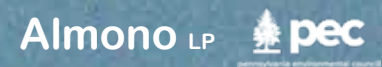


HAZELWOOD RIVERFRONT MASTER PLAN

APRIL 2022



PROJECT PARTNERS:



PROJECT PLANNING-DESIGN TEAM:



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PUMP HOUSE

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ACKNOWLEDGMENTS

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Special thanks to Tiffany Taulton of Hazelwood Initiative for supporting the public engagement activities and Pamela D. Yagle for documentation review.

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ADVISORY COMMITTEE MEETING

PREFACE

PERSEVERANCE

On a quiet morning nearly five years ago, an emerging sun warmed the chilly air and melted the overnight frost. Along a path, once an access road to the Coke Work's largest coal loader, I took my first of many walks along Hazelwood's Riverfront. Through the fog a tree's eerie outline emerged. Seemingly cast in a spotlight and standing out from an opaque backdrop, the tree's trunk and branch pattern distinctly overshadowed other vegetation.

Despite it being March, the 20-foot-tall Sycamore displayed almost perfect form; its former autumn leaves still clung to their branches. Any nature lover might have wondered about the tree and thought "How have you survived? How hard have you worked to take root in the swaths of concrete, asphalt, fly ash, and remnant coal under people's feet?" What could have been an uninhabitable place seemed to be this tree's verdant oasis.

Thousands of more majestic Sycamores grow in thousands of more appealing places; but on that particular day, one tree's determination to flourish exemplified what strength, persistence, and resiliency mean and do. On rough trodden soil, nature and people can mend themselves and their places with a helping hand and some time.

A STORIED PAST

For centuries, the Monongahela River (Mon River) frontage along the area known as "Hazelwood" has been significant to the neighborhood, to the City of Pittsburgh, and to western Pennsylvania. Haudenosaunee and Lenape nations "summered" along the river's floodplains and wooded slopes; these tribes viewed the land and water as common ground.

Several hundreds of years ago European settlers also found this portion of the river ideal for living and farming. In 1784 John Woods built his pioneer estate and farm, which tipped this area's economic focus to its hazelnut trees. "Hazelwood" emerged.

One hundred years later the Jones and Laughlin Company (J&L) started operations on these lands. By 1910 the world's most extensive collection of "beehive" coke ovens had developed along Hazelwood's Riverfront. J&L's Pittsburgh plants later became strategic to American democracy's defense during World War II and critical to some of the nation's most prominent buildings and bridges.

However, as the global economy emerged in the latter half of the 21st century, Pittsburgh's steel industry's competitiveness lagged. The adjoining Eliza Furnace ceased operations in 1981, and 1997 represented Hazelwood Coke Works' end of production. Taking ownership of the Coke Works in 2002, Almono initiated the long, arduous property clean-up process and thoughtful redevelopment of the land. For the first time in more than 125 years, the Riverfront became quiet and still.

A NEW BEGINNING

Throughout the past 20 years, Almono has focused on constructing new infrastructure, the Mill building's and Roundhouse's rebirth, and reinvestment and revitalization in other portions of the Hazelwood neighborhood. Until recent years and, recognizably, for many reasons, the Riverfront has been in the back of people's thoughts and actions.

Yet weather and time continue a slow disintegration of the Riverfront's remaining features and industrial artifacts. Graffiti stains

and brands cracked stone and concrete walls. Bronze patina coats many steel rails, stairs, decks, and walls – all not as stable and sturdy as they once were. Mother Nature, beginning to reclaim her dominion, is teeming the land with native plants and wildlife; and the water is seeing a surge in aquatic communities. This transformation has happened with preliminary efforts focusing on cleaner air and cleaner water.



SITE PHOTO OF FLY ASH ALONG THE RIVER'S EDGE

For 100+ years the Hazelwood Riverfront hosted commerce and economic vitality. It epitomized Pittsburgh's and the nation's economic and political power -- all while becoming an industrial wasteland of production. For untold numbers of people and families, the Riverfront represented jobs and income. In the "drive" for more coke and steel production, edges and elevations became reshaped, remolded, and repeatedly degraded. While the industrial past has succumbed to the elements and is in a state of neglected disorder, Mother Nature has introduced a new structure, cohesion, and inspiration. She's now encouraging clumps of native grasses and wildflowers to grow between disintegrated concrete and asphalt pavement cracks.

FULL CIRCLE

For the greater Pittsburgh region, the combination of Hazelwood Riverfront's land, water, and people make this section of the Mon River special and alluring. Through the master planning process, residents of Hazelwood, the City of Pittsburgh, and Almono have defined a new future for the City's longest undeveloped section of Riverfront. This vision leverages and fuses appreciation, repair, interpretation, celebration, and restoration. It's a place where balance and resiliency can follow nature's lead and place the community's needs at the forefront. It's a place where we can better understand the coexistence and interplay of an urban form of nature, man-made industrial structures, and man-created blemishes. It's a place where neighbors can meet neighbors and where people can, on common ground, touch the water once again.

