

**MASTER OF URBAN DESIGN**  
CARNEGIE MELLON UNIVERSITY

MCKEES ROCKS | FALL 2015

***Special thanks to***

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JUNCTION: INTERCHANGE

CONNECT, COLLECT, CREATE

## EXECUTIVE SUMMARY

This book documents the work of ten Carnegie Mellon University Master of Urban Design Students in the Fall of 2015 Semester. Under the direction of Stefani Danes, the studio focused on the redevelopment of a 21-acre site in McKees Rocks, Pennsylvania.

Issues addressed included a changing economic climate, combined sewage systems overflow, housing needs, and activating the area with program.

# A PORTRAIT OF PLACE

McKees Rocks is of comparable size to one of Pittsburgh's many neighborhoods. Its population of 6,072 is similar to that of Highland Park.

The town has a relatively transient citizenry-- 39% of citizens work outside the borough, and 44% of people that work in the borough live outside of it. Only 3% of the population both lives and works in the borough. The many commuters are complemented with the heavy traffic along Chartiers Ave. aka Rt. 51.

These commuters first encounter McKees Rocks through an underwhelming entrance that doesn't reflect the rich culture and history of the borough, and that discourages passersby to stop in the local businesses or visit for the cultural affairs.

As a pre-Columbian settlement, the community where McKees Rocks would eventually develop sustained itself on the rich woodland resources: plentiful fish, wildlife, and clean water. As early people adopted agricultural practices, the creek and river was the primordial life-source that provided water. The natural elements were celebrated and became symbols of importance for the site. Adjacent to the river lies the "sacred land of Plentiful," where the Adena tribe built their ceremonial burial grounds in the form of a large mound. These burial sites are one of the most recognized aspects of the culture, giving them the nickname "mound builders." This particular mound overlooks the Ohio River and has been the backdrop for the tale of McKees Rocks and for its emerging future. Throughout its history, Chartiers Creek and the Ohio River have served as the lifeblood of the land, providing for centuries its only access and an essential basis for its economy.

In the seventeenth and eighteenth centuries, McKees Rocks was a trading post for furs and fish. Many explorers landed on the banks of Chartiers Creek, followed by farmers and entrepreneurs, and the area became a gateway to the yet to be explored country to the west. By the late 19th century the advantage of the site shifted from

that of a trading post to a prime location for industrial use that complemented Pittsburgh's iron production. As Pittsburgh became the nation's largest steel producer, McKees Rocks became a center of railroad products and repair and, in particular, a service hub for the PL&E Railroad. During this period, small mercantile businesses in the old downtown area gave way to major industrial facilities built on the flat land along the river.

The borough grew from a population of 6,325 in 1900 to 16,241 in 1950. The effects of the railroad industry not only played a vital role in the economics of the borough, but also to a large extent, shaped the geographical layout. Major railway lines and crossing cut right through the borough, causing a stark divide of the land use. The flat and easily accessible areas were taken over by large scale industrial building and the residential areas were left to be occupied on the slopes. McKees Rocks was not laid out according to an overall plan, but grew pragmatically a few blocks at a time, which is why today it's a patchwork of different street grids.

While industry grew, tensions between the workers and the owners and managers of major industries caused labor conflict. McKees Rocks was the site of the McKees Rocks Strike in the year 1909. The backdrop was the Pressed Steel Car Co., America's second largest steel car producer. 5,000 of the 6,000 workers protested the corporate peonage, low wages, and poor working conditions. Though a low average income and labor exploitation are not legacies the borough wants to remember, a resilient and tenacious legacy of proud, and hard-workers remains.

In one generation McKees Rocks more than doubled in size and experienced an explosion of cultural diversity. McKees Rocks' cultural legacy is largely due in part to its ethnic melting-pot population. Its population reached its peak (18,116 people) in the 1930s, when it was an immigrant, working-class town. Its citizens migrated primarily from Czechoslovakia (1,108) and Poland (945). Previously however, migrants were primarily from Yugoslavia, Italy

and Hungary, though there were also significant citizens from Austrian and Russian descent. This continuous inflow of immigrants left a legacy of fine church buildings and Eastern European foods and music, which are embedded in its cultural landscape today. Ice skating, boxing, and events at the Roxian enriches the borough's cultural scene. The music clubs of the 1940s and 50s that attracted people from around the region made McKees Rocks a popular center for big band and jazz music.

That rich culture is what the CDC aims to tap into for McKees Rocks resurgence. The Father Ryan Arts Center, a fully-accessible, multi-level facility has reinvigorated the arts in McKees Rocks. The center provides low-cost art classes and workshops in visual arts, dance, theater, and music. It seeks to empower community members through the arts. Pending development, such as the reopening of Roxian Theater, will start to revive the rich musical history. The 1928 vaudeville movie house, is currently undergoing redevelopment as a 1,500-seat contemporary concert space. It is tentatively scheduled to open in 2016.

The locally-owned businesses, such as Five Generations Bakery, Pierogies Plus, and Mancini's are a testament to a long line of family-owned enterprises, and the ones that enrich the local culture and foster pride in the community.

While the rivers were an enormous industrial asset, in terms of connectivity, the construction of the 19th and 20th century did not consider the fluvial floodplains. Much of McKees Rocks was built on the floodplains of Chartiers Creek and the Ohio River. In a natural condition, the water bodies shift and expand seasonally, leaving the land along it more fertile. With the settlement of the town and the demand for industrial land, the edges of the creek were hardened and the channel narrowed. As the land became populated, the natural floods became liabilities. After each flood, McKees Rocks rebuilt and fortified itself, even raising the city higher to protect property and traditions. In 1936, a devastating flood ravaged the whole region and inundated the city, leaving many homeless. Today, the majority of the borough sits on the 100-year floodplain. The same focus on industry turned the borough away from its natural assets: its citizens are not able to utilize the creek front and creek for any recreational purposes

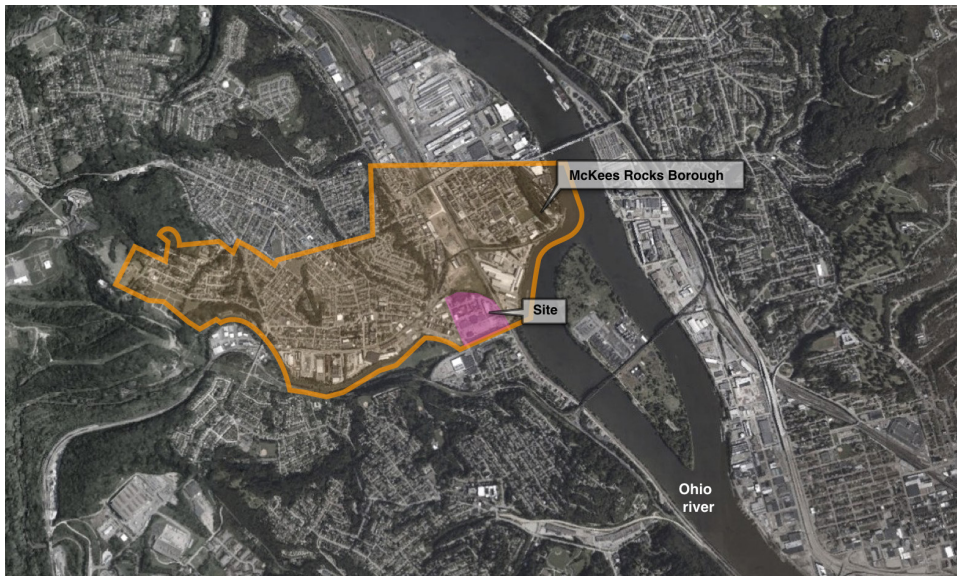
and the creek, like during industrial times, remains a dumping ground for human and industrial waste. Approximately 12 combined sewage outflows are stippled throughout the borough and contaminate its waters.

As the region once again grows, McKees Rocks is on the way to becoming once again a pivotal point in the region--this seems like a huge exaggeration. McKees Rocks could be a neighborhood center again where people could enjoy the rich and small town feel but also have access to the greater cultural activities of Pittsburgh. The transformation would begin with McKees Rocks turning towards the creek and celebrating the possibilities that it offers. Creating the connections back to the creek would open up new forms of connectivity to the region and really make McKees Rocks an even more special place to live and grow a family. A great influence in bringing about this change is the McKees Rocks CDC whose vision is to enjoy a safe, diverse and thriving residential business community capitalizing on McKees Rocks location and access to the region.

# SITE DESCRIPTION

This semester we worked with the McKees Rocks Community Development Corporation (MRCDC) to design a new mixed-use town center for one of the most high-visibility sites in the Pittsburgh region: the entrance to McKees Rocks at the terminus of West Carson Street.

The site is a 21-acre area at the mouth of Chartiers Creek. While the creek marks the boundary between Pittsburgh and McKees Rocks, Downtown Pittsburgh is only ten minutes away. This large under-developed area is adjacent to the historic main street of McKees Rocks, just to the west of our site. Chartiers Avenue, which is also State Route 51, is a major connection to the western suburbs of Allegheny County. The site is ideally situated to expand and anchor the historic center of McKees Rocks, to create a positive new image for the town, and create a unique and attractive place that serves not only the borough of McKees Rocks but the heart of the metropolitan Pittsburgh area. A well-designed development with a distinctive sense of place can bring new economic and social vitality to the borough as well as provide a model of sustainable riverfront development for the region.



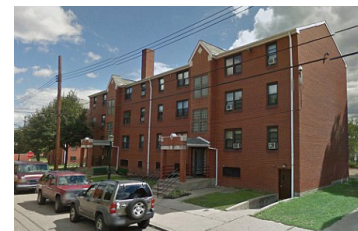
The three major uses on the site today are a shopping center, a car dealership, and a public housing development:



The shopping center, McKees Rocks Plaza, was built in the 1960's but as the surrounding area lost population and wealth, it fell on hard times. Its owners have reinvented it several times with new commercial tenants in order to keep it financially viable. It lost its original grocery store many years ago, but a few years ago Aldi's opened a store there.



The car dealership, Crivelli Chevrolet, has been on the site for many years, although the location is not especially advantageous. The business serves a regional market and is unrelated to any other uses around it.



The public housing, Hays Manor, which is located behind the shopping center, is a pocket of concentrated poverty isolated from nearby residential neighborhoods, and is planned to be redeveloped by the Allegheny County Housing Authority as part of a larger mixed-income neighborhood.

The largest and most visible area of the site is paved as parking lots. The current uses are unrelated to each other; the entire site is under-developed; the buildings are disconnected and detract from McKees Rocks' historic downtown; and very little of the site is pedestrian-friendly. Instead of a place of welcome and pride, the site conveys a sense of decline and placelessness.



The site is a gateway that provides visitors with an important first impression of McKees Rocks. It is a riverfront site, yet it faces a river that has always flowed behind buildings, noted more for the damage it has caused by flooding than the public benefits it offers. It is an important crossroads between a regional arterial road and local streets. Its location makes it ideal as a destination for a large market. Plans are already underway for revitalizing Chartiers Avenue as a cultural and entertainment hub. The Father Ryan Arts Center has become a regional destination in itself. It is soon to be joined by the revived Roxian Theater, and together they will anchor the smaller businesses that line the several blocks of McKees Rocks' downtown. The public realm here, despite a few planting beds, is dismal and unfriendly. From an ecological perspective, the development of the site has seriously impeded the functioning of natural systems and is dependent on an unsustainable level of public utility services and maintenance.

MRCDC is working with project stakeholders to re-envision the site and its potential. The process is in its early stages. A sense of opportunity has motivated initial discussions, but there is not yet a common purpose, a statement of goals, or an understanding of either the capacity of the site or constraints on development. The studio projects can therefore play an instrumental role in this catalytic opportunity: setting the site on the high road to sustainable urban development that transforms downtown McKees Rocks into a vital and beautiful place and provides a demonstration for the entire region.

# TACTICAL INTERVENTIONS

While permanent projects and real estate development require commitment, short-term, impermanent tactics can help garner support, create a sense of community, and test the success of more permanent ideas.



