF	
	Acoustic Room	600 SF	
	Office Workspace	420 SF	
	Large Meeting Room	300 SF	
	Small Meeting Room 1	100 SF	
	Small Meeting Room 2	100 SF	
	Kids Play Area	200 SF	
	Living Room/Event Space	950 SF	
	Cafe	924 SF	
	Restrooms (cafe)	480 SF	
	Outdoor Terraced Theater	12000 SF	
	Surface Parking	20000 SF	
<b>TOTAL NET</b>	<b>17834 SF</b>		
<b>TOTAL GROSS</b>	<b>25859.3 SF</b>		
<b>MERCADO ROMA</b>	Open Marketplace	6800 SF	
	Mezzanine Marketplace	1150 SF	
	Ground Floor Eating Area	625 SF	
	Cultivation Area	450 SF	
	Piano Bar	840 SF	
	Restaurant 1	840 SF	
	Restaurant 2	1260 SF	
	Terrace 1	500 SF	
	Terrace 2	160 SF	
	Beer Garden	6325 SF	
	Piano Bar BOH	340 SF	
	Restaurants BOH	300 SF	
	Service (Bathroom, Fridge)	450 SF	
	Service (Bathrooms)	580 SF	
	Service (bathrooms)	320 SF	
<b>TOTAL NET</b>	<b>20940 SF</b>		
<b>TOTAL GROSS</b>	<b>30363 SF</b>		

## PROPOSED BUILDING PROGRAM

<b>TRANSPORTATION</b>	Restrooms	260 SF
	Reception	540 SF
	Waiting	1200 SF
	Drop Off Area	9000 SF
	Bus Shelter	5000 SF
	Bike Storage	500 SF
	Luggage Storage	300 SF
<b>TOTAL NET</b>	<b>16800 SF</b>	
<b>TOTAL GROSS</b>	<b>24360 SF</b>	
<b>COMMUNITY CENTER</b>	Reception	1300 SF
	Community Room	460 SF
	Office Workspace	420 SF
	Large Meeting Room	300 SF
	Small Meeting Room 1	100 SF
	Small Meeting Room 2	100 SF
	Living Room/Event Space	950 SF
	Restrooms	480 SF
	Outdoor Terraced Theater	12000 SF
	<b>TOTAL NET</b>	<b>16110 SF</b>
	<b>TOTAL GROSS</b>	<b>23359.5 SF</b>
<b>MARKETPLACE</b>	Open Marketplace	6800 SF
	Ground Floor Eating Area	625 SF
	Cultivation Area	450 SF
	Restaurant 1	840 SF
	Restaurant 2	1260 SF
	Terrace 1	500 SF
	Terrace 2	160 SF
	Restaurants BOH	300 SF
	Service (Bathroom, Fridge)	450 SF
	Service (Bathrooms)	580 SF
	Service (bathrooms)	320 SF
	<b>TOTAL NET</b>	<b>12285 SF</b>
	<b>TOTAL GROSS</b>	<b>17813.25 SF</b>

Figure 42 - Program Analysis - Source: By Author

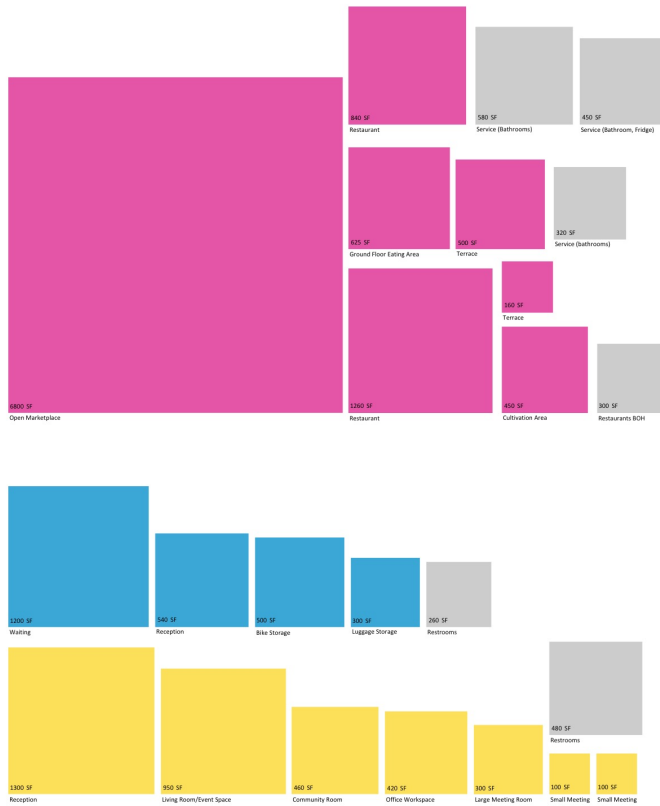


Figure 43 - Building Programming - Source: By Author

## Chapter 9: Architectural Design Response

### Urban Approach

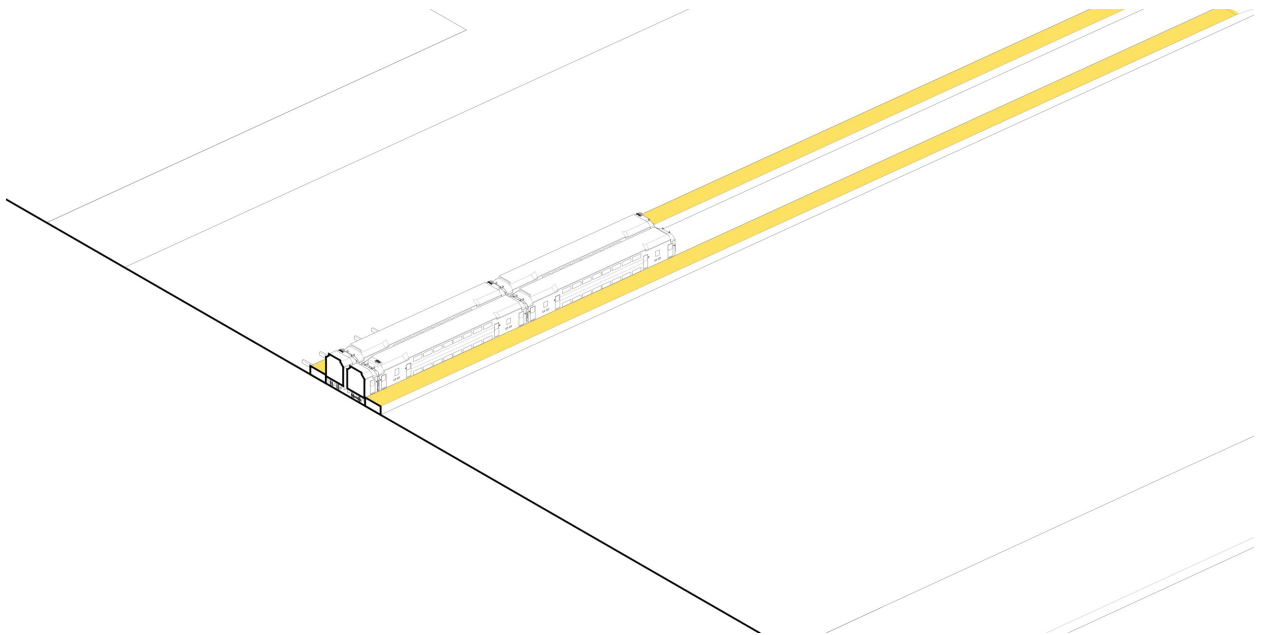
Being that this railroad acts as an urban divider, it was important to look at the design first from the broader urban scale, looking at how the design at this site would impact the city surrounding it. First, the three main urban corridors were focused on, in order to encourage building development down these streets. Springwood Avenue is located to the west of the train tracks and once served as the west side's commercial corridor, before the race riots of the 1970s. Once this path crosses the tracks, it intersects with Main Street which runs parallel with the train tracks and right now serves as a mostly industrial corridor. The city hopes to develop a more commercial main street in the future. Cookman Avenue connects Main Street with the boardwalk and the landmarks located there. This site acts as the “knuckle,” turning residents and visitors from one commercial street to the next, and can enhance connectivity across the tracks.