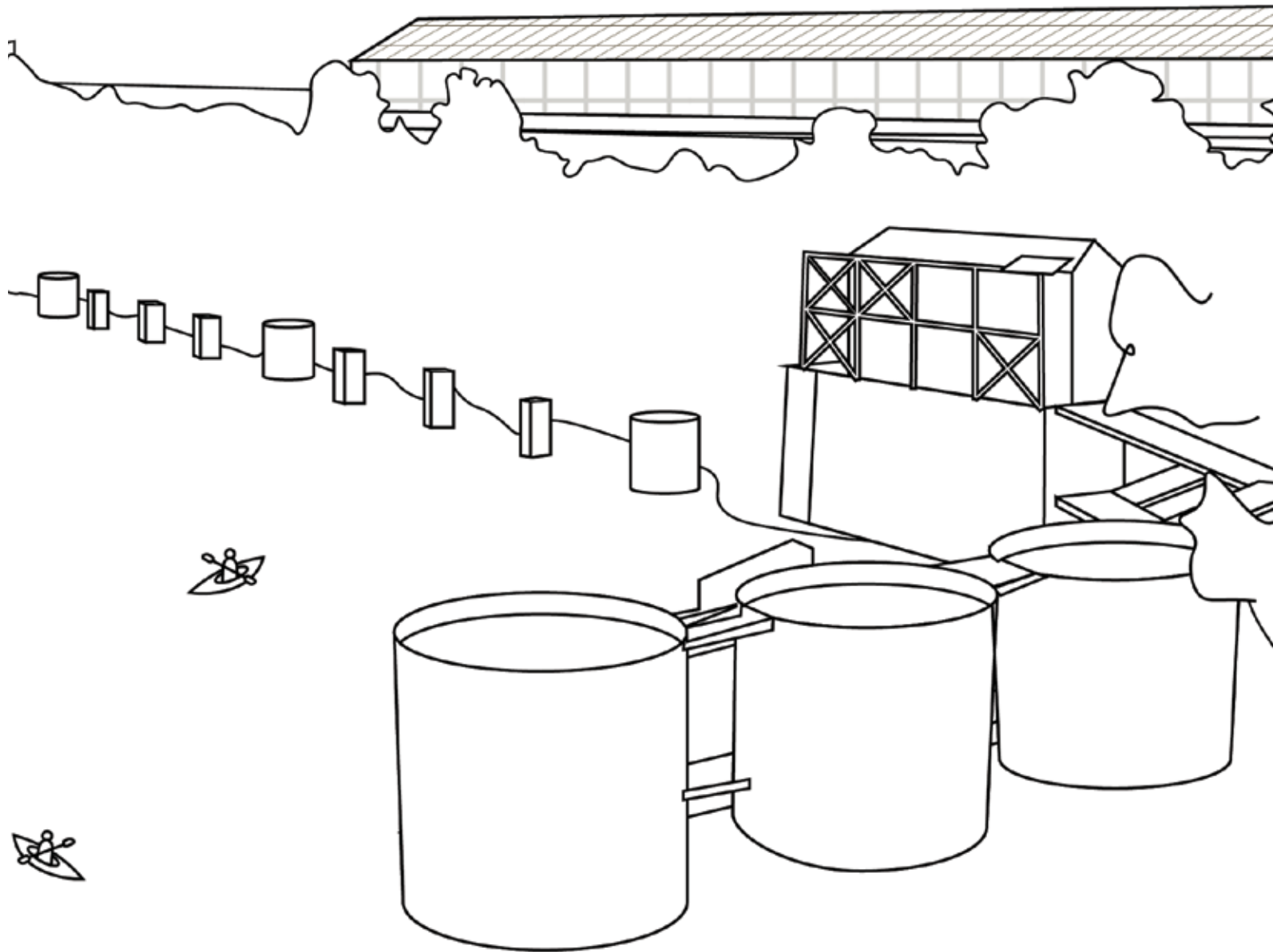
--With thanks, a thoughtful observer



SITE PHOTO OF FLY ASH DETAIL

PART 1

PURPOSE & PROCESS



PROJECT OVERVIEW

Once growing along the Monongahela River banks, hazelnut trees inspired the Hazelwood neighborhood's identity. The trees, the Mon, and an expanding vibrancy of homes and shops drew residents and businesses to the area hundreds of years ago; an influx of more people made Hazelwood one of Pittsburgh's denser neighborhoods. Beginning in the 1880s and for several generations, 178 acres adjacent to the River allowed industry and innovation to thrive as generations of workers fulfilled steel production demands along the River banks.

This post-industrial expanse is now experiencing growth of a different sort: The 17 acres parallel to Hazelwood's 1.3-mile Riverfront and the long-lost water's edge will return to area residents as a public space that can be enjoyed and developed recreationally. Neighborhood residents and stakeholders want to reconnect with the Riverfront; and the current property owner, Almono LP (Almono), shares the goal of restoring the Riverfront for full public access.

Partnering with the Pennsylvania Environmental Council (PEC), Almono initiated a Riverfront master planning process in 2019. PEC next sought and received a Pennsylvania Department of Conservation and Natural Resources (DCNR) grant to achieve the goal; Almono contributed matching funds. This master plan is a dynamic, long-term document that provides a conceptual layout to guide future site improvements. Stages include analysis, recommendations, and proposals for the site's space, uses, circulation, and amenities. By forging a long-term vision for the area, the plan supports a step-by-step process to lead to its final outcome.

This Riverfront Master Plan embodies both the neighborhood's and Almono's desire to return the Riverfront to the public and to guide the

Riverfront's transformation into a dynamic public space open to all. With a keen focus on raising awareness as well as on collecting public thoughts and feedback, the team's public engagement and outreach efforts became informative and inclusive. The master planning effort started in Spring 2020 with Winter 2021 completion. This Master Plan aims to rejuvenate the Hazelwood Riverfront as a public asset. Today numerous industrial structures create one of the region's largest artifact collections of the steel-making era. The planning process sought to understand and to celebrate that legacy and Hazelwood's people.

The Riverfront site is in the City of Pittsburgh's broader Hazelwood Green District. Approved by the Pittsburgh Planning Commission in 2018, the updated Preliminary Land Development Plan (PLDP) reinforced the aspiration for a new, dense, more mixed-use development throughout the former Coke Works property. That vision extends the existing fabric of Greater Hazelwood toward the Riverfront and plans for a progression of increased density as one moves from Glen Hazel toward the Hot Metal Bridge. The PLDP update did not address the Riverfront area itself. This Master Plan represents the first time since Almono has owned the property that attention will focus on the Riverfront's future.



SITE PHOTO ALONG THE RIVER'S EDGE

PRINCIPLES & GOALS

The Riverfront Master Plan serves as a guide for achieving the community's, the Advisory Committee's, and the landowner's shared values. Before the October 2020 Community Collaboration Workshop, the Advisory Committee had worked with the Project Leadership Team (PLT) to develop a series of Riverfront Master Plan goals. Community members offered feedback and responded to the ideas. As part of the Hazelwood Green District, the overall PLDP principles also have guided District development. These broader reaching principles include advancing human well-being, inspiring innovation, regenerating the ecology, and creating resilient places. The following Riverfront Master Plan goals are customized more specifically to the public spaces and site conditions.

- ▶ **PRINCIPLE 1**
ADVANCE HUMAN WELL-BEING
- ▶ **PRINCIPLE 2**
INSPIRE INNOVATION
- ▶ **PRINCIPLE 3**
REGENERATE THE ECOLOGY
- ▶ **PRINCIPLE 4**
CREATE RESILIENT PLACES

RIVERFRONT PLANNING AND DESIGN GOALS

- View the Riverfront as a “common ground” where people come together to socialize, to recreate and to recharge.
- Create an inclusive place where users of all abilities, income levels, and interests can enjoy the space and a sense of belonging.
- Allow the land and water’s ability or capacity to support development to guide the Riverfront’s long-term uses and activities.
- Consider the site’s water resource as important as its land resource in the planning and design process and commit to enabling people to reach the water.
- **Leverage the Riverfront’s unique qualities in length, industrial structures, and regional juxtaposition to create a distinct and authentic place.**
- **Transform the environment by mending the impacts of past industrialization through innovative interventions.**
- **Reveal and celebrate the Riverfront’s cultural and historical significance to Western Pennsylvania and world culture.**
- Create a multi-use and multi-modal link along the Riverfront to attract both local residents/workers and international visitors to the nearby Great Allegheny Passage.
- Overcome the Riverfront’s physical constraints by finding synergies and ways for uses, activities, and infrastructure investments to coexist.
- Use the Riverfront as a place to support and to promote physical, social, mental, and spiritual wellness.

RIVERFRONT PLANNING - DESIGN GOALS

COMMON GROUND
INCLUSIVE
CONNECT
CULTURAL ACCESS
TRANSFORM
MENDING WELLNESS
WATER
COHABITATE
AUTHENTIC
HISTORICAL
CELEBRATE

Development of the entire Hazelwood Green District is guided by the amended SP-10 Zoning Ordinance, approved by Pittsburgh City Council in 2019, and Hazelwood Green’s new Preliminary Land Development Plan (PLDP), approved by the Pittsburgh Planning Commission in 2018, to replace the plan of record. The Riverfront site is located in the Hazelwood Green District in the PLDP as parcels #1, #16, and #17. Recommendations of the Riverfront Master Plan are compliant with the PLDP requirements.