## A new entrance

Painting the large span of concrete, or decorating the bus stops in the entrance of the borough can help spark ideas for a new, welcoming entrance.



## Play parks

Recycled wood pallets or repurposed construction material can be used to create engaging and activating play areas that catalyze a more vivid and community-oriented urban landscape.



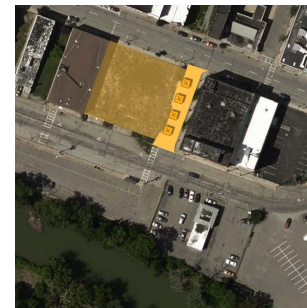
## A visible creek

Access to the creek will engage the citizens with the waterfront and create a new consciousness of water issues in the region. Furthermore, a more eventful and natural setting will attract people.



## Engaging sidewalks

Lively sidewalks will attract more pedestrian traffic. The more people are out and about, the friendlier and safer the neighborhood becomes.



## Porto-patio

Vacant lots along Chartiers Ave. could be activated with impermanent and moveable furniture. Creating pleasant, open, "sticky" spaces will attract more pedestrians to the borough's main street.



## Pop-up markets

Interactive spaces and the rotation of food stands will help engage the community and attract visitors. What better way to socialize than shopping for fresh local produce?

# DEVELOPMENT PROGRAM

This project focused on an emergent issue in post-industrial cities throughout the United States. Urban neighborhoods built in the nineteenth century offer the density and connectivity that would make them attractive and sustainable communities for the future. However, in the automobile era in the United States, suburbs have drawn away those who have the affluence to make choices.

Even if a neighborhood has a wonderful physical environment that looks stable, it is constantly changing—people, money and other resources are flowing in or out all the time. To continue to be stable, there must be continuous investment. In cities throughout the world, the choices that younger generations are making determine their viability for the future. Pittsburgh, having lost such a large proportion of its younger population in the 1980's, is on the front wave of this trend. Towns like McKees Rocks are viable today but show many effects of the area's fifty-year population drain and a notable tendency of its older residents to look backward rather than toward the future.

Today, younger people are interested in the urban lifestyles, amenities, and convenience that urban neighborhoods can provide. The premise explored in the studio was that it is only by attracting new younger residents--meaning, today, the Millennials--that the vitality of McKees Rocks can be enhanced and its viability for the future assured. The studio investigated the forces that supported the situation, understanding the concept of "complete communities", utilizing principles of place making in design, and making research-based design recommendations for a new mixed-use "anchor" development.

In this studio, our focus was developing a strong sense of place. We explored the critical relationship of place to its ecology (which is rooted in the idea of "home"). An authentic sense of place derives from a deep understanding of its distinctive natural, historic, social, and economic characteristics. We focused particularly on a concept of place in which human interventions were no longer in opposition to natural systems, but rather, created a harmonious whole in which

natural and human systems supported and enhanced each other. Research into McKees Rocks was an integral part of the design process.

The project presented opportunity to learn more about public interest projects and the skills needed to take a leadership role in the growing urban design field. Recognizing that development organizations and design professions are also being held to a higher standard of accountability, the studio explored the interface between practice, community development, and public policy.

The following design proposals are the result of the semesters work. Each scheme was developed in teams of two Master of Urban Design students under the guidance of studio coordinator Stefani Danes.



# FRINGE

Ashley Cox and Abhishek Bodkay

While McKees Rocks is carving out a name for itself, it is important to understand and embrace the importance of their supporting role, historically, to larger networks municipally and nationally. As a gateway to Downtown this new center is well-suited to accommodate budding entrepreneurs “on-site” and to create a niche as a robust satellite for well-established industries that surround the area. We approached this design challenge with two major strategies: (1) increase connectivity within the sites and to larger network, and (2) integrate of uses and open space.

## Fringe: A Redevelopment Strategy, for McKees Rocks Town Center at the Urban Periphery

While McKees Rocks carves out a new name for itself, it is important to understand and embrace the supporting role of the borough to larger municipal and national networks. As a gateway to Downtown, this new center is well-suited to accommodate budding entrepreneurs “on-site” and create a niche as a robust satellites for well-established industries in the area.

### FRINGE

noun, often attributive /frinj/

: a border made of hanging threads used to decorate the edge of something (such as clothing, rugs, and curtains)

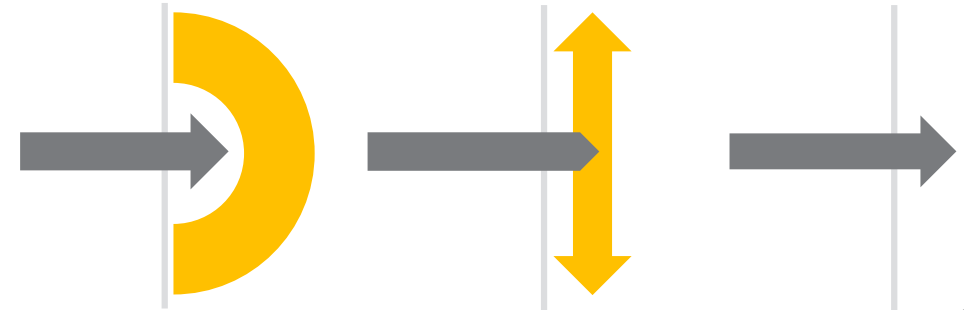
: a narrow area along the edge of something

: an area of activity that is related to but not part of whatever is central or most widely accepted



One of the first design gestures we made was the introduction of paths for movement. Some came as a result of the existing context; some came as a result of what we saw lacking.

Our site edges are treated in the following ways:



McKees Rocks suggests its own fabric and its own set of geometry from which we began our design integration onto the site. Our challenge was dealing with these geometries and how we could resolve the fringed edges.



### Vehicular Roads

The road grid is taken from the existing grid network west of the site. Working with the extended geometry ensured the distance between vehicular roads would match up the context of McKees Rocks. It also helped us generate our block lengths.

### Pedestrian Streets

Pedestrian streets create the grid and are designed to dominate the site movement over vehicular traffic. The streets run north-south, creating the grid for the street network. All pedestrian paths end in a green space.

### Green Spaces

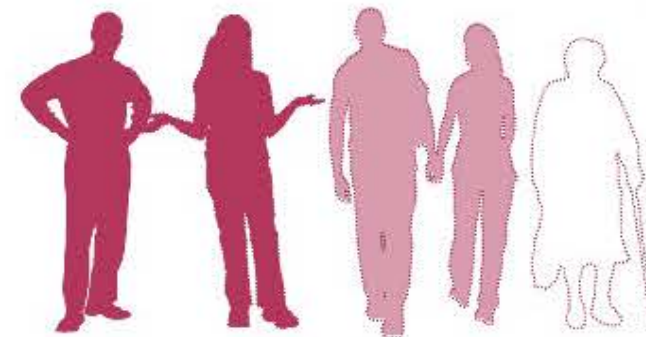
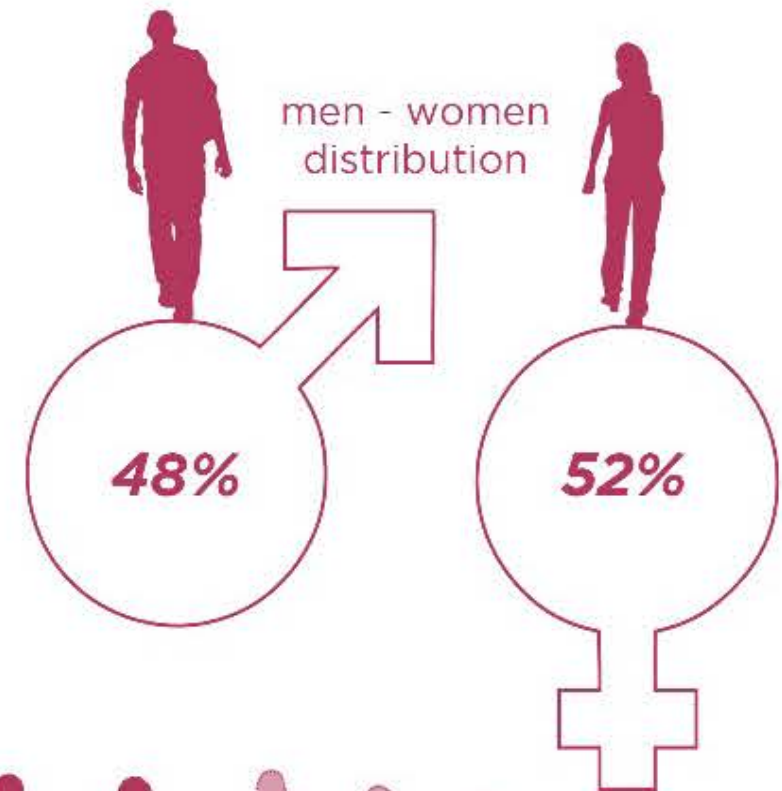
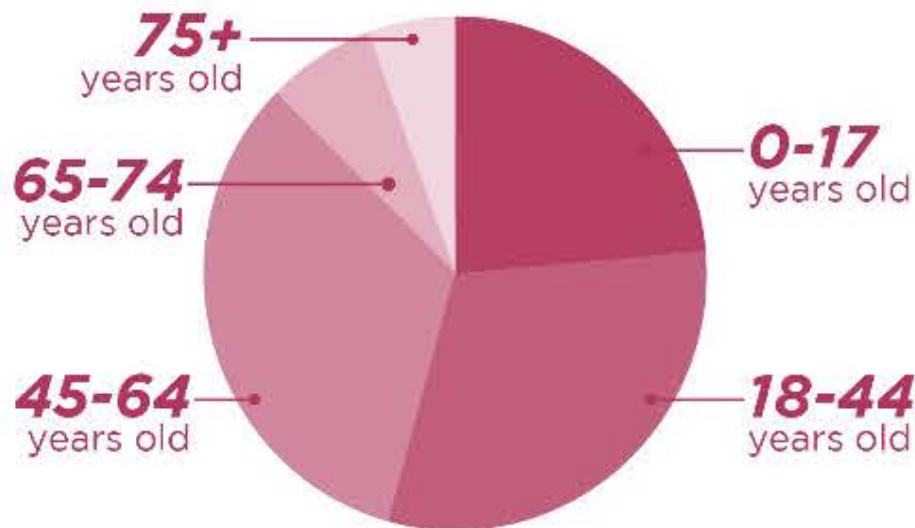
At the south end, the riparian edge works as open green space, and at the north end, the park acts as an important buffer between the residential zone. The open spaces are used to cap the pedestrian movement across the site.

# DEMOGRAPHICS

McKees Rocks has  
**6,097 PEOPLE**



...their age distribution is as follows:



**4 out of 5** residents are high school graduates

less than **1 out of 5** Pittsburghers is a high school graduate

**2 out of 5** residents has a higher education degree

less than **1 out of 5** Pittsburghers has a Bachelor's degree

# HOUSING AND INCOME

**.92** car by household



**2 out of 3**  
drive their car  
to work

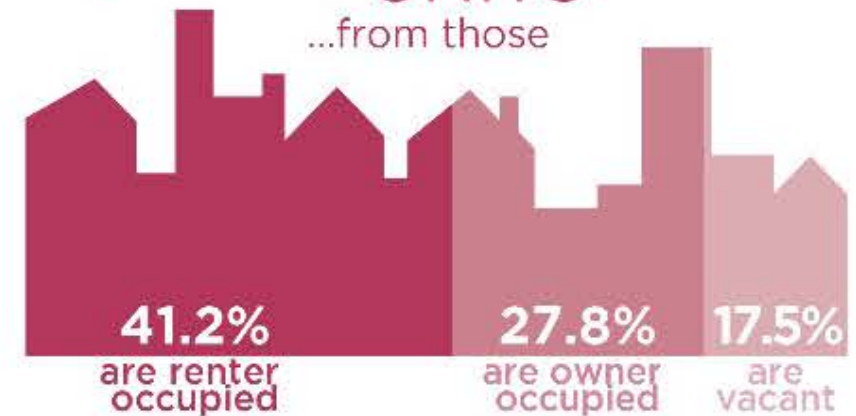
**% of population  
below poverty**

Based on Census Data,  
a low income neighborhood  
is a Census Tract that has  
**more than 20%**  
of its population  
under poverty.