Figure 44 - Urban Connections - Source by Author

## Architectural Design Approach

When approaching the design, it was integral to begin with the strategy that would be used to cross the train tracks. Currently, the train platforms span three blocks and are raised 51” above the ground level, creating a wall and cutting off circulation through the community (Fig.45). The first step was breaking up the three block-long block by reconnecting the street grid across the site (Fig. 46). By doing this, connectivity between the two sides already begins to become enhanced. Next, the three options of circulation across the street were analyzed (Fig. 47). The first option, around the platforms, became easier as the street grid was reconnected. Bridging over the tracks was analyzed through schematic design and determined to be too extreme in this context to create a building bridging over the tracks. The third option, under the tracks, created more opportunity for public open space and a more engaging connection to the street level.



*Figure 45 - Platform Current Condition - Source by Author*

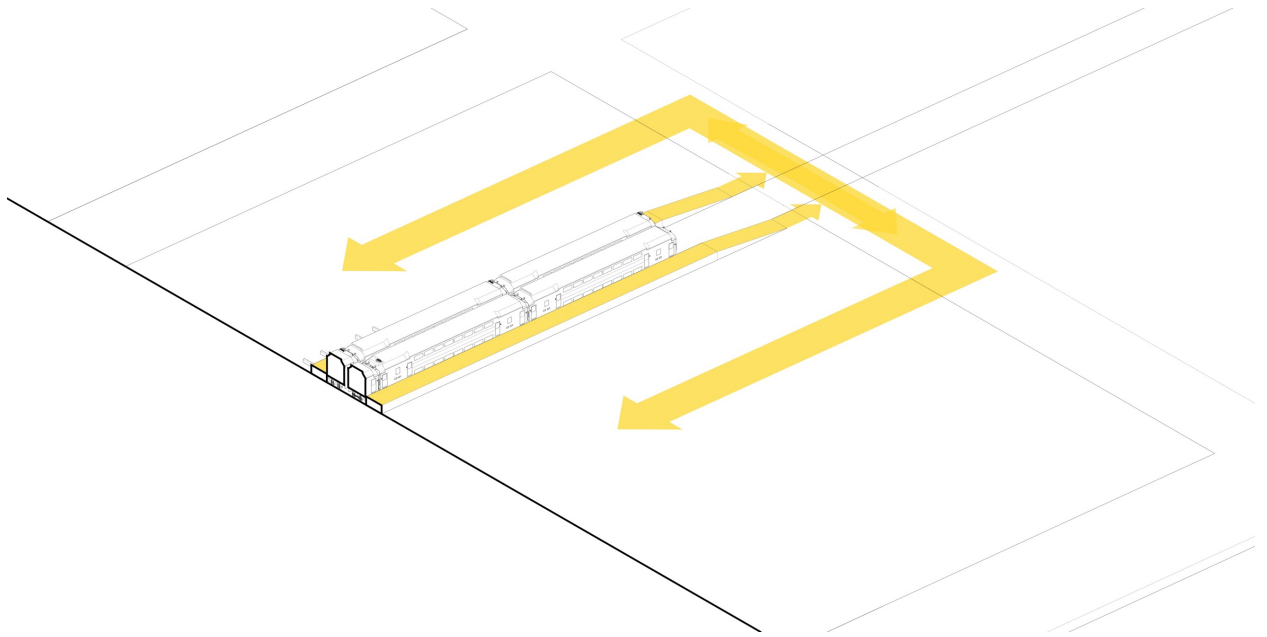


Figure 46 - Reconnecting the Grid - Source by Author

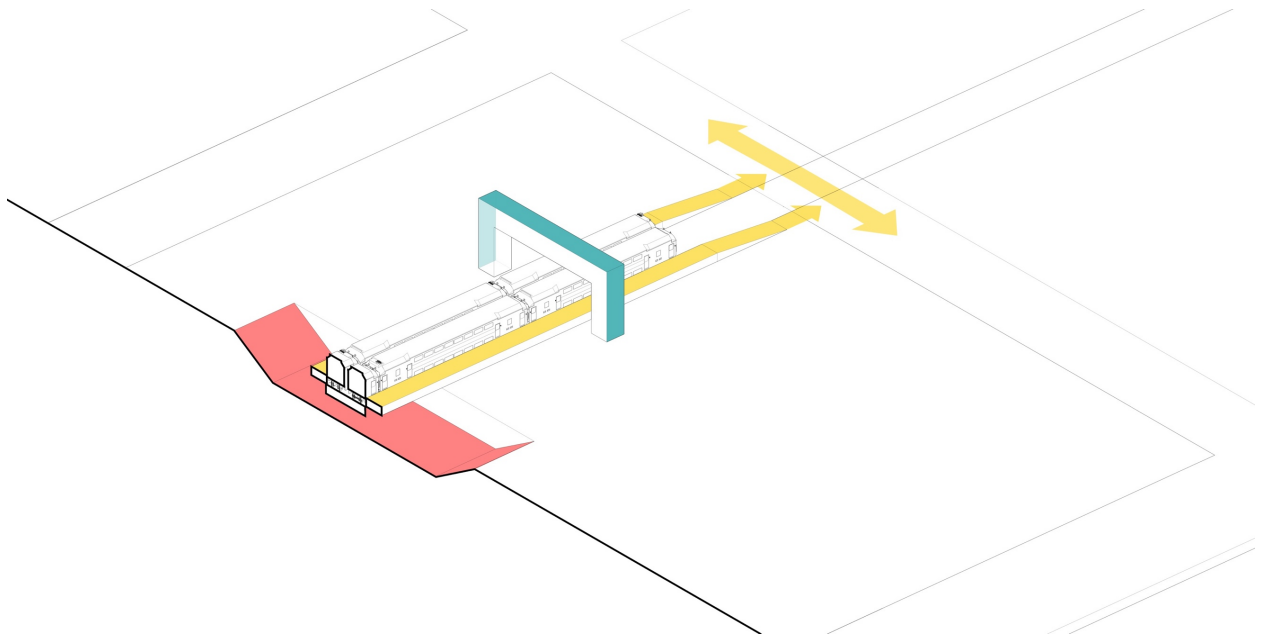
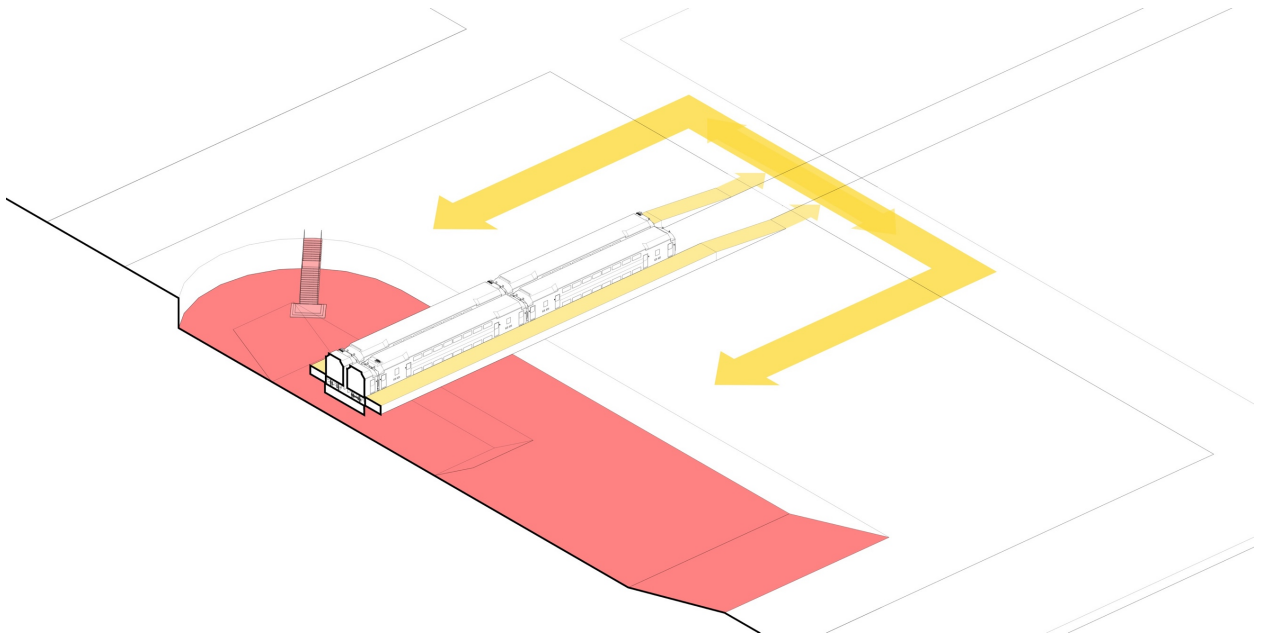
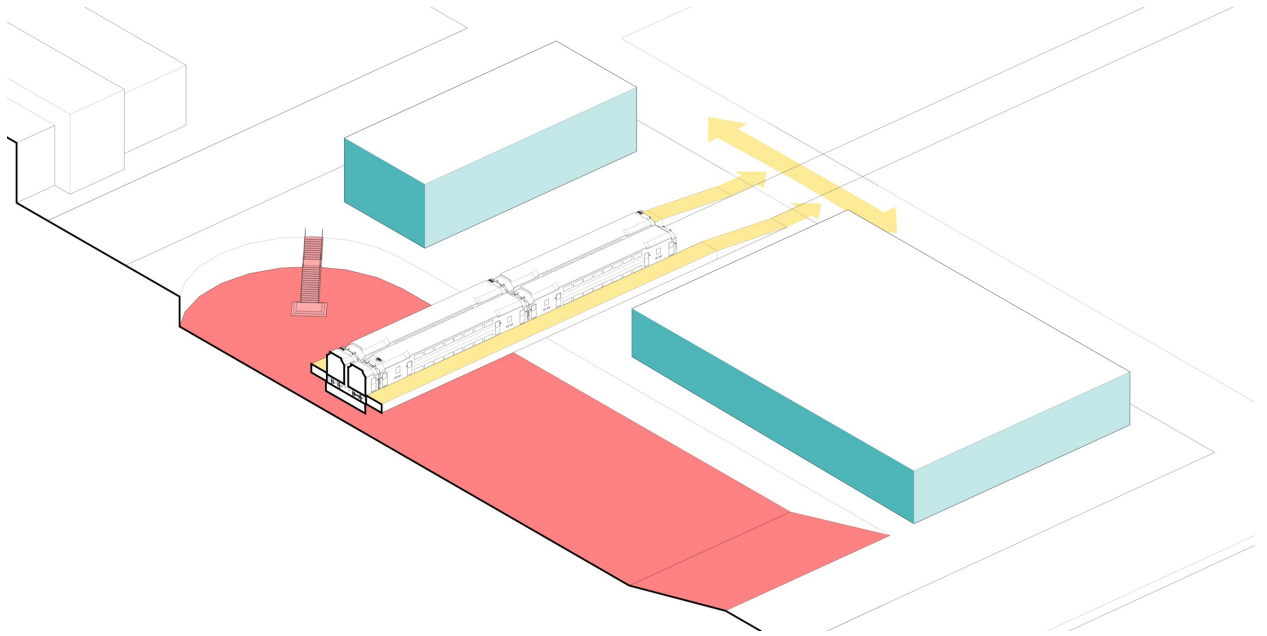


Figure 47 - Options to Cross Tracks - Source by Author

By expanding the option to connect the two sides of the city under the tracks, the tunnel below the train became a public plaza (Fig. 48). This unified public space serves multiple purposes to the citizens and the visitors. Placing public, community oriented buildings on either side of this plaza ensure that the plaza is activated at all times of the day (Fig. 49). These buildings are programmed as a food hall and an art center, each of which spill out into the sunken plaza.