The site is home to industrial artifacts, railroad corridors, and spontaneous vegetation. The spectacular yellow structures in the water are called “mooring cells” and “dolphins”; they provided anchor points with which coal barges could be tied while they were being loaded and unloaded. Overall, the site is a long, linear space between the Mon and railroad tracks. On the site there are numerous opportunities to view the Downtown Pittsburgh skyline as well as to experience the industrial infrastructure that, at one time, powered the Coke Works.



SITE PHOTOS TAKEN FROM LAND AND WATER

MASTER SITE DEVELOPMENT PLAN

The Riverfront Master Plan, a specialized type of Master Site Development Plan (MSDP), is a planning-design document that forges the vision for a Riverfront area with detailed features for long-term development. Information provided by an MSDP includes:

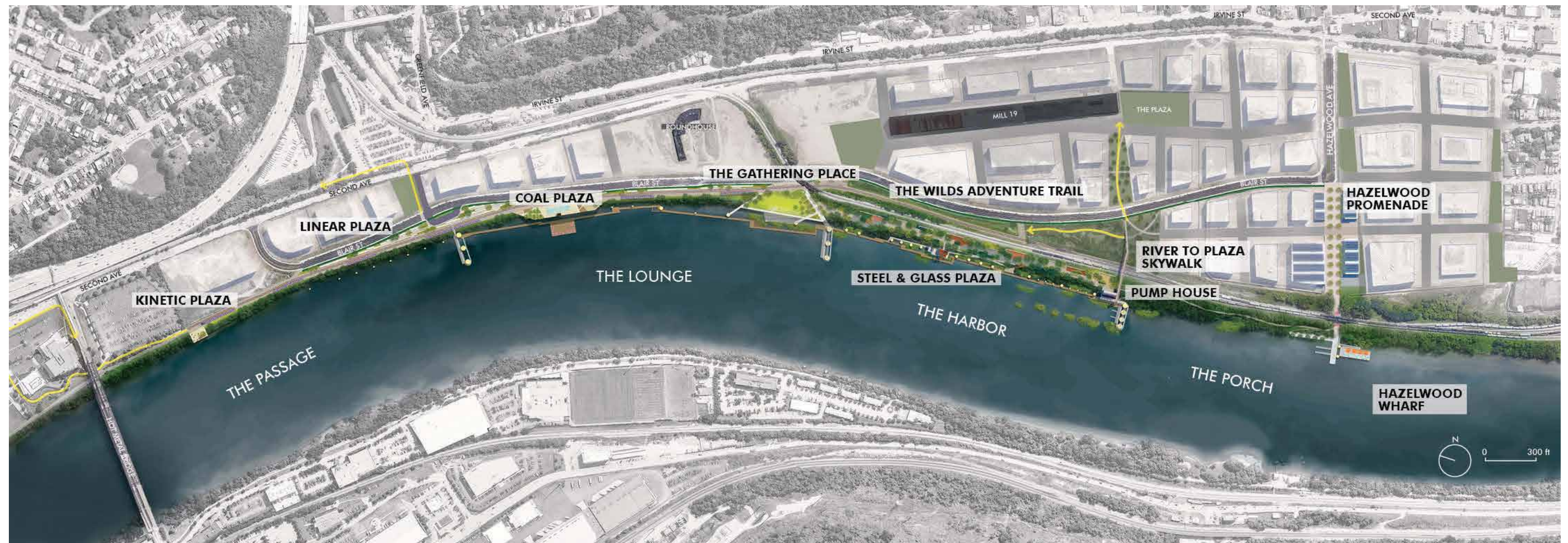
- A description of the proposed project and potential phasing
- Site plans with details of all development on the project site
- Design elements (including landscaping, lighting, amenities, and structures)

In this project a few critical issues -- community access, restricted land width near an active railroad, and the re-introduction of water interaction -- emerged as priorities. As a result, the MSDP creates connections to the Hazelwood Avenue extension, identifies potential water recreation opportunities and proposes multiple daytime uses along the railroad corridor for pedestrians and cyclists, but not while trains operate overnight. Proposed features come together in a series of universally accessible site amenities, including the Kinetic Plaza, the Linear Plaza, the Coal Plaza, the Gathering Place, the Steel and Glass Plaza, the Wilds

Adventure Trail with fitness equipment and ecological restoration zones, a floating walkway on water, kayak launches, a Skywalk, a Hazelwood Wharf, a Promenade along Hazelwood Avenue Extension, and a group of floating islands to mitigate the impact of 6 Combined Sewer Overflows (CSOs) along the site. Outlined decision-making priorities will guide future spending allocations for long-term implementation. Sustainability and public art strategies will reflect on-site and community-specific conditions. Capital investments project site improvements for future decision-making.



FUTURE VISION AT THE PUMP HOUSE



HAZELWOOD RIVERFRONT MASTER SITE DEVELOPMENT PLAN

PLANNING DESIGN PROCESS

Utilizing extensive public engagement, stakeholder interviews, Advisory Committee input, Project Leadership Team coordination, and owner briefings throughout the process, the public engagement activities included three rounds of events intended to stimulate discussion and to solicit public feedback at each stage of the master planning process. Consensus and conclusions from the engagement efforts informed the design recommendations of the MSDP. The Covid-19 pandemic presented challenges in gathering public feedback, but these were successfully overcome by shifting in-person events to a hybrid format. Passionate input from neighborhood residents and the larger Pittsburgh community gave excellent momentum to urge early physical implementation on the site after decades of silence. Photos on the following page document in-person and virtual events. The planning-design process undertook successive cycles:

- To perform site due diligence to understand what is there and what is feasible
- To define goals and principles to guide the formulation of ideas
- To obtain public, stakeholder, and owner input regarding preferred amenities on the site
- To develop concepts into a feasible vision
- To consider implementation, phasing, funding, and potential operating scenarios
- To build consensus toward plan adoption and implementation

PROJECT TIMELINE



SCHEDULE OF EVENTS

OCT 15TH THURSDAY
EVENING 5:00 - 7:00 PM - Neighborhood Pop-Up Event*
 Stop by Neighborhood Pop-Up Event location* to share your Mom River stories and memories of Hazelwood Works.
5:30 - 8:00 PM - Community Social
 Come share your goals and discuss for what you want the riverfront to become. You are welcome to come and go as your schedule permits. Bring the young ones in your life, children's activities will be part of the evening.

OCT 16TH FRIDAY
AFTERNOON 3:00 PM - Public Preview
 Get a sneak peek of the Planning-Design Team's initial ideas for the riverfront.
EVENING 5:30 - 8:00 PM - Public Open House
 Come see 2 different illustrations of the riverfront and tell us what parts of the designs you prefer. You are welcome to come and go as your schedule permits. Bring the young ones in your life, children's activities will be part of the evening.

OCT 17TH SATURDAY
AFTERNOON 11:00 AM - 2:00 PM - Public Meeting
 It's Day 2, and it's time to showcase all the feedback we have received to date. The project team will synthesize these ideas into preliminary concepts for further review and discussion. There will be three (3) different presentation times for participants to choose from.