McKees Rocks has  
**3,489** HOUSING  
UNITS

...from those



the **average age** of  
the housing stock in McKees Rocks is

**67 years**



**McKees Rocks**

**Pittsburgh**

all housing units average value

% of houses  
with mortgage

**56.1%**

the median rent is

**\$566**



## Fragmented Open Space

The fragmented open spaces on the site are embedded in the grid to engages larger, responsive, ecological network. The division of the open spaces also ensures equal distribution to all blocks and land use types. The two main types of smaller open spaces are center courtyards and corner gardens.

## Blocks and Pavements

The blocks are oriented in the north-south direction to take advantage of the linear site. The block sizes are determined by the grid take-off from the existing street network. All blocks are connected by pedestrian ways. Connection of alleyways allows for the circulation of services and utilities.

## Building Mass and Form

The massing of the single family residence units, apartment buildings are with respect to average residential mass in McKees Rocks. The commercial buildings on the south are scales to match the massing of the buildings downtown as our proposal extends the commercial corridor of Chartiers Avenue. The heights of buildings do not exceed six floors, obeying the context of the borough.

## Parking

All the parking on site is on-street. The residential units have allotted parking. Commercial and retail parking is around the blocks and alleyways.

## Tree Coverage

The foliage on site has a 30% landcover. Trees are an important part of place-making.



## INCREASE CONNECTIVITY

Since the site is on the edge of the borough it also acts as a gateway to McKees Rocks. Currently, it is poorly connected not only with the rest of the borough, but also within a larger regional context. The aim is to resolve all overall connectivity considering all modes of transportation that could flow into larger networks around the site.



### Road Hierarchies

The main road is the extension of Chartiers Ave. from downtown towards the east. It serves as the entry point to McKees Rocks for those using West Carson St. the peripheral roads enhance connectivity to the north end of the site. All secondary roads connect to Chartiers Ave.



### Pedestrian Streets & Alleyways

The pedestrian streets are connected to open green spaces at both ends. The alleyways are laid out to connect service corridors along blocks without disturbing the main roads.



### Rerouting Route 51

Rerouting Route 51 is an essential part of our strategy to engage better connectivity for both the site and downtown McKees Rocks. It also helps to resolve the intersection issue, which is seen on the current route.



### CSX Connectivity

The direct road connection from West Carson to the proposed CSX campus will divert the heavy traffic from Chartiers Ave. into the CSX site.



### Public Transit

Poor connectivity of public transit has been an apparent problem on site. Proposing a bus route from the site with strategically placed bus stops would attract more people on site and help revitalize the commercial corridor.



### Bike Paths

The bike path is a connection through downtown and the new extension, which comes in from Neville Island will connect to the Great Allegheny Passage.



### Railroad Connectivity

The Railroads are important infrastructure embedded in the Borough's fabric of connections. Using them to transport goods for all the light manufacturing units will be a good way to revitalize the proposed CSX campus. We also propose establishing a new railway dock on site where there is an intersection on the tracks.



## INTEGRATION OF USES

The open spaces are an integral part of the land use and are activated on site. The south end of the site has public plazas built along the commercial corridor. The residential blocks have a central open space for multiple uses. They responded well to the various activities around them and are connected up pedestrian ways throughout.

### PROGRAMMATIC BREAKDOWN commercial

- neighborhood service retail
- recreational-commercial
- office space
- industrial

### PROGRAMMATIC BREAKDOWN residential

- single family  
96 units 96 occupants
- duplex  
18 units 36 occupants
- rental apartments
 

① 20 units @ 1000 sf	16 ct
② 32 units @ 1000 sf	3 ct
③ 15 units @ 1000 sf	1 ct
④ 15 units @ 1000 sf	2 ct
⑤ 18 units @ 1000 sf	1 ct
⑥ 36 units @ 1000 sf	1 ct
⑦ 63 units @ 1000 sf	1 ct

578 occupants

### PROGRAMMATIC BREAKDOWN public

- waterways
- public/semi-public facilities
 

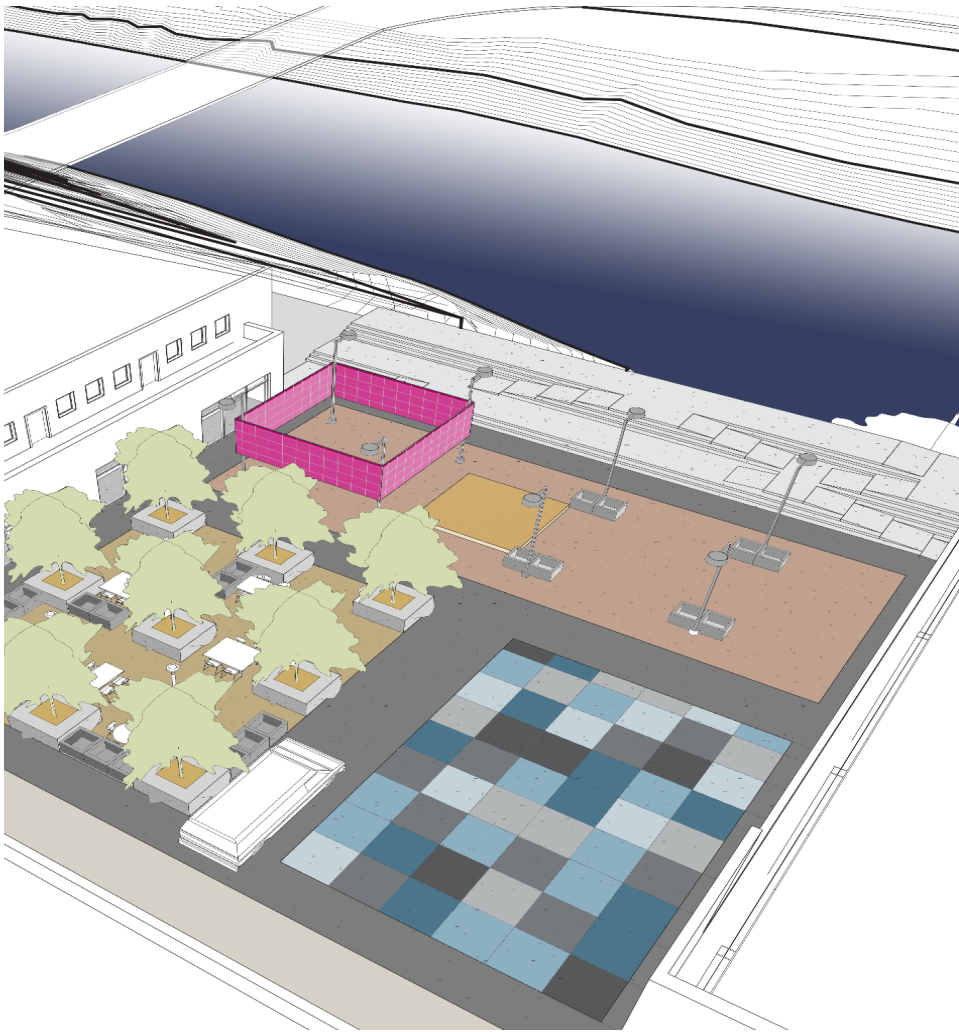
① borough building	@ 41884 sf
② marina gateway	@ 19000 sf
③ commercial share	@ 33000 sf
④ pre-kindergarten	@ 32000 sf
- utility facilities
 

① living machine	@ 36500 sf
② railway station	@ 69000 sf
③ solar energy hub	@ 13200 sf
- recreational open space
- environmental conservation
- urban agriculture



## COMMERCIAL PLAZAS

The plazas close to the creek are essential in capturing the working population in the adjacent commercial buildings. Their proximity to the creek would ensure use of the space for recreational purposes as well. The space would be active during daytime due to offices around it and in the evening by residents living in the neighborhood.






Performers are able to cook, perform, play sports, or display projections. Observers can have a 360° view of the area— from the creek to the plaza. The platforms are large enough to sit, stand, or lay down. People are able to interact with a water play space that can shoot water when it's warm, or become an ice rink when it's cold, and light up at night.

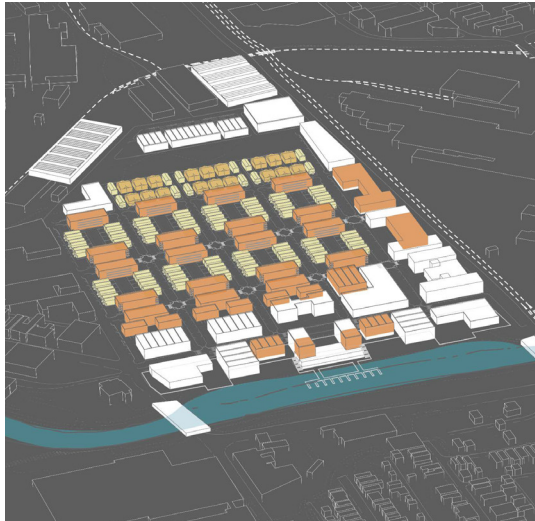


## SOCIAL OVERVIEW

McKees Rocks is known for its working class population and we are seeking to enhance their current living conditions. In our proposal we are attempting to address issues of social equity and diversity as it relates to housing and mobility.

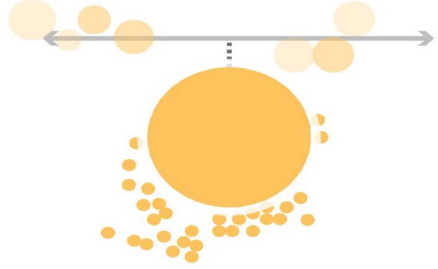
### PROGRAMMATIC BREAKDOWN residential

	single family 96 units	96 occupants
	duplex 18 units	36 occupants
	rental apartments	
	1 20 units @ 1000 sf	16 ct
	2 32 units @ 1000 sf	3 ct
	3 15 units @ 1000 sf	1 ct
	4 15 units @ 1000 sf	2 ct
	5 18 units @ 1000 sf	1 ct
	6 36 units @ 1000 sf	1 ct
	7 63 units @ 1000 sf	1 ct
		578 occupants



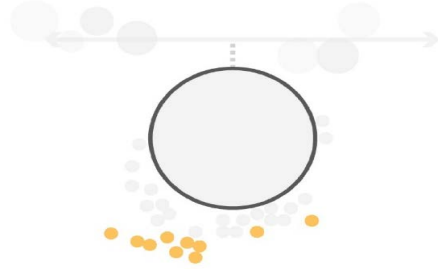


## ECONOMIC OVERVIEW



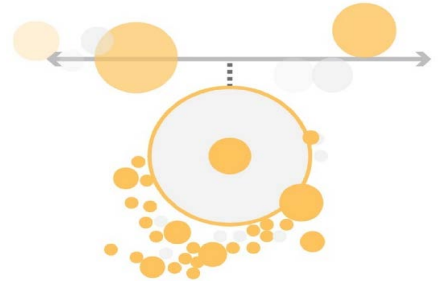
### Industrial Climax

During its heyday, McKees Rocks had a strong railway industry that focused on the service and repair of freight trains from across the nation.