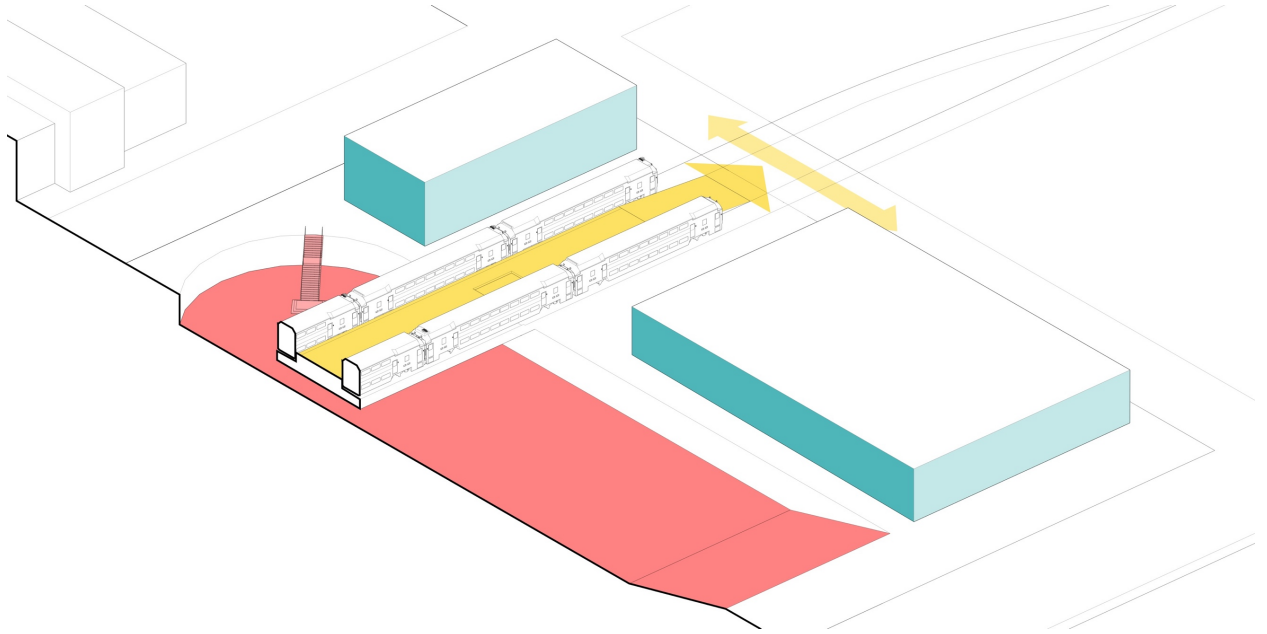


*Figure 48 - Creating the Sunken Plaza - Source by Author*



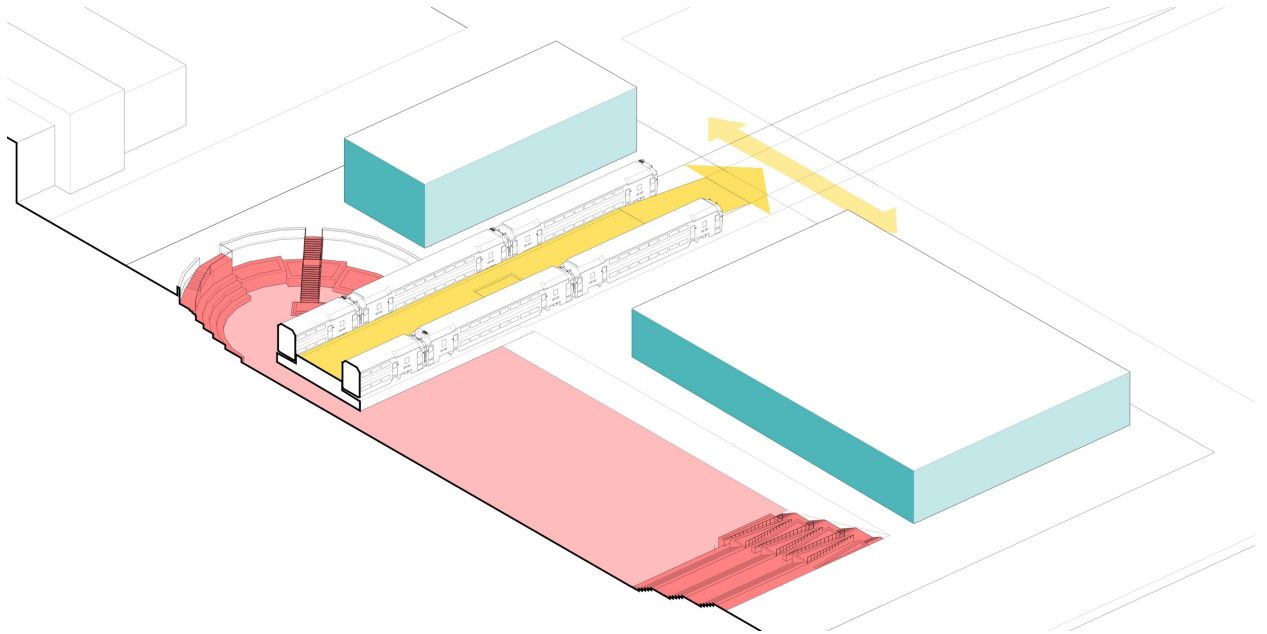
*Figure 49 - Community Oriented Buildings Activate the Plaza - Source by Author*

By taking the two platforms, which bordered the train tracks, and merging them into one centralized platform, the unity this thesis aimed to create is realized (Fig. 50). The unified platform eases circulation and creates one space that visitors and residents arrive to and depart from. This move was integral in creating a unification between the East and West side of the train tracks.



*Figure 50 - Creation of Centralized Platform - Source by Author*

The circulation leading to the plaza was studied in depth to create universally accessible circulation that could be used for multiple different purposes (Fig. 51). Along with providing a clear path to the plaza and train platforms, the spaces needed to be engaging to encourage circulation to the plaza. The terraced stairs provide seating for concerts and events and integrate themselves into the landings of the ramps. Circulation on each side features terraced stairs and seating, also integrating planting beds to bring greenery and life to the space.



*Figure 51 - Creation of Circulation - Source by Author*

Furthering the sense of unity is the canopy that stretches over the train tracks and central platform (Fig. 52). This canopy makes the train visible from the street and gives the train tracks a façade that engages the plaza and buildings surrounding. This system also features a beacon, which pierces through the canopy and continues all the way to the sunken plaza. Serving as an elevator to bring people to the platform as well as a lit beacon, the idea of unification is once again enhanced.

The final design (Fig. 53) creates a large public space with clear circulation, engaging buildings and facades, and a unified platform and canopy that brings residents from both sides of the tracks, as well as all visitors to one welcoming space that serves to bring the community together.