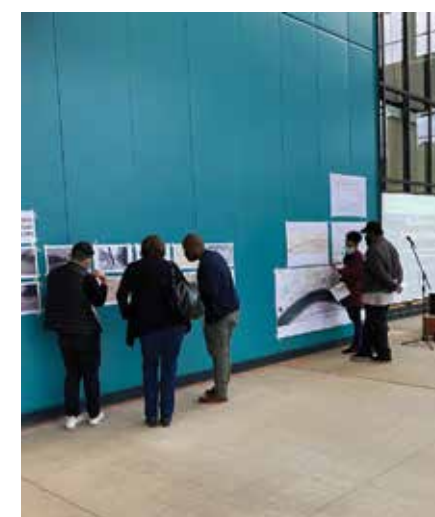
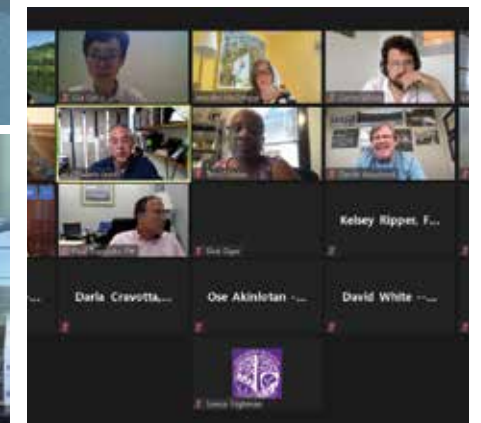
All events other than Neighborhood Pop-Up Event will be held at **The South Porch of Mill 19, 4501 Lytle Street.**
 *Thursday's Neighborhood Pop-Up Event will be held at **The Hazelwood Initiative Parking Lot, 4901 Second Avenue.**

REGISTRATION REQUIRED: REGISTER ONLINE
 Visit www.hazelwoodgreen.com/riverfront or Call 412-918-6563

FREE On-Street Parking

HELP US SHAPE THE HAZELWOOD RIVERFRONT BY PARTICIPATING IN THE HAZELWOOD GREEN RIVERFRONT MASTER PLAN COMMUNITY COLLABORATION
 Oct 15th - Oct 17th 2020

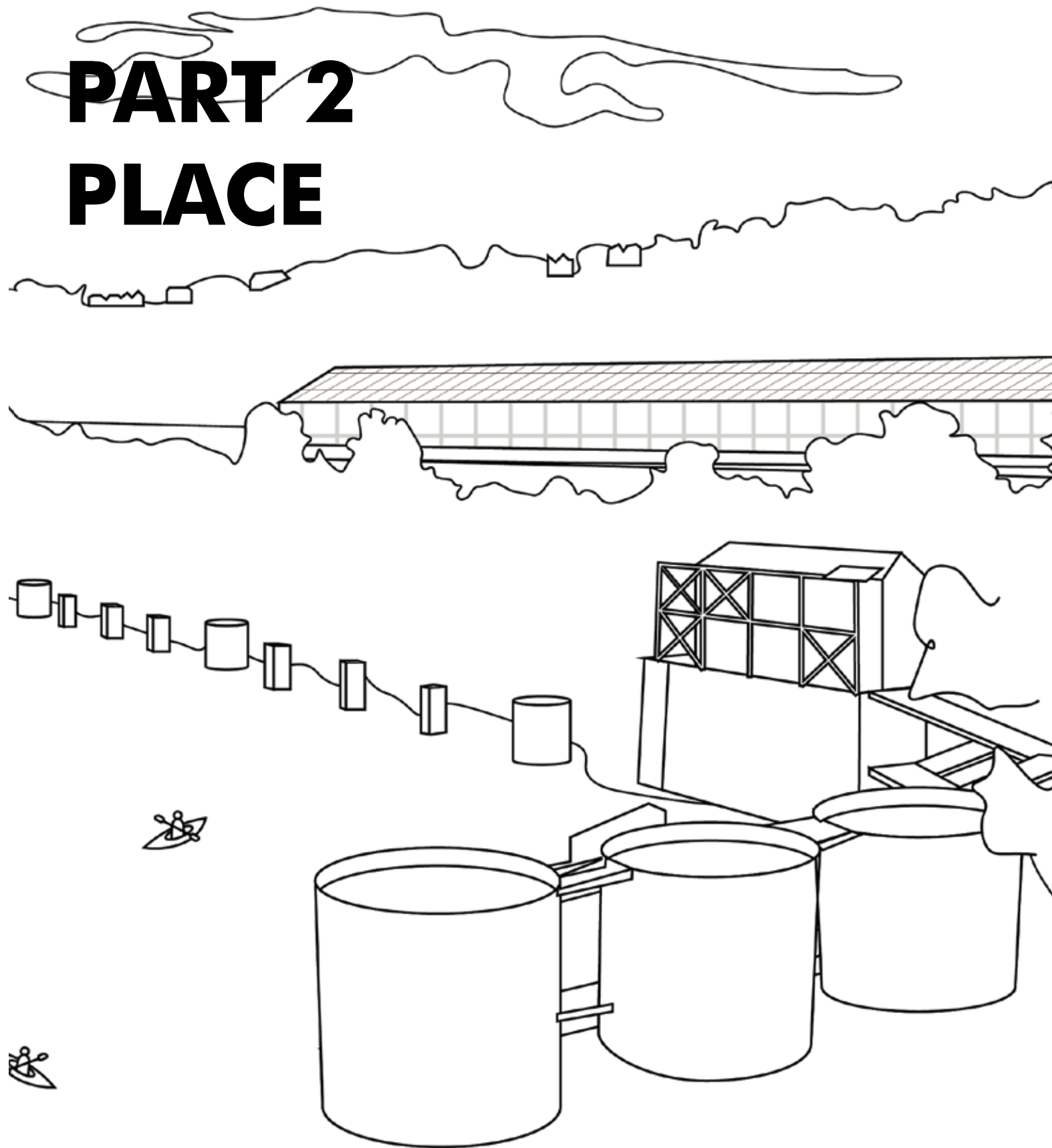
PROJECT PARTNERS: Almono LP, DEC
PROJECT PLANNING-DESIGN TEAM: environmental planning & design, F&E CONSULTANTS, H&M CONSULTANTS



VARIOUS FORMATS OF ENGAGEMENT EVENTS AND ACTIVITIES

PART 2

PLACE



IMPORTANT SITE INFLUENCES

This part identifies site influences that presented significant challenges and opportunities during the master planning process. The top influences are summarized to give the reader a quick overview of findings. They include conditions and situations of access, infrastructure, water uses, surrounding communities, neighborhood history, and cultures. In-depth understanding of those factors enabled informative communications with local communities and stakeholders and in turn, supported guided design decisions.

A Changing Neighborhood

After J&L Coke Works' closing at the end of the past century, the surrounding neighborhoods' population declined and a once-busy commercial corridor along Second Avenue shifted or disappeared. With decades of job losses, disinvestment, and residents leaving, public health and lower average income levels than in the City and the State hurt the neighborhood. However, now the Hazelwood Green District is slated for population growth, as reflected by new jobs and residential units in the PLDP. These factors make it morally imperative that the Riverfront design solution addresses inclusiveness, affordability, and equity while answering the question "For whom is the Riverfront being designed?"