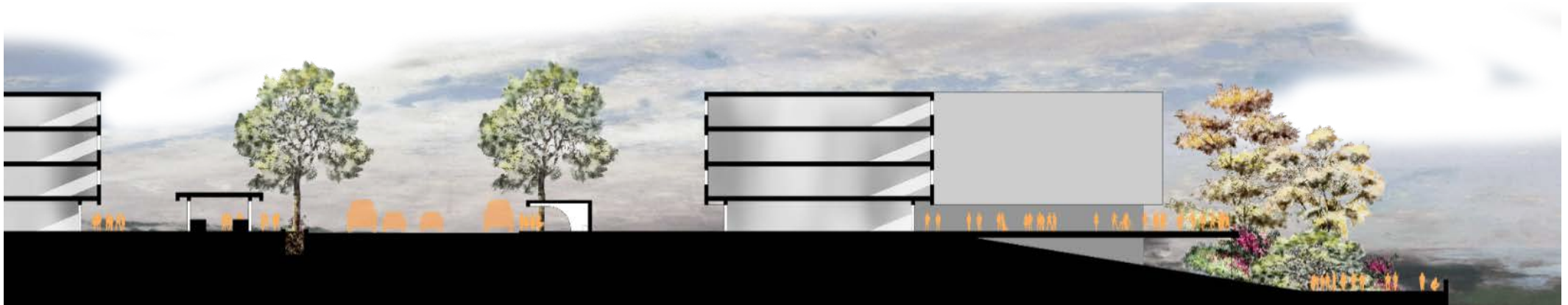
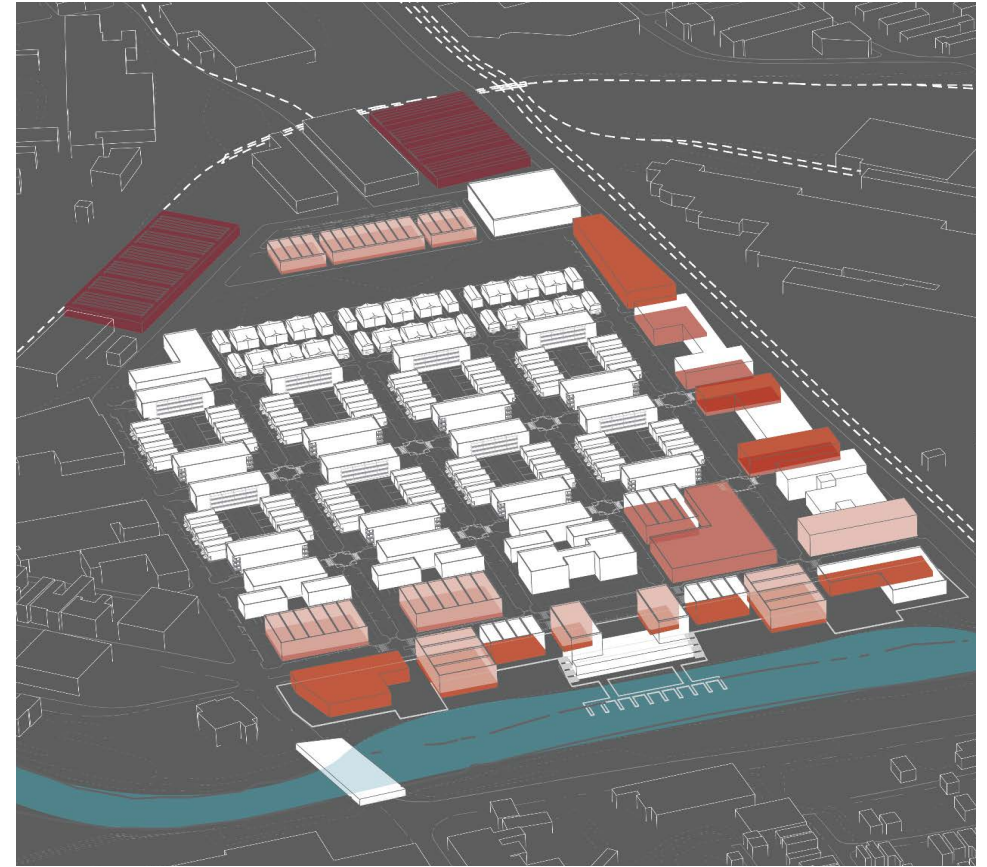
### Railway becomes Bankrupt

Once the industry began to decline, it took with it a majority of the economy that allowed the town to thrive.



### Economic Diversity

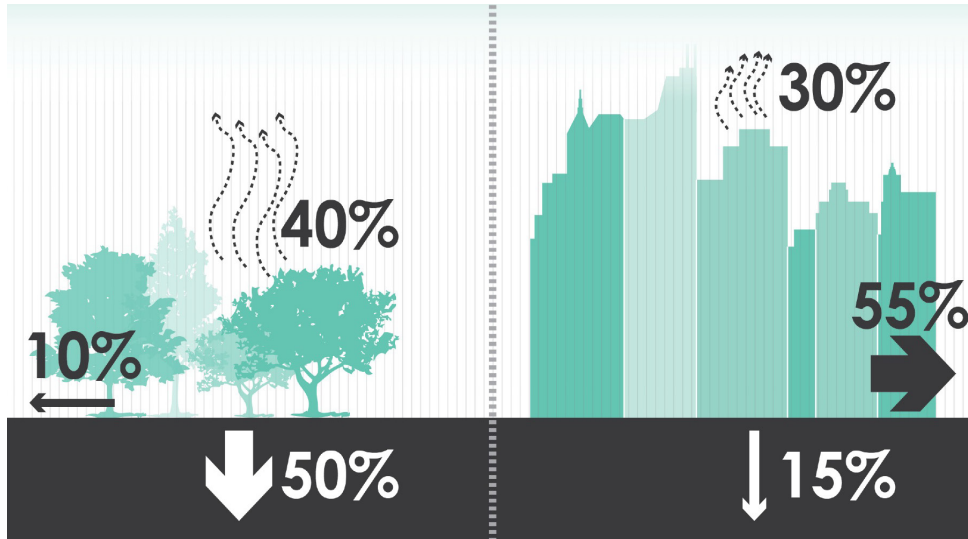
By diversifying the type and scale of industry that McKees Rocks supports with our infrastructure, a more resilient economic culture can begin to form.



## ECOLOGICAL OVERVIEW

### Storm Water Management and Flooding:

Storm water management is necessary to be tackled on site as the site is on a flood plane. Various ecological networks planned on site helps reduce rain water runoff which essentially reduces the issue of flooding.



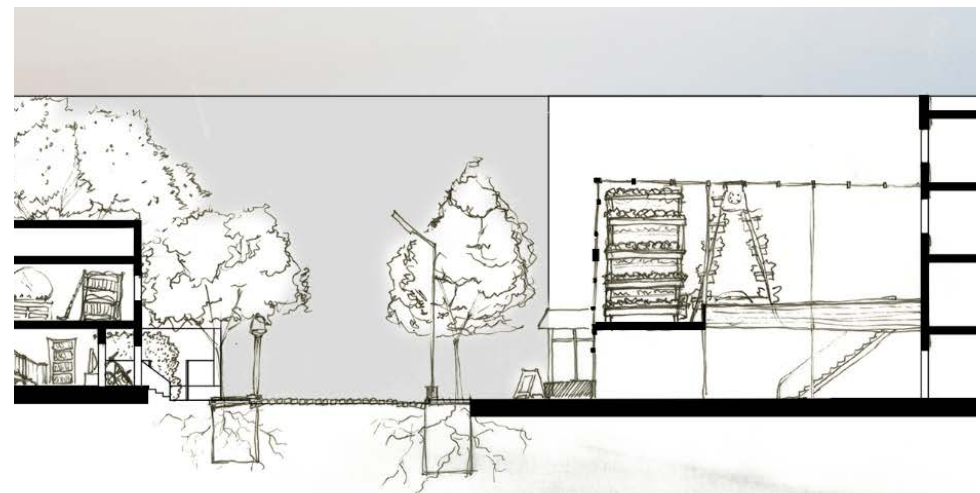
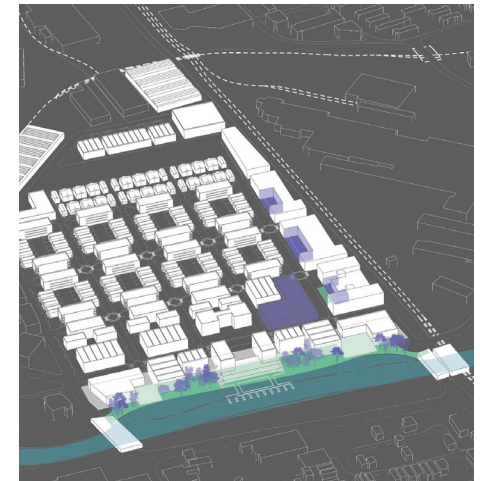
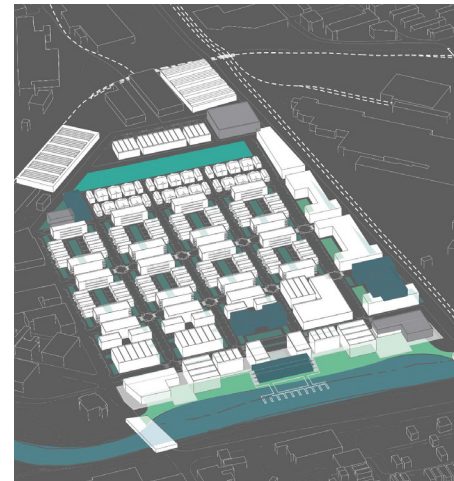
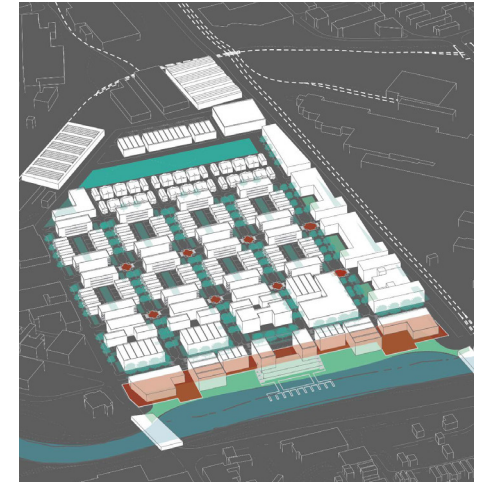
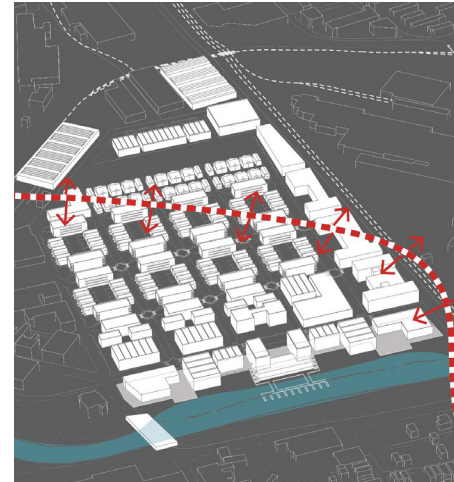
### Storm Water Management and Flooding:

We prioritized our placement of rain gardens along major thoroughways because of street width and as a traffic calming strategy. Rain gardens are along pedestrian streets.