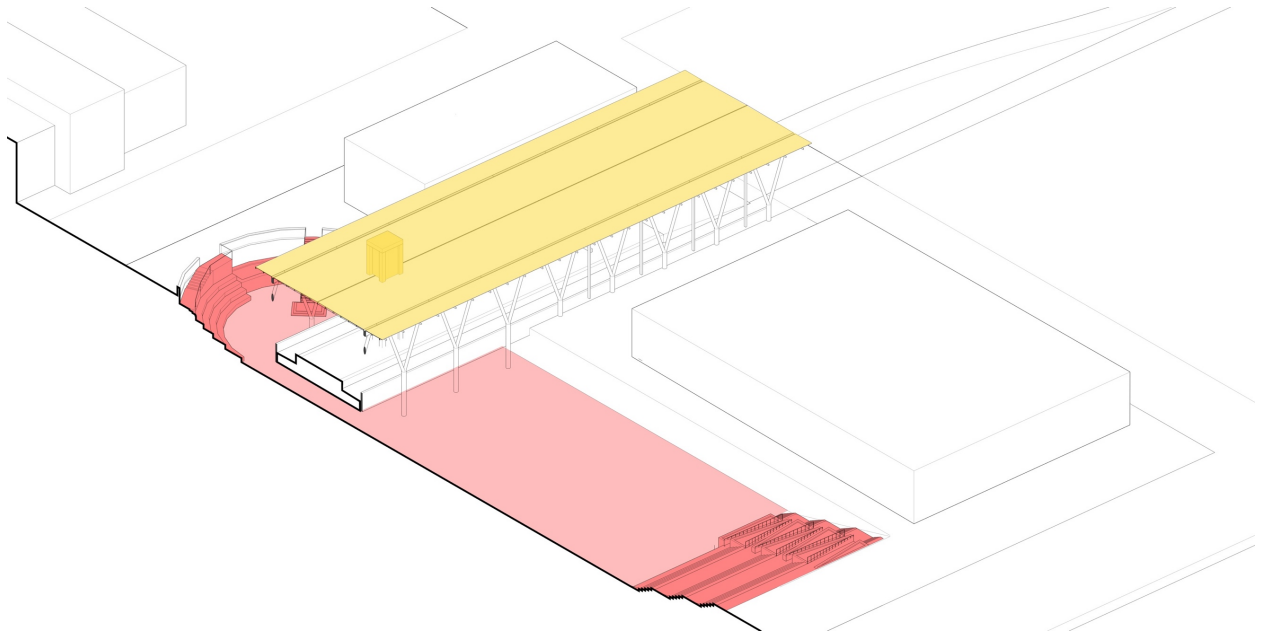


Figure 52 - Covering Tracks with Canopy - Source by Author

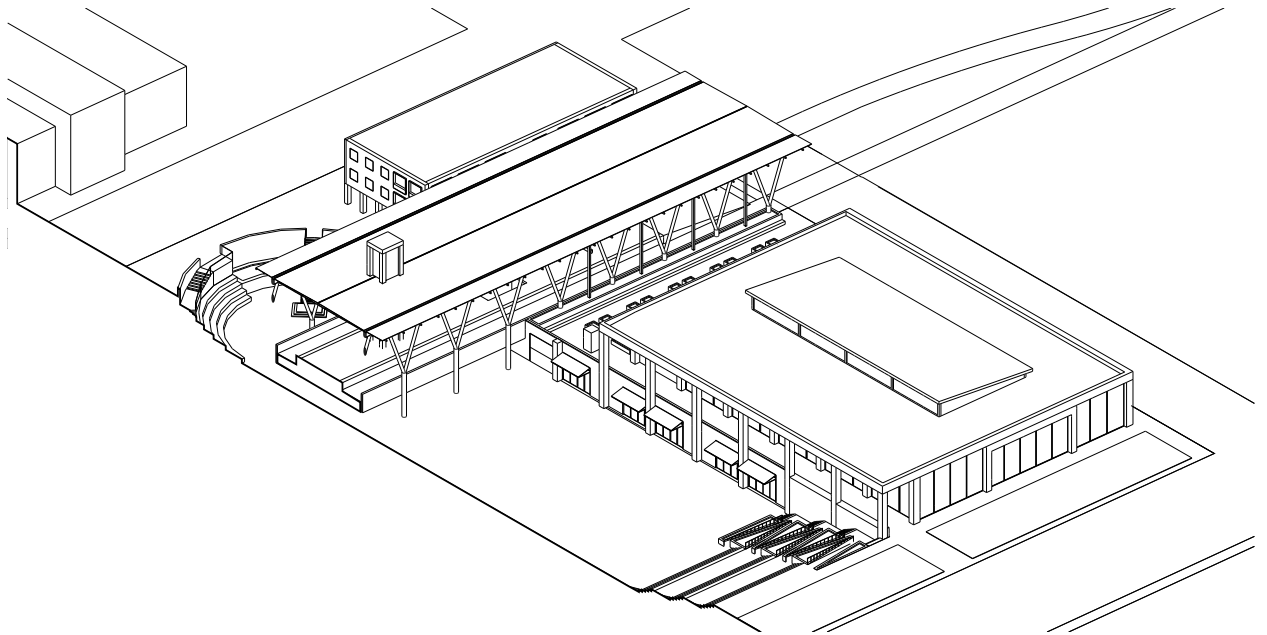
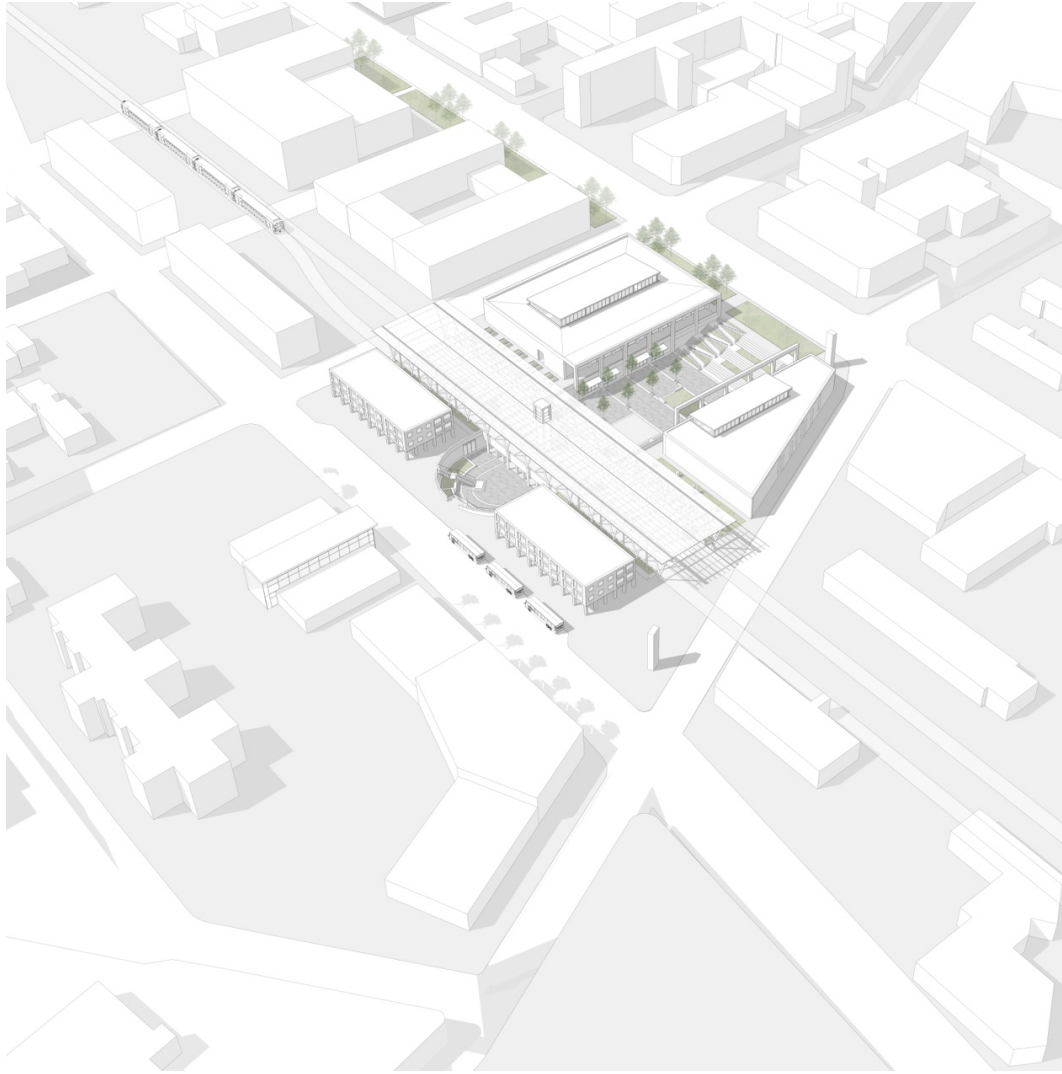