All Perspectives

In the future PLDP vision, the new development will be supporting job opportunities for an expanded workforce. When seeing the site as a regional destination and balancing Hazelwood's established patterns with Hazelwood Riverfront's evolving assets, divergent demands from all perspectives are critical factors in determining what amenities will be provided and where.

Legacies of the Coke Works

Industrial heritage is embedded in the local community's, the City's, and the region's memory. Aging structures and functionality-driven design contribute to an irresistible charm that makes the site one-of-a-kind. Together the community, local historians, and public art consultants are giving features new life.

Legacy easement and lease issues, evaluated in the context of public access, involve active railroad operations and potential access points' limitations. This situation is quite common when working with brownfield sites in the region. Creating safe and accessible public access is possible.

Physical Barriers and Constraints

Physical barriers, including slopes, drops, active railroads, and stormwater ponds, currently prevent free movement between the Blair Street sidewalk and the Riverfront site. The land is long and narrow, sandwiched between the railroad and the water. Widths range from 50 to 200 feet with elevation changes, retaining walls, cliffs, stormwater ponds, and a few sets of rail tracks in between. Finding an open, flat, and accessible piece of land for sizeable uses is a crucial challenge. Along the site's southern perimeter, cliff edges and bulkhead walls confine water access. More than 60 percent of the bank is at least 20 feet above the average water level.

Missing Links

Site access from land is also highly confined because of existing topography, easement, and the Greater Hazelwood Neighborhood geographic location. With the pre-requisite of eliminating legal issues or investment in costly infrastructure such as flyovers, five potential areas could re-establish site access.

With civic uses, there are challenges in restoring connection to existing residents and in introducing water recreation to people’s lives (from landform and lifestyle perspectives). The most noteworthy fact about connectivity is the Hazelwood Avenue extension area that is physically closest to the Greater Hazelwood Community and within the upper limits of walking distance. This site segment is considered the premium location that is purposeful to serve the existing communities.

Water and Infrastructure

To date residents have been unable to enjoy the water. Currently busy commercial water traffic uses the navigation channel to transport coal and other raw materials. While water can provide an excellent opportunity, safety and water quality concerns have surfaced. The project design team have studied river depth and barge traffic routes plus have taken a kayak trip along the water trail to understand the feasibility of future water-related programs.

The existing infrastructure of 6 CSOs and the network of sewer lines on-site pose a challenge in water quality and water activity programming. Understanding their impact and how to mitigate them also becomes an essential topic when designing water programs.

Nature

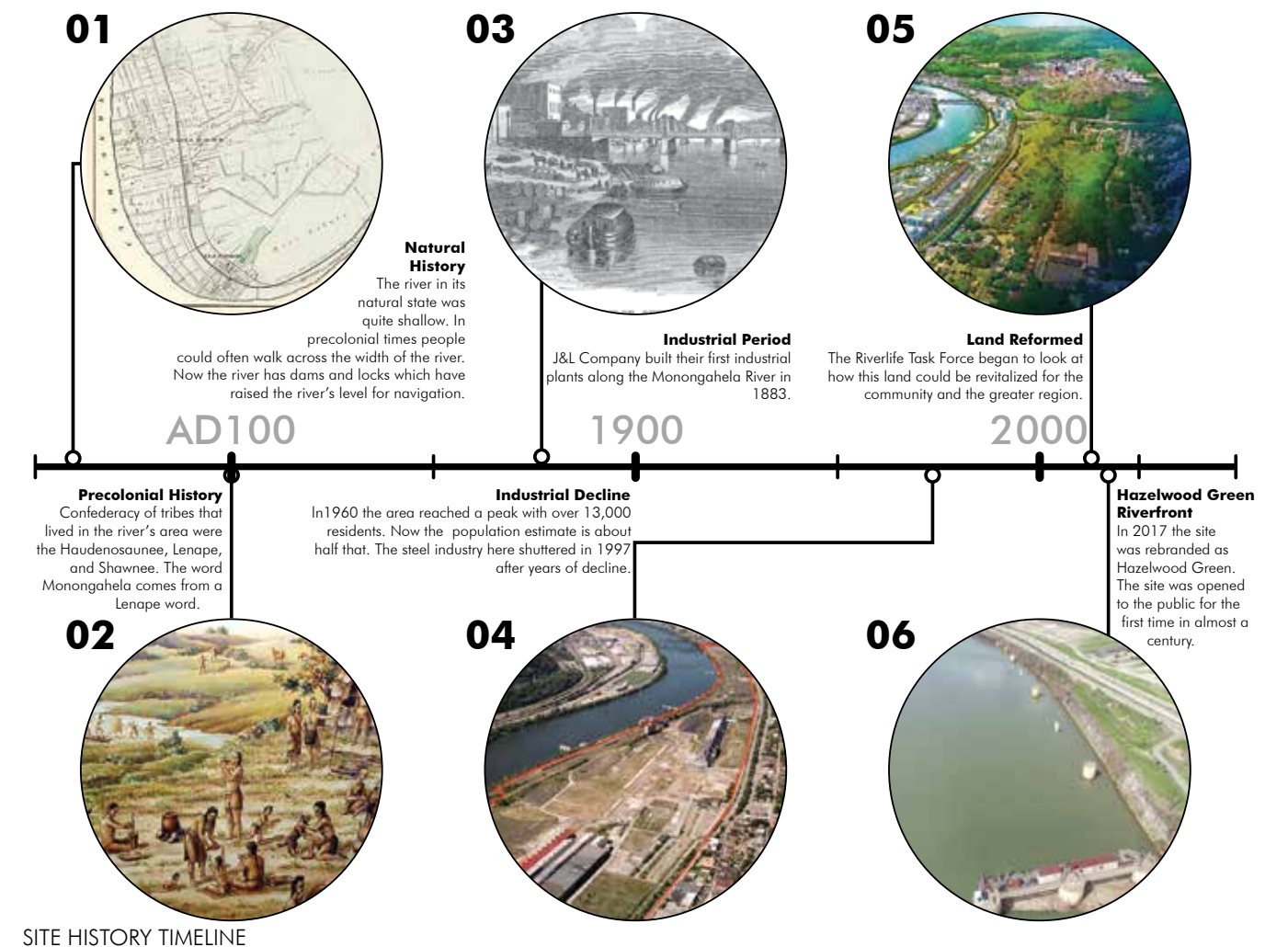
After a decade without continuous industrial activity, Mother Nature is reclaiming what was once her domain. Accidental wilderness is emerging. With a scenic view of the Mon River, the Riverfront site is an ideal place to provide a natural haven for busy urban residents. During the engagement process (see Part 3), the public and the Advisory Committee expressed their strong preference for a nature-oriented, “non-manicured” landscape for people to explore and to heal. In this project “Nature’s” influence calls for a design solution that fosters reclamation rather than forces or fakes it.

What is a CSO?
 Combined sewer systems are sewers designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Most of the time combined sewer systems transport all of their wastewater to a sewage treatment plant for treatment and then discharged it into a body of water. During periods of heavy rainfall or snowmelt, however, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant. For this reason a combined sewer system is designed to overflow occasionally and discharge excess wastewater directly into nearby streams, rivers, or other water bodies. These overflows, called combined sewer overflows (CSOs), contain stormwater and untreated human and industrial waste, toxic materials, and debris. They are a major water pollution concern for the approximately 772 cities in the U.S. that have combined sewer systems.