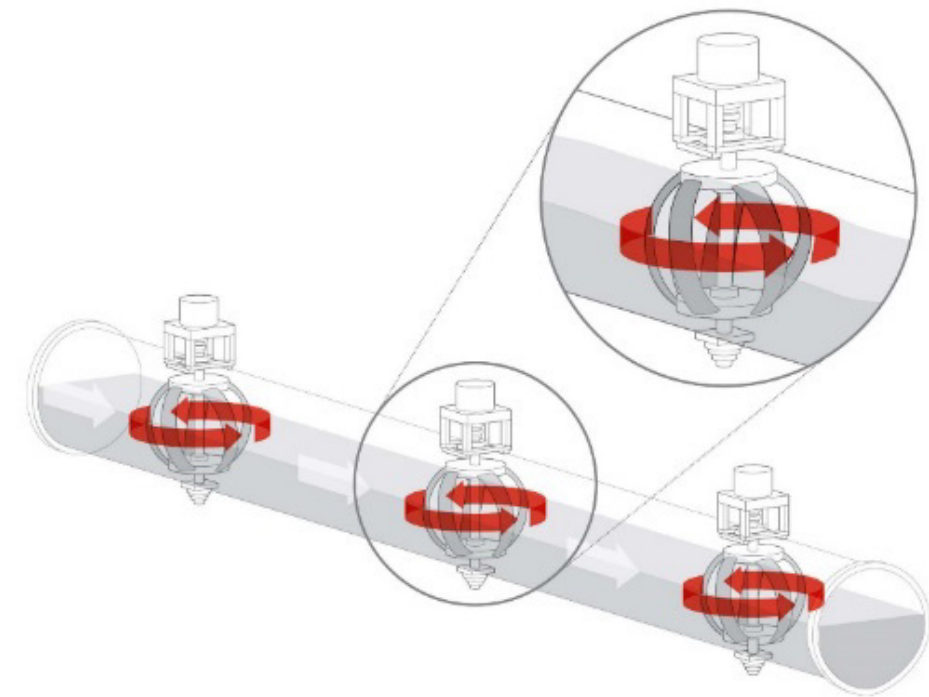
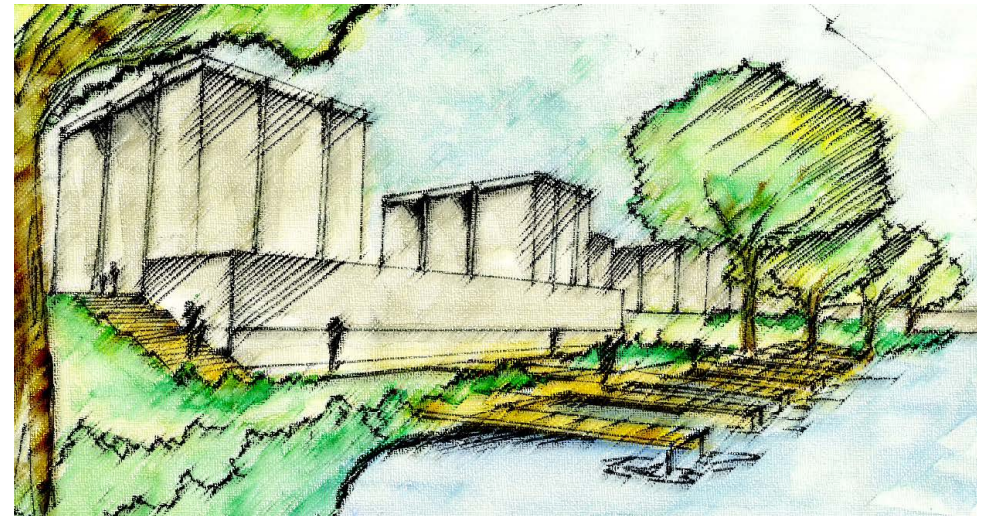
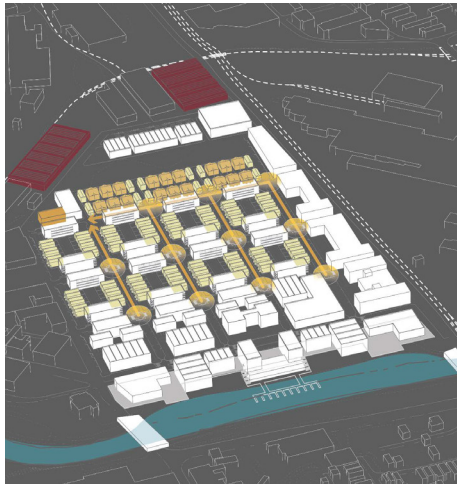
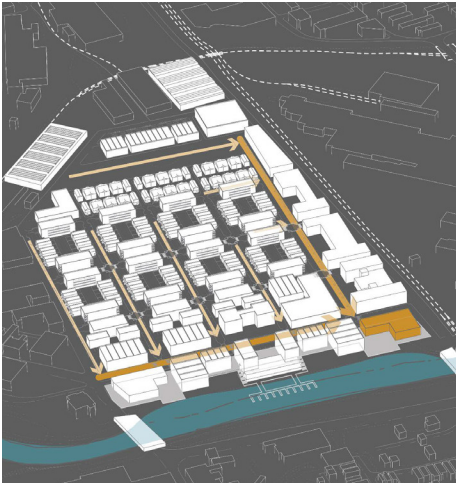
Catch basins are proximate to vehicular streets and the storm water on it. Its flow is directed towards the tanks under pedestrian streets.

### Food Production:

We have proposed both formal and informal urban agriculture along the to major peripheries on the site









### Waterway Systems:

The Chartiers Creek is one of the largest water bodies in Allegheny County. It runs down all the way to Lawrence. Since the site is just placed from beginning of the creek, revitalizing the creek and providing access infrastructure on site could be an great way to connect these neighbourhood for recreational purposes.

### Neighborhood

Stormwater park  
Urban Agriculture field

### Right of Way (E/W streets)

Cisterns

### Right of Way (N/S streets)

Permeable paving  
Tree trenches

### Block

Bioswales  
Rain gardens



# RIVER ROOTS

Nicholas Fazio and Smriti Chauhan

The concept emerged from the missing connection that the borough has with Chartiers Creek and the Ohio River. Historically, the water bodies served as an economic and transportation catalyst for the growing borough but during the period of the industrial revolution the people turned their back on the water. This negative relationship that the people of McKees Rocks had with water deprived the people of its livelihood and its heritage. The water serves as an important gateway and with its reemergence as the heart of McKees Rocks the borough has the opportunity to flourish once again. The intervention has the potential to tie people back to the river and establish roots through the creation of the new town center. The three major interventions goals were (1) relieve the traffic congestion and tension between vehicles and people along Chartiers Ave; (2) reconnect the borough back to the water and create a new center for the borough, and (3) reconfigure the grid to create a better cohesion of old and new.



## RIVER ROOTS

Our project is titled 'River Roots', a design intervention for McKees Rocks.

The three major interventions goals were to relieve the traffic congestion and tension between vehicles and people along Chartiers Ave, reconnect the borough back to the water and create a new center for the borough, and reconfigure the grid to create a better cohesion of old and new.

Since the borough is located in such close proximity to Downtown Pittsburgh, the borough is ripe for new development that can profit off its location to amenities but also offer lower costs of living. The intervention will provide opportunities for new housing, retail and office that is framed along Chartiers Creek and the Ohio River. These new connections to the water front will open up opportunities for new forms of travel and establish McKees Rocks as a true entertainment town.

The overall development plays on the strengths of McKees Rocks historical character and consists of many distinct districts such as 'The Wharf' that frames the Ohio River, 'The Promenade' that frames the Creek and Avenue and 'Old Towne' where the historical meets the new.

The Promenade serves as a new spine along Chartiers and will have a grove of orchards along the creek that would frame different views of Downtown Pittsburgh. The Wharf would serve as a new marina for boaters and would open up the opportunity for clipper ships to pull in and drop tourists and locals alike to the borough.

Through the reconnection to the water, McKees Rocks has a great opportunity to establish itself as a destination for tourists and locals alike.



Relieve



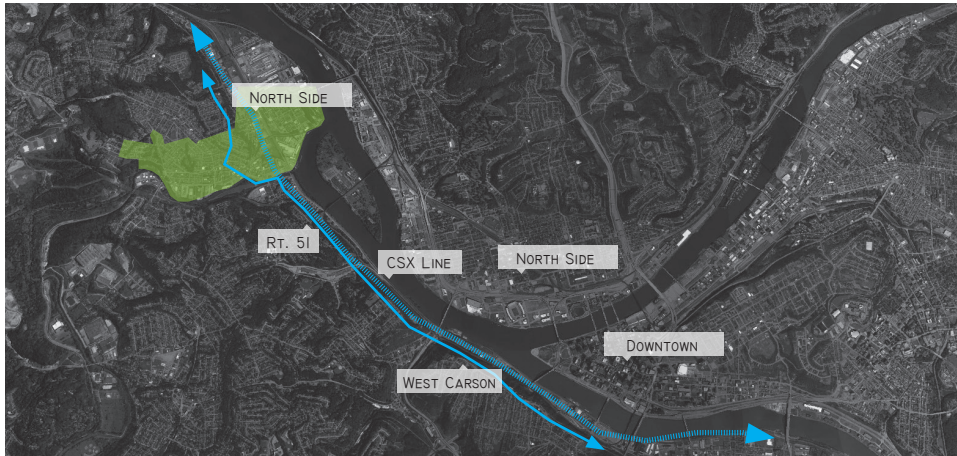
Reconnect



Reconfigure



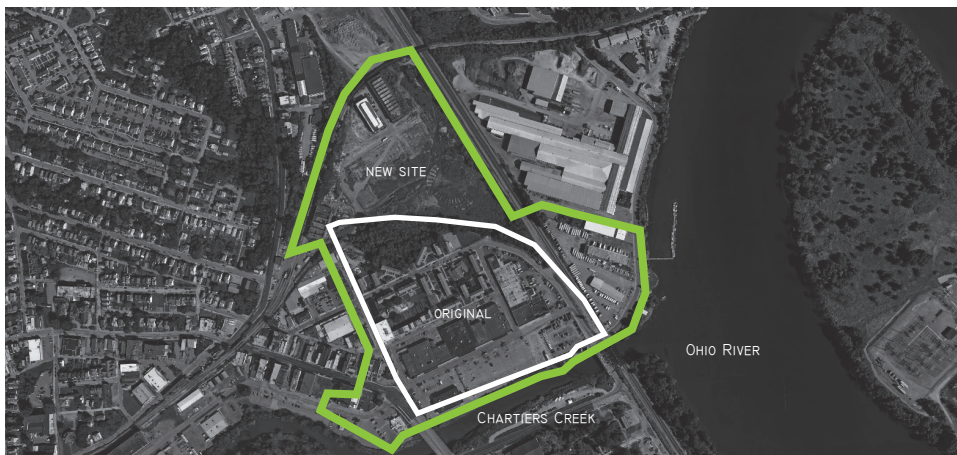




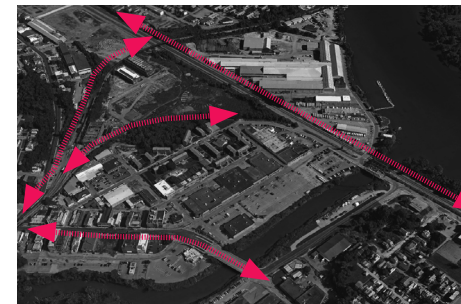
The site is located fifteen minutes from downtown Pittsburgh.



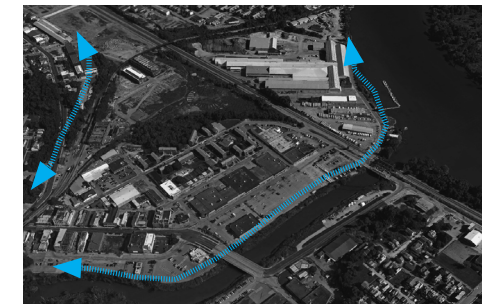
The site is in the entryway to the McKees Rocks Borough.



The site serves as a gateway, portal, and destination to the neighborhood.