Figure 53 - Final Design Proposal - Source by Author



*Figure 54 - Aerial View - Source by Author*

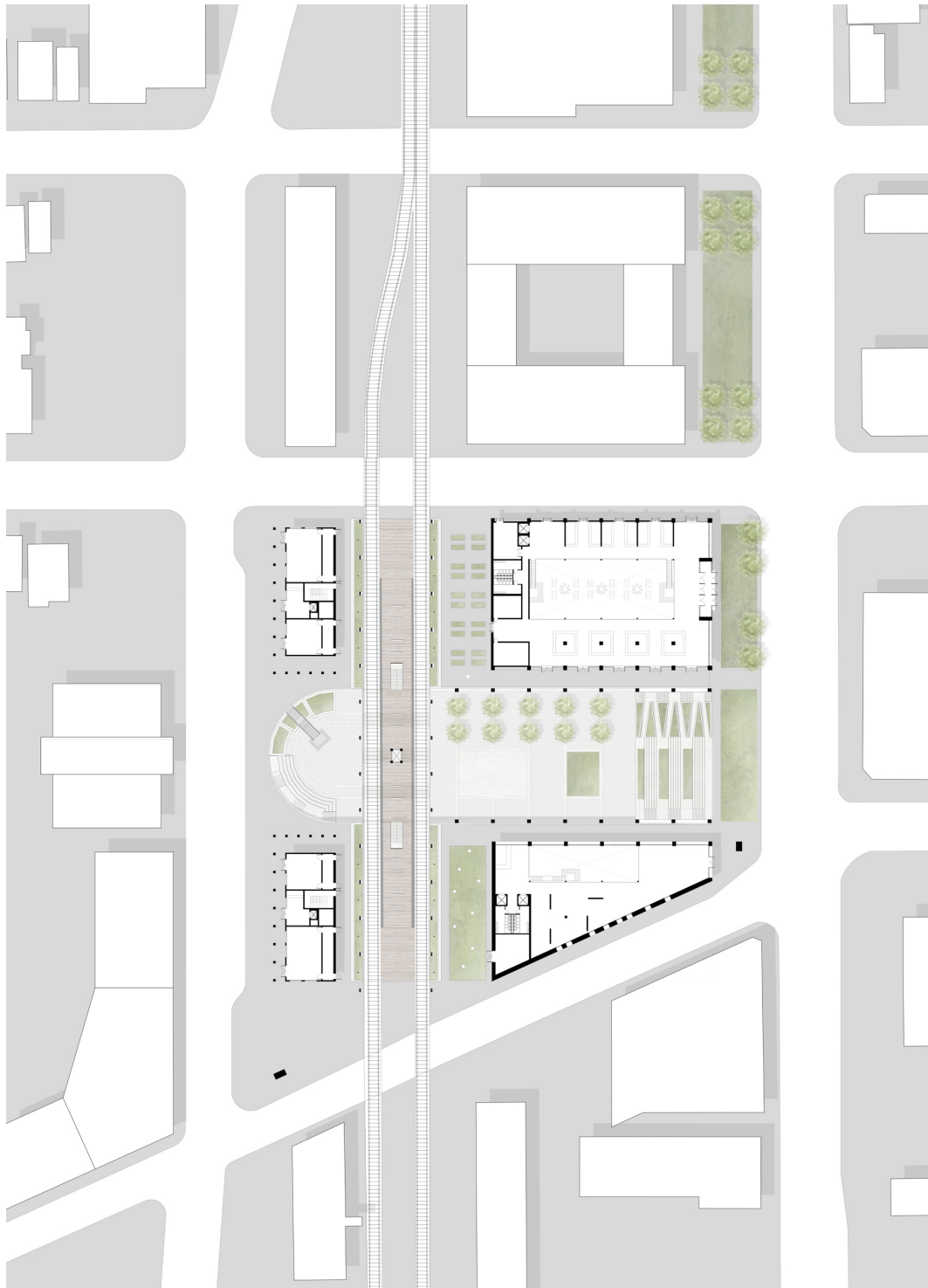
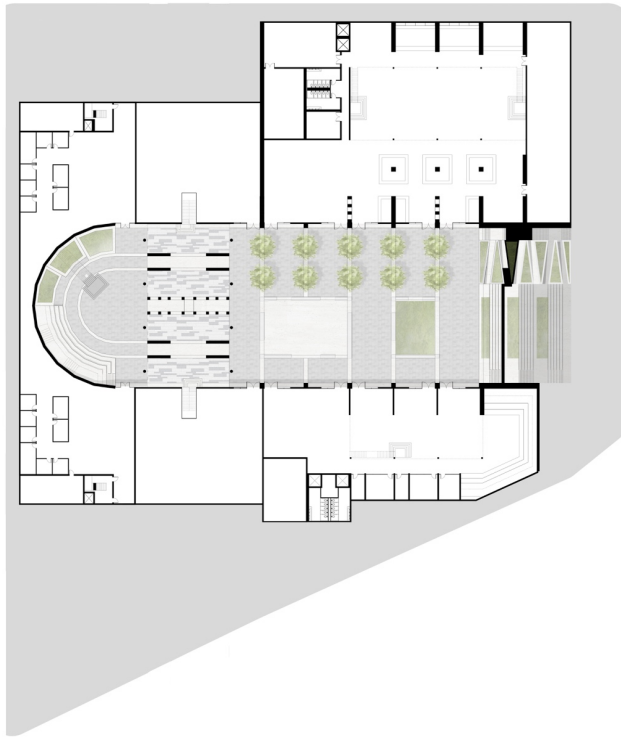


Figure 55 - Ground Floor Plan - Source by Author



*Figure 56 - Plaza Level Plan - Source by Author*

### Proposed Design

The part of this design expresses the unity of the community in one central sunken plaza, bordered by four buildings on both sides of the train tracks. In the middle of this space is the centralized platform and elevator, acting as a beacon of unity for the two sides of the city.