HISTORY

Named for the hazelnut trees that once grew on the Monongahela River banks, the land upon which Greater Hazelwood sits was purchased in 1758 and became one of the earliest settlements in the Pittsburgh region. Over time Greater Hazelwood (including Hazelwood, Glen Hazel, Four Mile Run, and the Hollow) grew into a diverse, dynamic neighborhood anchored by the steel industry. As barge traffic increased and railroads expanded, the River’s edge became a working waterfront; but local residents lost access to it. The Hazelwood Coke Works, the last operating steel business within the City of

Pittsburgh, closed in 1998; and Almono, LP acquired the 178-acre site. Now Almono has forged a long-term vision for the property’s redevelopment, including the neighborhood’s reconnection to the Riverfront. The amended SP-10 Zoning Ordinance, approved by Pittsburgh City Council in 2019, and Pittsburgh Planning Commission’s 2018 approved Hazelwood Green’s new Preliminary Land Development Plan (PLDP) guide the entire Hazelwood Green District’s development.



SITE HISTORY TIMELINE

HAZELWOOD AVENUE

Historical maps early as 1872 and various atlases through 1939 (the latest one being available online) depict Hazelwood Avenue extending to the Mon. Another set of tracks appears to have led to a marshaling yard on the site's eastern end. Through this Plan's engagement efforts, the neighborhood, the general public, all the stakeholders, the Advisory Committee, and the landowner have expressed strong interest in restoring the Hazelwood Avenue connection to the River. Restoring that connection is important.



HAZELWOOD AVENUE HISTORICAL MAP 1898-1939



1898



1911



1923

COMMUNITY

This study focuses on Greater Hazelwood. Census-wise, Tract 5629 also covers the Four Mile Run community. The future Hazelwood Green District neighborhood study will emerge from the PLDP's planning vision.

THE GREATER HAZELWOOD NEIGHBORHOOD

The following observations are relevant to Greater Hazelwood's demographics, consisting of primarily two census tracts (5623 and 5629):

Population and Household Summary

- There are 2,000+ households in Census Tract 5629; however, some of those households exist across the Monongahela River.
- The Median Age of Census Tract 5623 is 10 percent higher (45.8 years) than Allegheny County's average.
- The Median Household size within the Greater Hazelwood neighborhood is equivalent to Allegheny County's average.
- Census Tract 5623's income is about half that of Allegheny County.
- 46.9 percent of residents in Census Tract 5623 live below the poverty line.

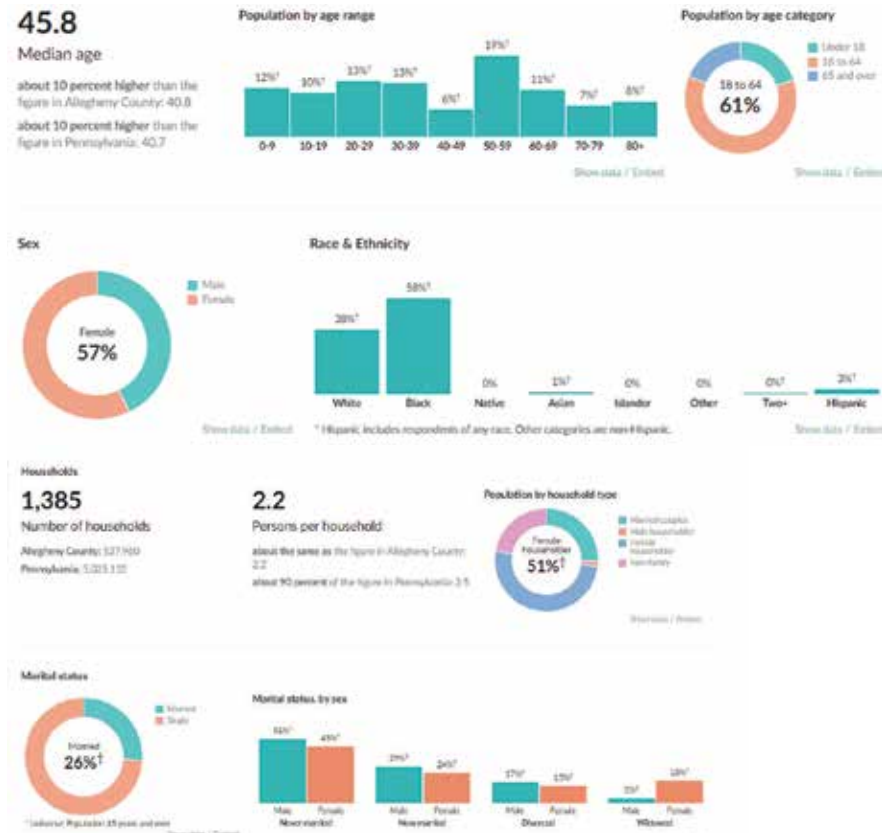


AERIAL VIEW OF J&L COKE WORKS IN HAZELWOOD WHILE LOOKING TOWARD DOWNTOWN, 1940S

Census Tract: 5623 STATISTICS



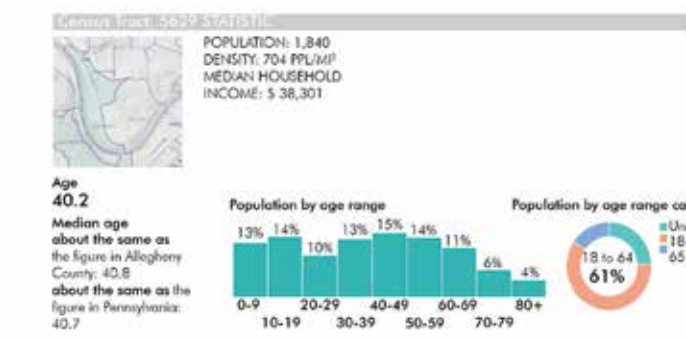
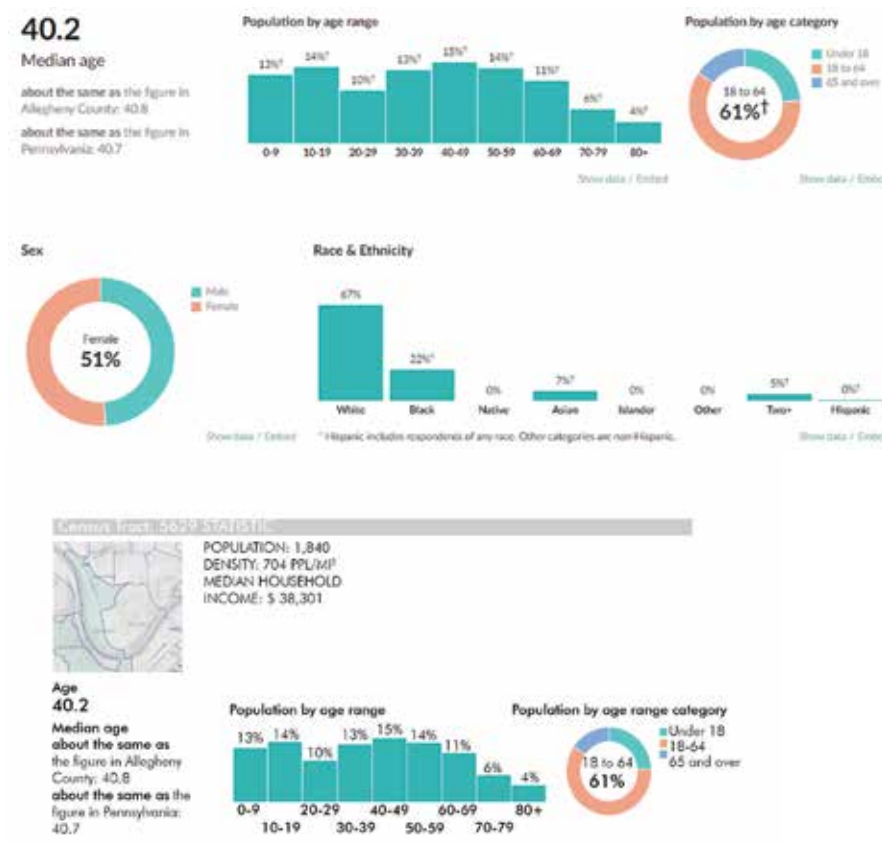
POPULATION: 3,266
DENSITY: 2,714 PPL/MI²
MEDIAN HOUSEHOLD INCOME: \$ 19,130