Negative Conditions



Positive Conditions



Rt. 51



Rail Lines



Creek

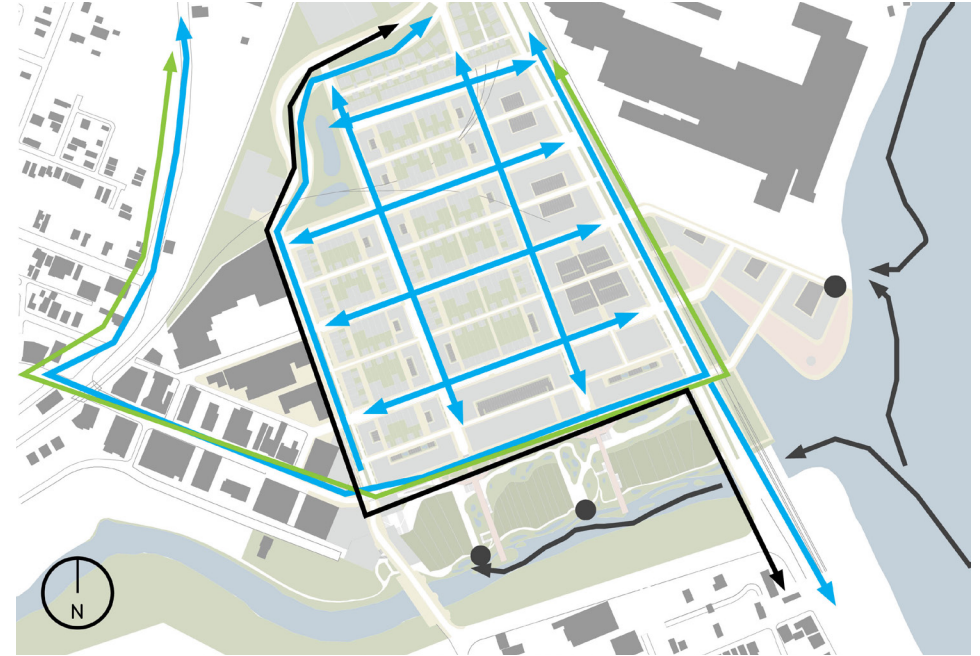


Slopes

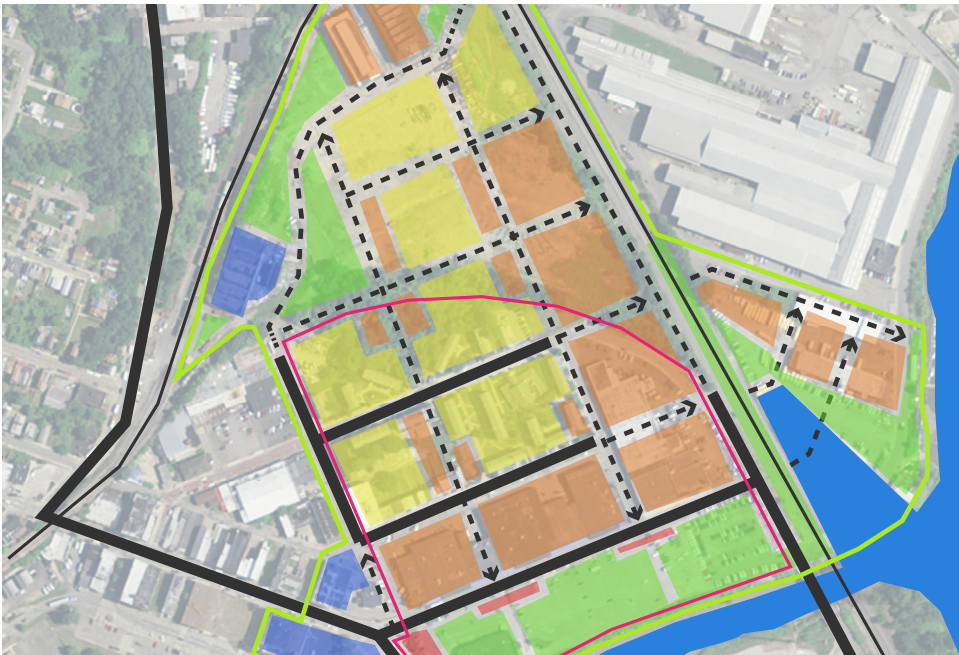




Movement within the site context



Movement on Site



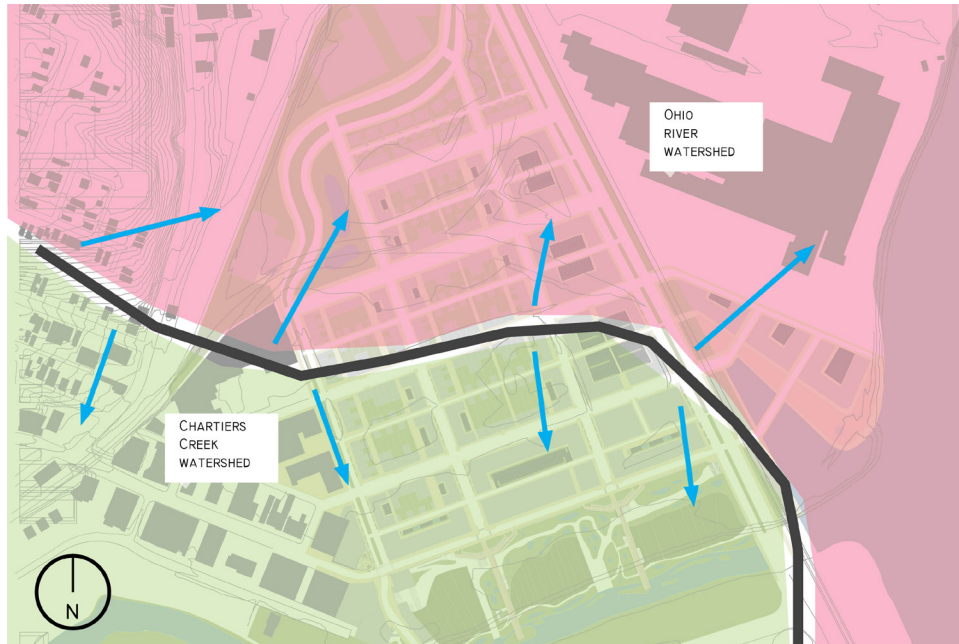
Concept



Open Space Framework



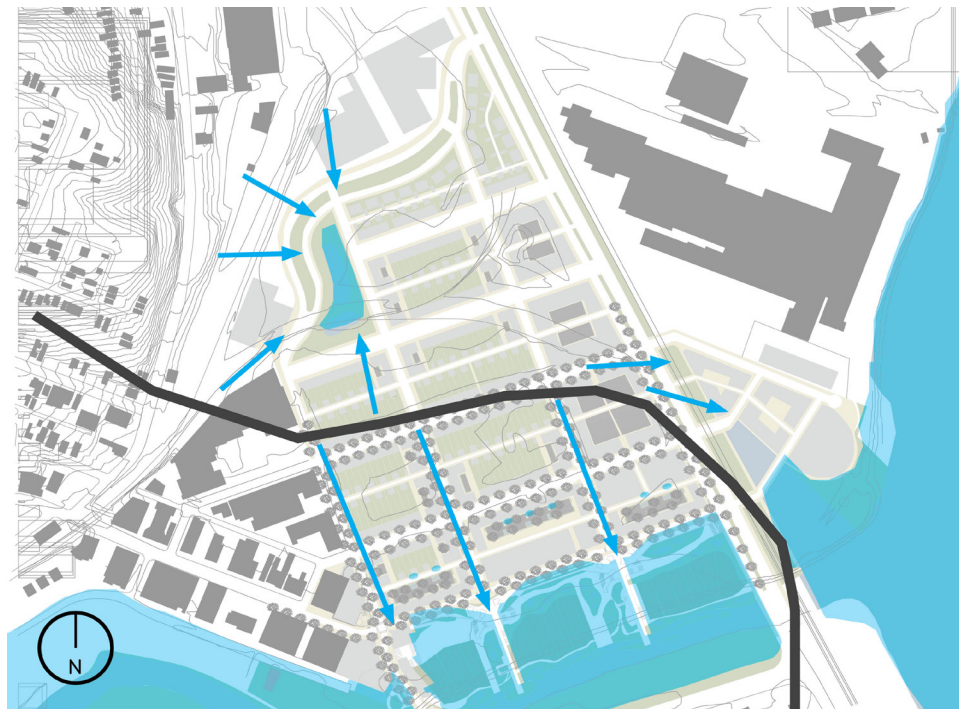
## DESIGN FRAMEWORK



Water System - Dry



Activity Places - Districts



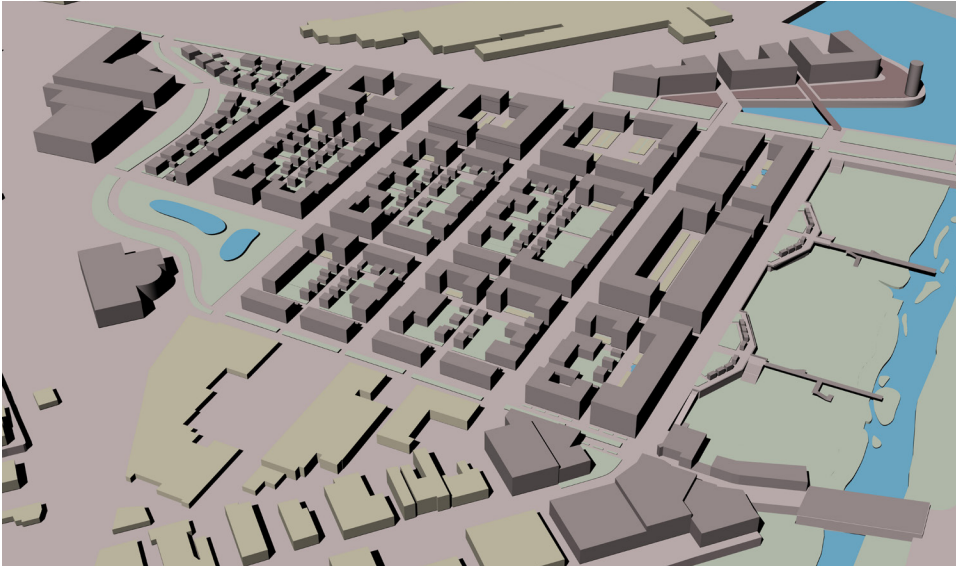
Water System - Wet



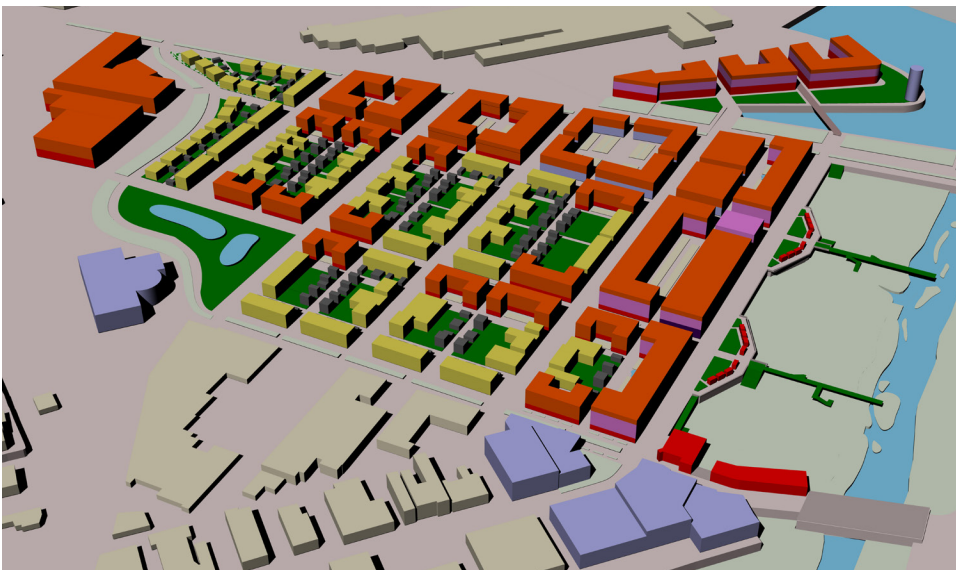
Spatial Structure



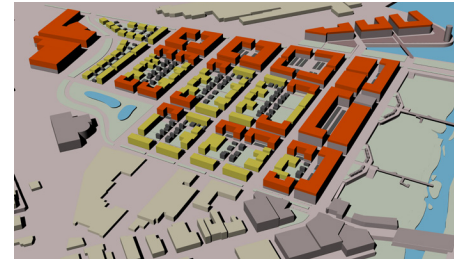
## BUILDING MASSING AND PROGRAM



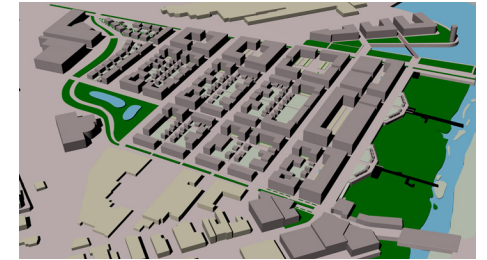
*Our site massing is cohesive to fit into the historic charm of the older section.*