The creation of the sunken plaza allows for connectivity underneath the train tracks, unifying the communities through one public space. The design of this plaza is intentionally left open in order to allow for the largest range of activities to happen within the space. In front of the terraced steps is a patch of green space, continuing the green areas that begin to come down the terraces. Surrounding this area and the adjacent paved

area, seating is provided for community members to sit and relax, people watch, and come together in the space. The paved area is also left open in order to be used as an ice skating rink during the winter.

The ramping on the northeast end of the plaza creates universally accessible access to the space, also working as a strip of green that leads to the allée of trees on the north end of the plaza. This allée trees defines the area where market stalls are able to spill out from the market building and into the outdoor public space. Craft vendors, produce stands, and holiday market stands can occupy this zone between the trees and create a connection from the indoor market space to the open area of the plaza.

The nature of the sunken plaza and how the plaza interacts with the train tracks above influenced the language of the plaza and the surrounding facades. At the sunken plaza level, the materiality is heavy and massive, creating the feeling of being underneath the ground plane and the solidness that it takes to hold up these train tracks. The walls underneath the train tracks are concrete, covered with murals that are seen throughout Asbury Park. The directionality of these massive walls moves people through the space and encourages movement from one side to the other. The gallery of murals encourages people to engage with and spend time in this space that unifies the plaza and, in turn, the community. The light steel canopy touches down between these massive walls, expressing its lightness in materiality and the contrasting circular shape.

The plaza takes a circular shape on the west side to encourage gathering in the space and the notion of bringing everyone to one central point. This space is defined by the amphitheater seating that is integrated into the staircase, as well as the expressive staircase that cuts into the space and encourages movement. This space is bordered by

two live-work buildings that have commercial storefronts at the ground floor. These commercial spaces will be spaces that residents will utilize on a day to day basis, making the commute to and from the train more enjoyable and more efficient. At the upper floor, living units will face Memorial Drive, with studio spaces facing the train tracks. These two buildings will connect at the sunken plaza level where there will be community gathering space, meeting rooms, and flexible open work spaces for entrepreneurs in the city.

On the east side of the train tracks, two buildings border the plaza, the Food Market and the Arts Center. The facades of these buildings that face this plaza were developed through many iterations and were ultimately designed to reflect the character of the city's landmark buildings. The red brick, massive limestone columns and green metal are seen in the Casino Building, Carousel Building and Convention Center, three of the iconic Asbury Park landmarks built in the 1920s. The ground floor remains light and glass-covered, encouraging circulation in and through the building. At the plaza level, the openings are large, allowing southern light to enter the space at the lower level. These fenestrations are covered by green metal screens. These screens serve multiple purposes for the façade. During the day, when folded up, these act as awnings which denote the entrances. At night, these can be closed to protect the windows from vandals. These screens also add a character to the façade and bring in the green metal that is prominent in the architecture of the city.



*Figure 57 - Section Perspective Through Plaza - Source by Author*



Figure 58 - Memorial Drive Approach From the West Side - Source by Author



Figure 59 - West Amphitheater - Source by Author



Figure 60 - View from Unified Platform - Source by Author



Figure 61 - Under Track Gallery - Source by Author



Figure 62 - East Plaza Summer - Source by Author



Figure 63 - East Plaza from Ground Floor Winter - Source by Author

## Market Building



*Figure 64 - Market Interior - Source by Author*

The design of the food market building orients itself toward the central open space that creates a connection between the two floors of the market. This space features a different structural system, light steel columns, that emphasize the atrium's function of bringing additional light to the lower level.

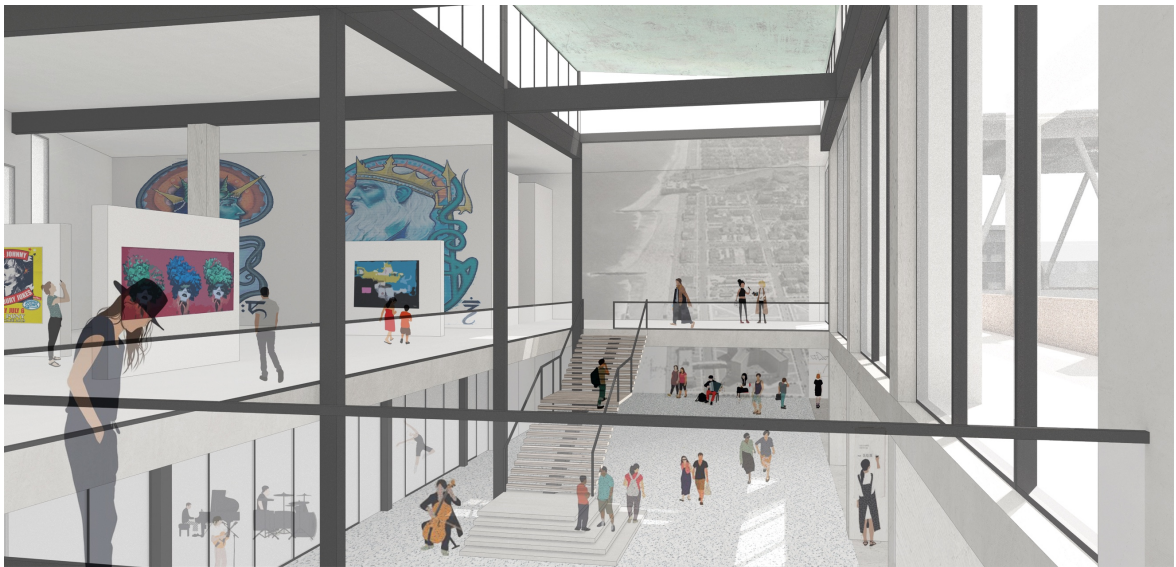
On the ground floor, two types of market stands are used. On the north side, facing Cookman Avenue, the stands are oriented perpendicular to the wall, in order to draw people in from these entrances, through these permanent vendors, and into the space. On the south side facing the plaza, the market stands are more open and flexible, allowing for connection to the exterior loggia. This loggia is shaded by the overhanging roof to provide shade to the exterior space where seating can be placed in the summer.

At the sunken plaza level, the north end is more permanent stalls that orient themselves toward the central dining space and would allow for bar seating. This allows

for the pochè zone of these vendors to occupy the wall that is dug into the ground. The central dining space is a double height space, connecting to the vendors above and serving as the space for visitors to enjoy their food. In the summertime, when more visitors are likely to eat outdoors, additional vendors can set up temporary stands in this conditioned space. More temporary stands are located on the south side, where the operable screens open the interior up to the plaza and create connection to the public space.