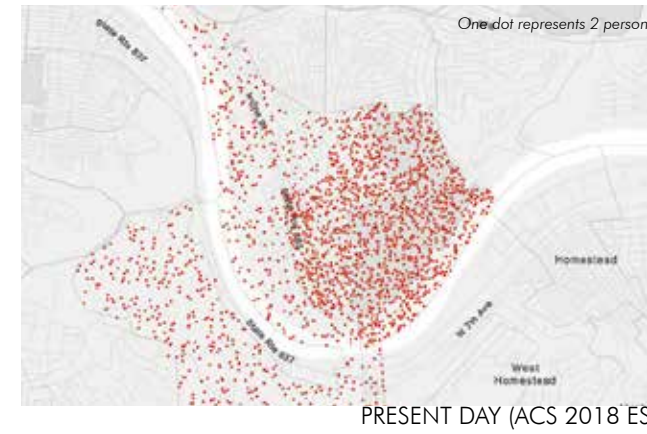
Census Tract: 5629 STATISTICS



POPULATION: 1,840
DENSITY: 704 PPL/MI²
MEDIAN HOUSEHOLD INCOME: \$ 38,301



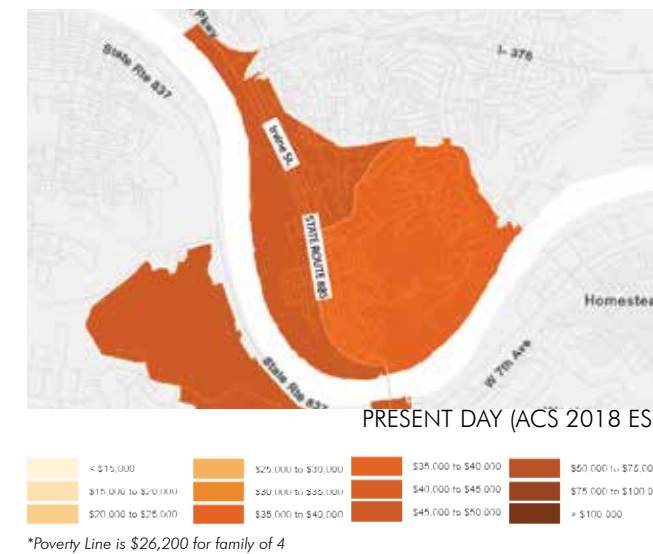
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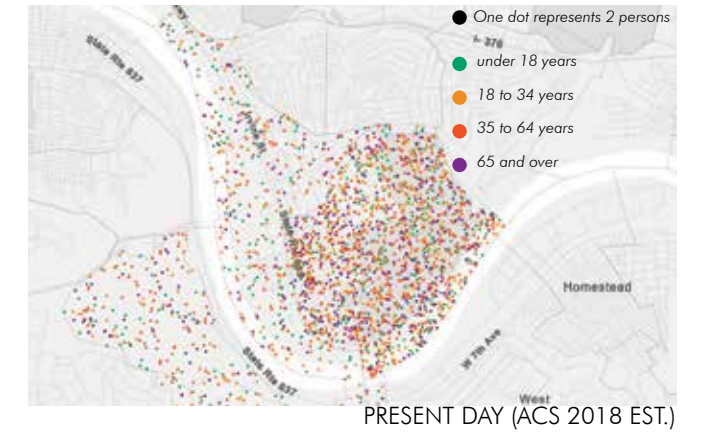
Population Trends Summary:

- The overarching trend has been the 50-year out-migration or population loss from the neighborhood in all census tracts.
- In 1970, the neighborhood had more than 9,700 residents; today, the number is 44 percent less than the 1970 figure (5,395 persons).
- The most severe population loss has occurred in the uphill portions of the neighborhood.

AVERAGE HOUSEHOLD INCOME



AGE DISTRIBUTION



Age Trends Summary:

- Census tract 5623 has greater amounts of population of all ages.
- The greatest population age range is between 45-54 years.

Public Health Community Priorities

- A top priority of the residents and the supporting organizations is to address the neighborhood's rates of addiction and high rates of asthma, diabetes, depression, and anxiety.
- Additionally the neighborhood plan suggests the creation of opportunities to foster community and to promote physical activity in Greater Hazelwood.
- Finally, another top priority is to improve access to fresh and healthy food.

GREATER HAZELWOOD CHARACTERISTICS AND CHALLENGES

Population By Age

The Hazelwood neighborhood exceeds the City’s average number of children in a household (+5 percent) and residents over 50 years of age (+13 percent). While the neighborhood has 20 percent fewer young adults (ages 18-34) than the City’s average, it has a greater proportion of families than found City-wide.

Income & Poverty

53 percent of Greater Hazelwood’s children under 18 years of age live below the poverty line, compared to 31 percent of all City children.

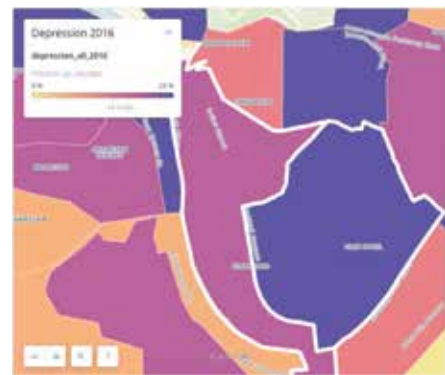
Fatal Accidental Overdoses

Between 2010 and 2017, the number of fatal accidental overdoses in the 15207 zip code has risen.