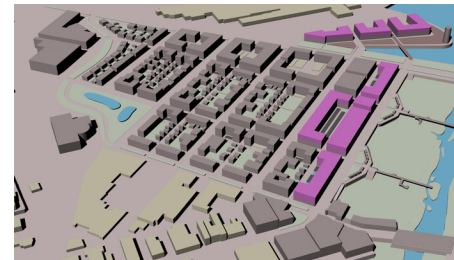
*Our site has a diverse mix of programs to activate the site all day and evening.*



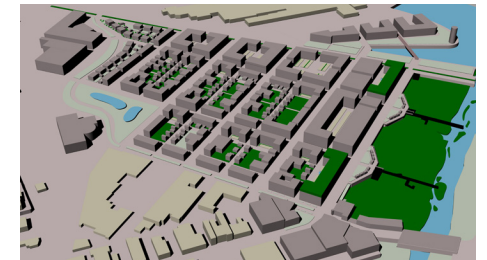
*Residential*



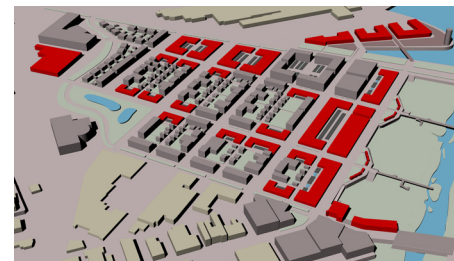
*Recreation*



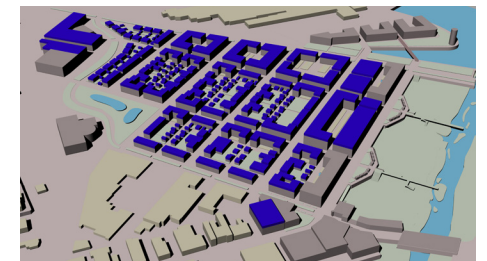
*Businesses*



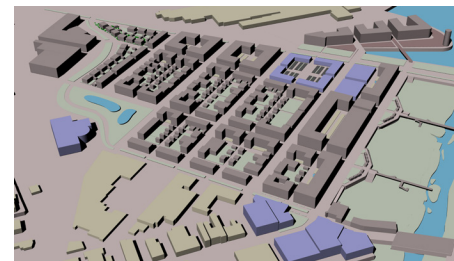
*Food production*



*Retail and entertainment*



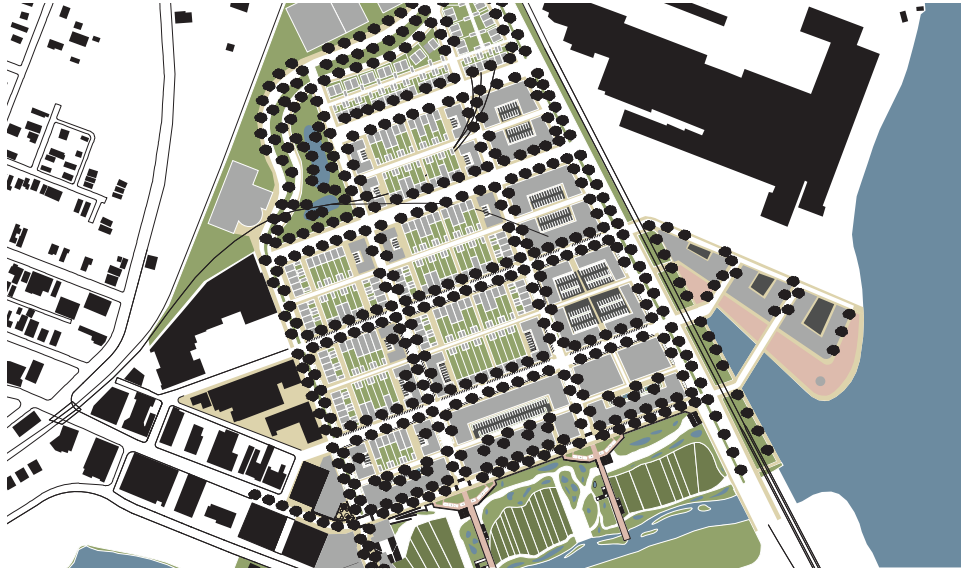
*Energy production*



*Community spaces*



## SITE PLAN

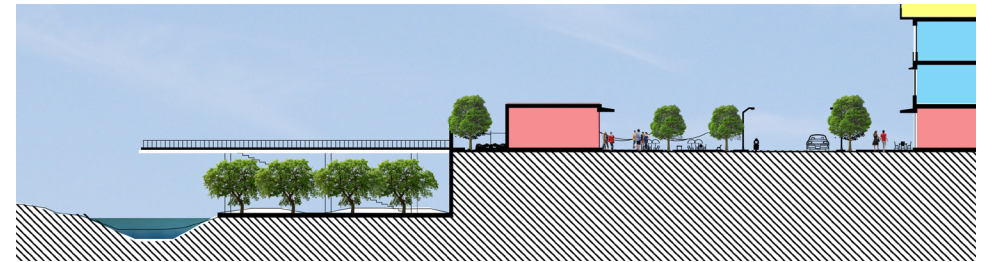


*Our site is covered by 28% of tree coverage for a nice shady feel during hot days.*



*All public spaces are accessible from major roads with service behind.*

## SITE SECTIONS



*Our creek is activated by the piers and orchards to create better connection to the water.*



*The overlooks form a gateway to the piers with a mix of local retail.*



*Private residences have large backyards with back alleys for cars and garbage pick-up.*



*Service alleys are naturally shaded and a protective green buffer for stormwater.*



## SITE SECTIONS



*Water will infiltrate through three sets of bioswales reducing quantity and improving quality.*



*Chartiers Avenue provides a mixed experience with active retail front and a promenade.*



*The large bioswale will serve as a recreational center for residents.*



*The boulevard is a green buffer and forms a connection to the parkway.*

## DESIGN STRATEGIES



*The project will be completed in four phases.*



*Our site has great sun coverage and plenty of shade during sunny periods.*



## VIEWS - Residential Areas serves a mix of activities





**VIEWS - The Parkway provides a lush green setting for residential duplexes**





## VIEWS - The Piers provide an exciting experience for events and celebrations





## VIEWS - The Welcome Plaza is the new gateway to McKees Rocks





# THE GATEWAY

**Anushree Nallapaneni and Abhishikta Pal**

The gateway is the entrance to the proposed McKees Rocks Town Center located in McKees Rocks Borough. Chartiers Avenue proved to be a great asset for our design proposal as it houses the Famous Roxian Theatre, Father Ryan Arts Centre and The Hollywood Music and Sound Inc. It is the Downtown of McKees Rocks and undoubtedly formed an integral part of our design. The Father Ryan Arts Center forms the most important node in our design proposal from which our goals of creating a new gateway, enhancing activity, promoting mixed use development and revitalizing the creek front radiate out into the site. Our project goals included (1) creating a new gateway, (2) encouraging activity, (3) providing access to the creek, and (4) stimulating mixed-use development.



- Rail Road
- CSX Site
- Light Industry
- Lane Industry
- Proposed Office
- Proposed Green Buffer

## SITE

The main project goals exist in order to create an extension to Downtown and integrate entertainment, retail, mixed income development and vitalize the creek front. The site is physically bounded by the railroad extension and the creek. Downtown McKees Rocks adds an additional functional boundary. Furthermore, the site forms the start of multiple proposed developments including the CSX project, which extends north towards the McKees Rocks Bridge.



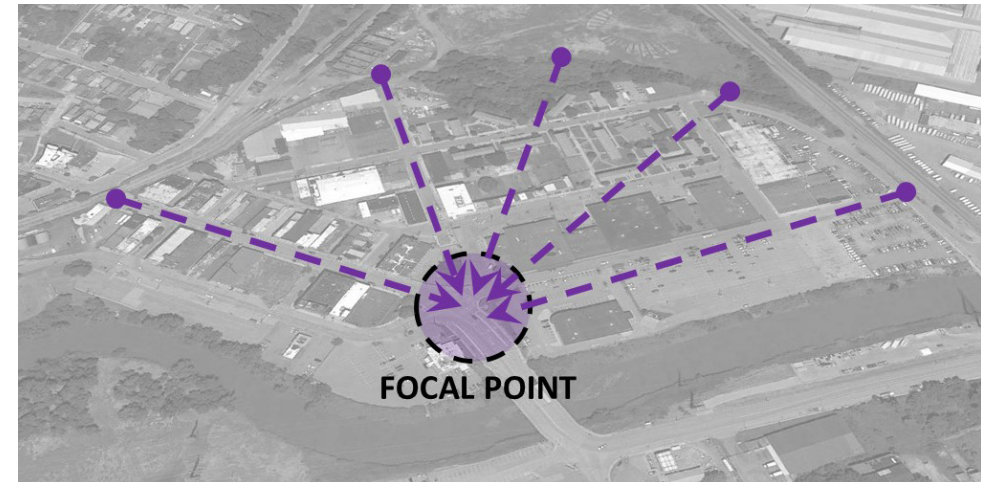
*The important elements of the design proposal include relocation of the existing Church, Rite Aid ,the Borough Building, and to vitalize the Creek Front.*



*The design proposal involves relocating the stores in the Strip Mall ,the Community Building , rethinking parking while also refurbishing the West Carson Bridge.*



## MASSING CONCEPT



*The massing of the site radiates towards the central entertainment node from the boundaries of the site creating a central focal point.*