Occupying the space between the market building and the train tracks, the community garden is placed. This space connects the food that will be sold inside the market with the resources the community has available to its residents. This garden can also take advantage of the rain that is collected by the canopy

### Arts Center



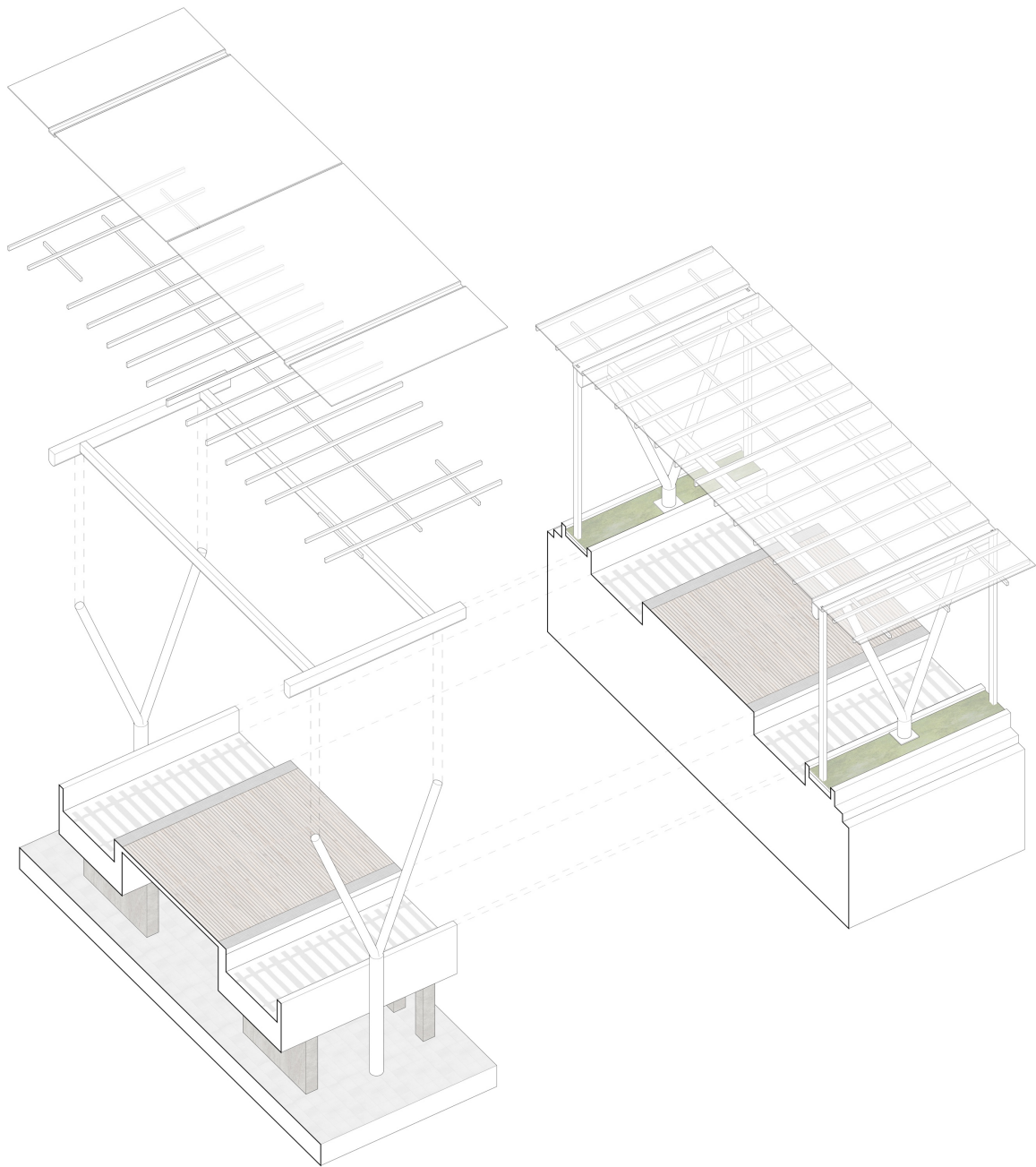
*Figure 65 - Art Center Interior - Source by Author*

To the south of the plaza is the Arts Center. The culture of art in Asbury Park has given the city character and begun to bring the city back to life. At the ground floor, there is an open gallery space, creating a place to display the work of local artists and engage the street level. At the Plaza level are a variety of learning and vendor spaces. To the south, where the space is bound by the ground it is dug into, there are classrooms of different sizes. In these spaces artists and musicians can come work on their craft and teach others, inspiring the next generation of Asbury Park's artist community. At the east end of the building there is a small theater space with stepped seating where small performances can happen and can be heard throughout the building. This program utilizes the pointed shape that occurs at the east end of the building adjacent to the terraced land of the plaza. Yet another type of space is seen at the north side of the plaza level, where large concrete walls run perpendicular to the façade. These walls and the spaces created between them can be used for local artist to sell their goods, engaging visitors to the building as well as those in the plaza.



*Figure 66 - Section Perspective Through Buildings - Source by Author*

Canopy



*Figure 67 - Canopy Exploded Axon - Source by Author*

The train canopy is used as a unifying element that creates a public façade for the train and shelters the platform. This canopy was studied in depth as to how it integrates itself into the design and what language it wanted to have. The final proposal for this canopy takes cues from the city's street grid, which flares out to the east in order to capture sea breezes. Similarly, the canopy's structure and façade create a Y-shape that flares out as it moves upward. In addition to creating a dynamic façade that faces the plaza, the structure expresses the train as a light, unimposing element. The train now has the same façade on the east and west sides, unifying the communities. This light, steel structure gets lighter as it moves upward toward the sky. Taking from the way a tree's branches work, the structure has a larger, more solid base as a two-foot diameter steel column, branching out into two 18" columns. The primary beam runs parallel to the train, to work with the directionality and movement of the train tracks. Secondary beams span the width of the train tracks, supporting the tertiary members that hold up the glass roof.

In addition to providing a façade for the train, this canopy also has many sustainability benefits. The canted form at the roof level is designed to collect rainwater in gutters that lie over the primary beams. These gutters direct water to downspouts, which are located over green buffer zones. These zones occur where the canopy structure meets the ground level, directing water away from the sunken plaza level. This minimizes runoff from the dirtier train tracks, filtering and collecting the water to reuse as greywater in the market and art buildings, as well as for use in the community garden.

## Conclusions

Infrastructural elements such as train tracks create divisions within cities throughout the world. With the study of transit oriented development and community oriented architecture, the built environment has the ability to bridge this gap and repair communities that have long been divided. If done correctly, train stops that incorporate public space and programming can not only act as a compelling and exciting gateway to the city for visitors, but work to repair the community from the infrastructural scar that railroads often represent.

Careful study of Asbury Park's history and community, along with the testing of a multitude of different options, drove design decisions throughout this process. However, the character and form of this space can be, and should be, unique depending on the city in which it is applied. Different styles or materials, the use of more vegetation or different building programming can give the space a different feel and direct visitors through the space in different ways. The facades used in this project took from characteristics seen throughout the city and from buildings of Asbury Park's past. When this model is applied in different cities, these material and form decisions should reflect the character of that place in order to create an engaging, authentic entrance into the city.

This thesis can be used as a precedent in space making and programming that can be applied when this community division is seen. No matter the character of the individual place, spaces can and should be created at infrastructure that act as divisive urban elements in order to repair the community and strengthen the gateway into the city. These spaces can serve as more than spaces to move through on one's way in or out of

the city, they can serve as places for residents and visitors to gather together and unite as one community

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