*The polygonal site plan connects various activities to the creek.*

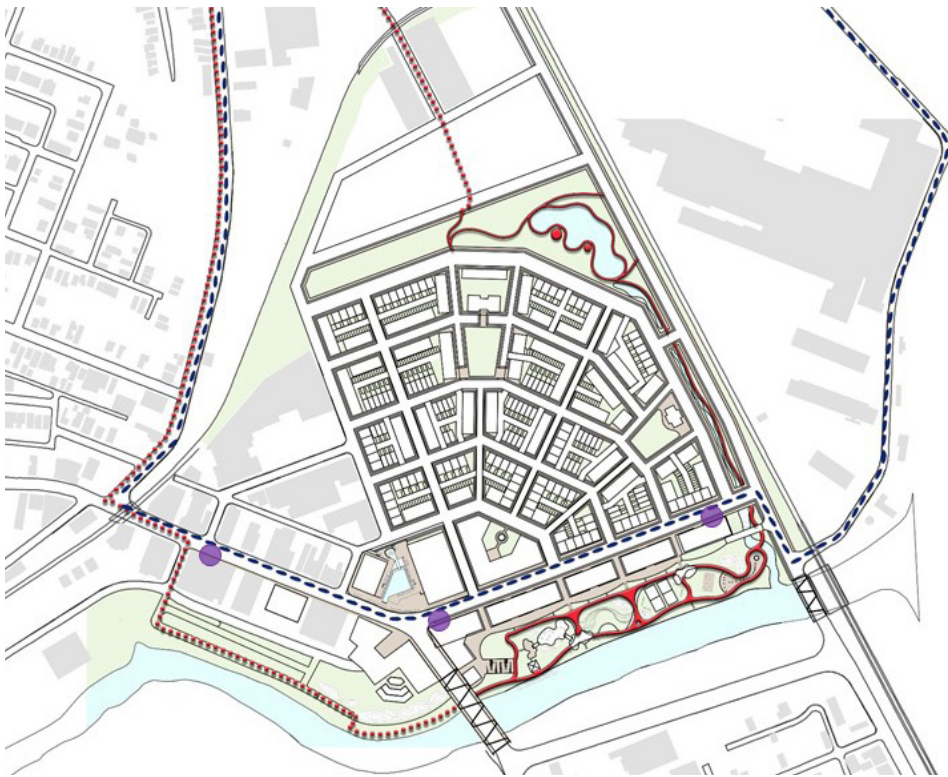


## TRANSIT SYSTEM

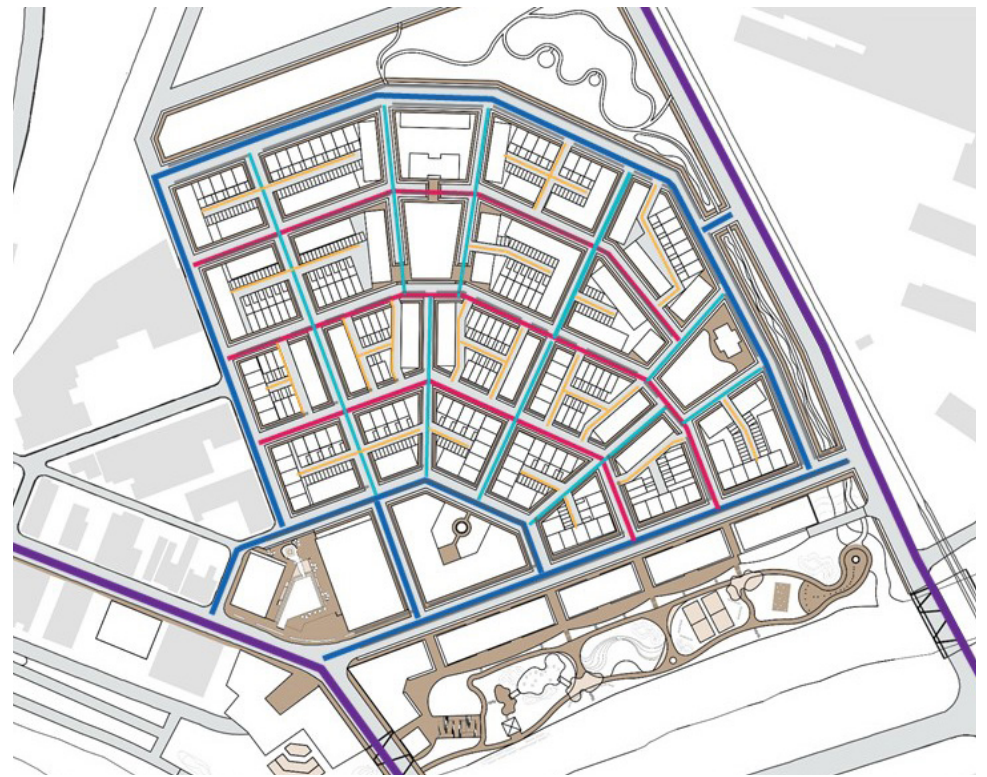
The Transit system design involves the inter-connection of different modes of transit, to create a balanced pedestrian and vehicular network. The Transit system also involved the creation of complete streets that are pedestrian and bike friendly. The system is complete with on street parking offset from the pedestrian paths with a buffer of trees or bioswales to create a coherent walking experience for the pedestrians and local commercial / retail activity



*The bike trail runs along the stream in 'The Park' towards the Creek Front forming the east edge of the proposed project.*



*The bike trail from Island Avenue connects to the site through Harriet Street, runs along 'The Park' and connects to the creek front.*

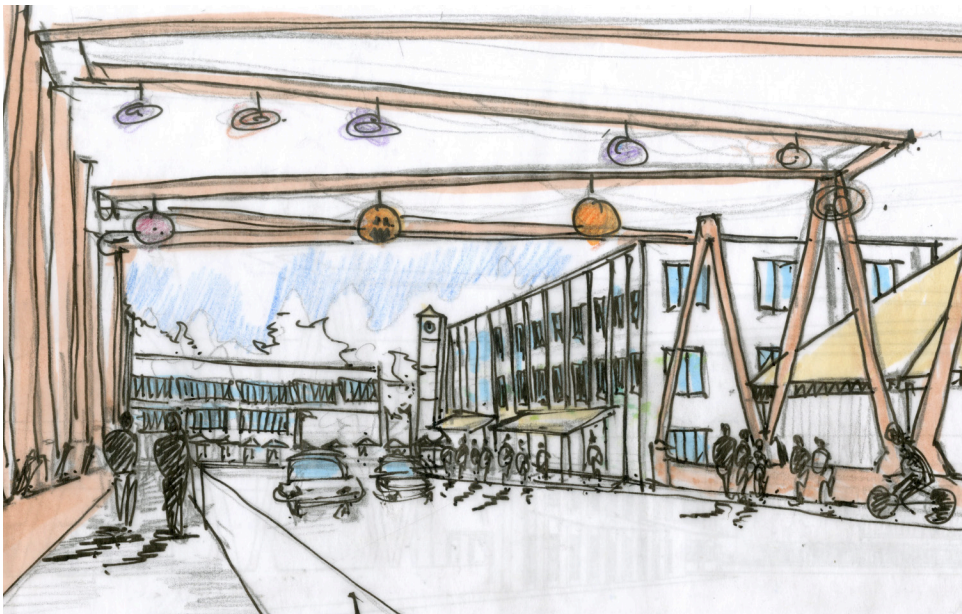


*The road hierarchy provides for better connectivity to the creek with active streets that allow for optimum pedestrian and vehicular movement.*



## THE ENTRANCE NODE

The site is located 10 minutes away from downtown Pittsburgh and has Route 51 passing along it due to which there is a huge opportunity for development. Our first and foremost aim was addressing the entrance into McKees Rocks through Route 51. We proposed a new industrial bridge designed over the lines of the existing bridge on West Carson which marks the entry to our site and welcomes people to the Chartiers Avenue and 'The Entrance Node'.



*The proposal for the gateway bridge provides a strong sense of entrance and place.*

The entrance node is essentially an extension of The Father Ryan Arts Centre and houses the McKees Rocks Dance Hall, an ice-skating rink (reliving the memory of the Rox Arena) and a clock tower which incorporates the Memorial currently located at the node dedicated to "Men and Women of McKees Rocks Who Served in Defense of the Nation". The Entrance Node forms a space to relax, play, talk and integrates multiple activities like outdoor movies, music, dance, farmer's market and cooking classes.



*Ideas of celebration for the gateway bridge - Concerts, Marathons, Halloween etc.*

The Chartiers Avenue extends into the site to form a commercial street which incorporates office spaces and retail areas along with restaurants. The commercial area extends to the creek in the form of a plaza which overlooks the creek front. As McKees Rocks hosts various festivals like 'Festival' and 'Jingle Bell Rocks', the proposal allows the creek front to cater to all these festivals. The creek front features urban beach, stepped seating, an amphitheater and interactive fountain.



*The existing entrance to McKees Rocks.*



## ENTERTAINMENT



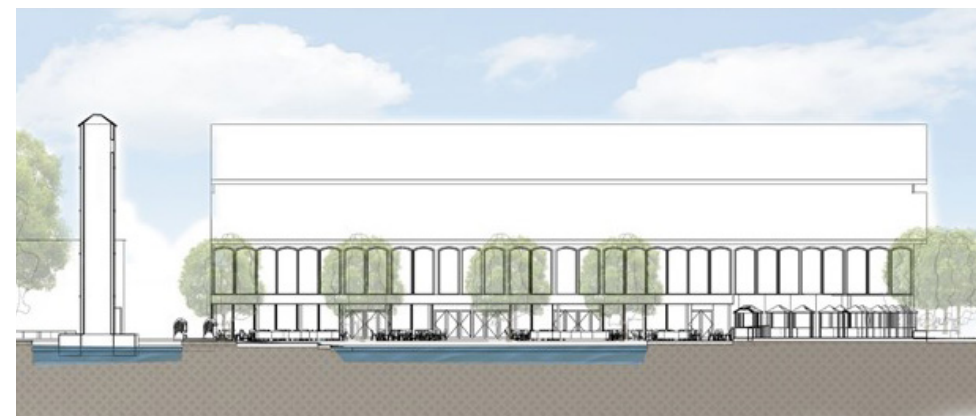
*Entertainment forms the core concept of the design and forms a node at the entrance to McKees Rocks. The node is designed in connection to the Father Ryan Arts Center*



*A dance hall with prominent structural elements that relate to the industrial feeling.*



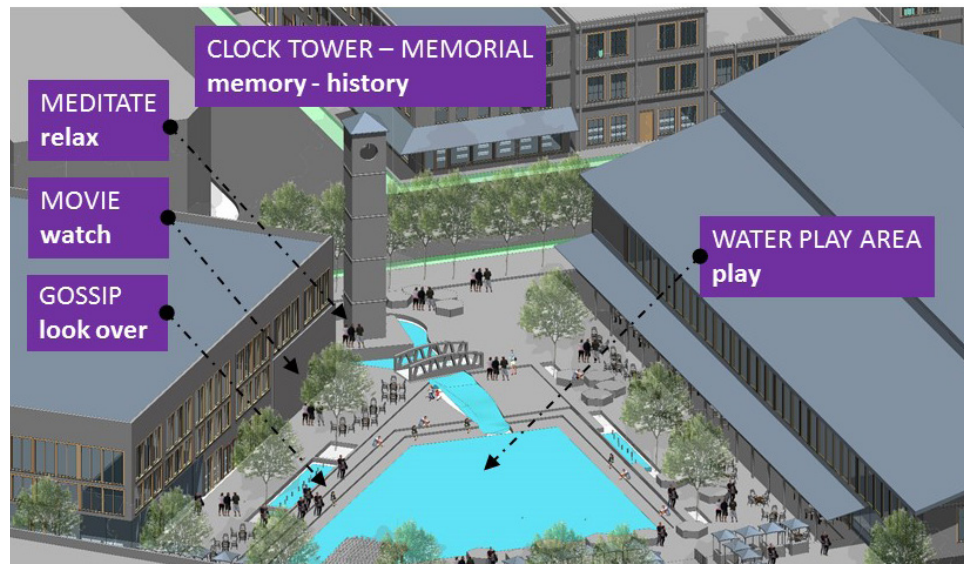
*The interactive fountain in The Square can become an ice skating rink in the winter.*



*The clock tower forms a landmark by integrating the memorial within itself, making it historically and physically significant.*



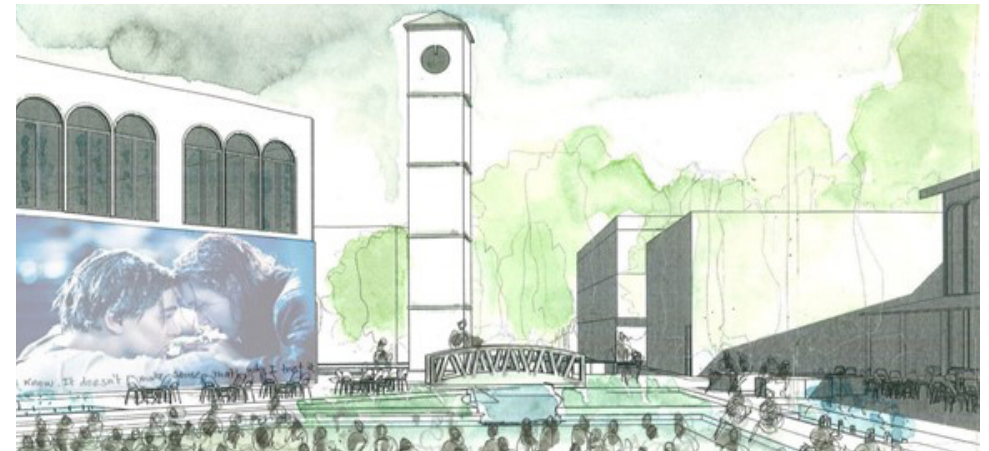
## THE SQUARE



The square integrates multiple activities to form the center of the design proposal, which vary in function with seasonal changes.



Entry view - Summer



Open Air Theatre - Fall



Ice Skating Rink - Winter



Farmers Market at the entrance - Summer