Public Health Community Priorities

Per the Greater Hazelwood Neighborhood Plan, a top priority of the residents and the Greater Hazelwood Community Collaborative is to address the neighborhood’s addiction rates and high rates of asthma, diabetes, depression, and anxiety

PUBLIC HEALTH CHALLENGES



DEPRESSION: HIGH

In 2016 a quarter of the Glen Hazel population who reportedly held health insurance were treated for depression. Additionally, nearly 18 percent of Hazelwood residents who have health insurance were treated for depression in this same time period. Both of these are higher rates than the Allegheny County average of 14.4 percent. According to the Jefferson Regional Foundation, in 2014 households in Greater Hazelwood most often used the Allegheny County Department of Human Service’s mental health services.



BLOOD LEAD LEVELS: ELEVATED

Between 2015 and 2018 residents in both of Greater Hazelwood’s census tracts tested positive for elevated blood lead levels. A higher percentage of residents tested positive for elevated blood lead in census tract 5623, represented by the dark blue.

ASTHMA: HIGH

Allegheny Health Network and Duquesne University discovered that residents of the Pittsburgh region suffer from asthma at twice the rate of the nation, the state and the County.



DIABETES: HIGH

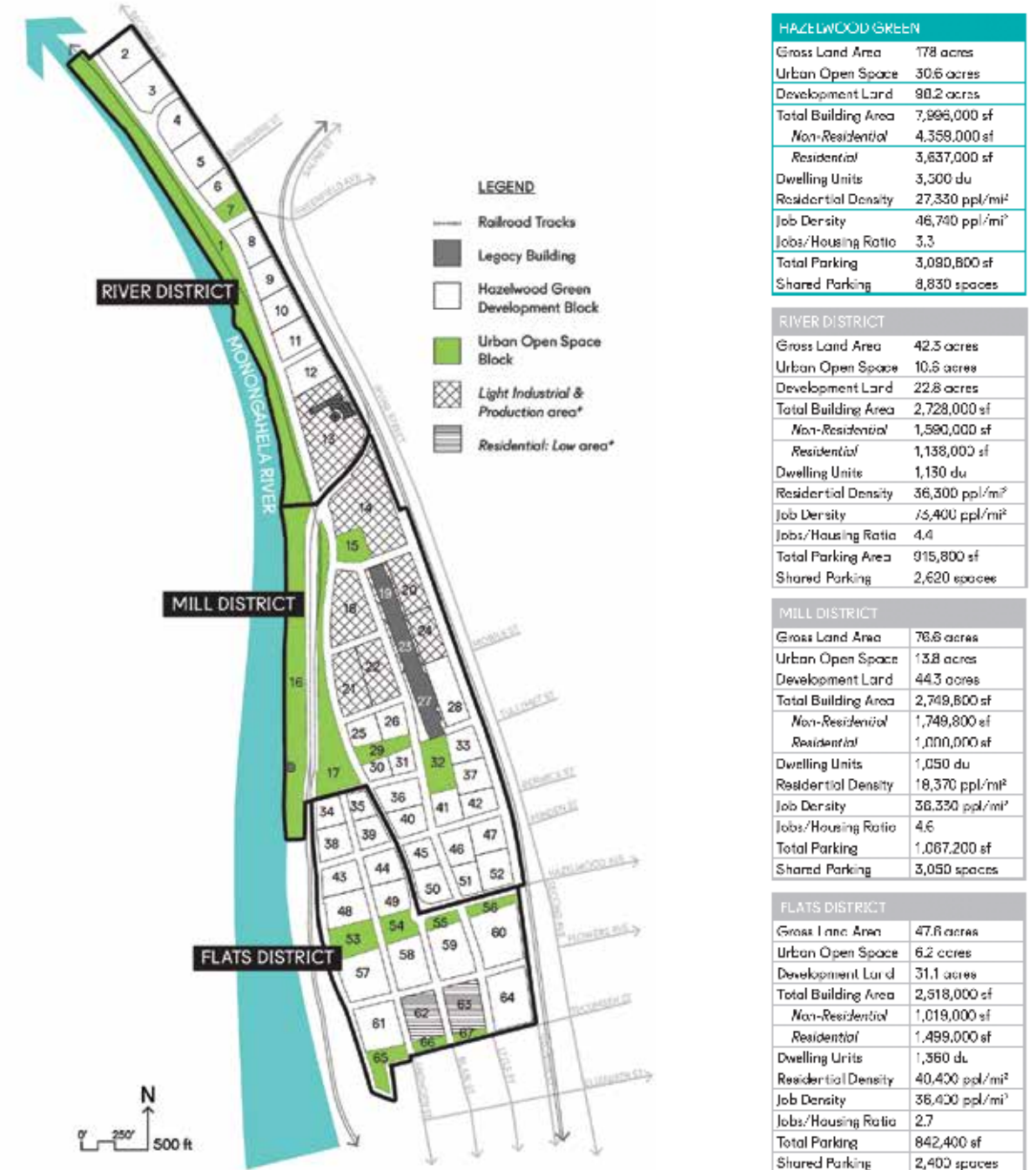
Both Hazelwood and Glen Hazel have higher rates of insured residents receiving diabetes treatment than the County average of 9.21 percent. Glen Hazel has a very high rate of 25 percent receiving treatment.

HAZELWOOD GREEN DISTRICT

Hazelwood Green Preliminary Land Development Plan 2018

The Hazelwood Green District will be a development area of 178 acres of land with a proposed building area of 7,996,000 square feet. Forty-five percent of the square footage will be residential. The PLDP indicated density there could rise to 13,000 jobs and 7,600 residents over time

HAZELWOOD GREEN PRELIMINARY LAND DEVELOPMENT PLAN (PLDP) - DEVELOPMENT & LAND USES



ASPIRATIONS AND ASSUMPTIONS

Current	Night Time Population	Day Time Population	Population (3pm-7pm)
Census Tract 5629	1,840	820	1,840
Census Tract 5623	3,266	1,520	3,266
HG River District	-	-	-
HG Mill District	-	200	200
HG Flats District	-	-	-
Current Total	5,106	2,540	5,306

Anticipated	Night Time Population	Day Time Population	Potential Peak Population (3pm-7pm)
Census Tract 5629	1,840	715	1,840
Census Tract 5623	3,266	1,325	3,266
HG River District	2,400	5,000	4,900
HG Mill District	2,200	4,500	4,450
HG Flats District	3,000	3,500	4,750
Proposed Total	12,706	15,040	19,206

Planned Job:
13,000 positions

Planned Residents:
7,600 ppl

Planned Dwelling Units:
3,500 du

Planned Residential Density:
27,330 ppl/mi²

BACKGROUND INFORMATION & DATA

REGIONAL INFLUENCES

The site, consisting of 1.3 miles of riverfront on the Mon River's edge, is the last piece of undeveloped riverfront within the immediate vicinity of Downtown Pittsburgh. The land is surrounded by a few communities, including Greater Hazelwood, Four Mile Run, Greenfield, South Side, and Oakland. Landmarks and regional destinations in close proximity to the site include the Hot Metal Bridge, Schenley Park, the Great Allegheny Passage (with 2 million annual users), and the Eliza Furnace Trail (a segment of the Three Rivers Heritage Trail within the Great Allegheny Passage).



PROJECT STUDY AREA



REGIONAL LOCATION OF HAZELWOOD RIVERFRONT

PLANNING DOCUMENT SUMMARY

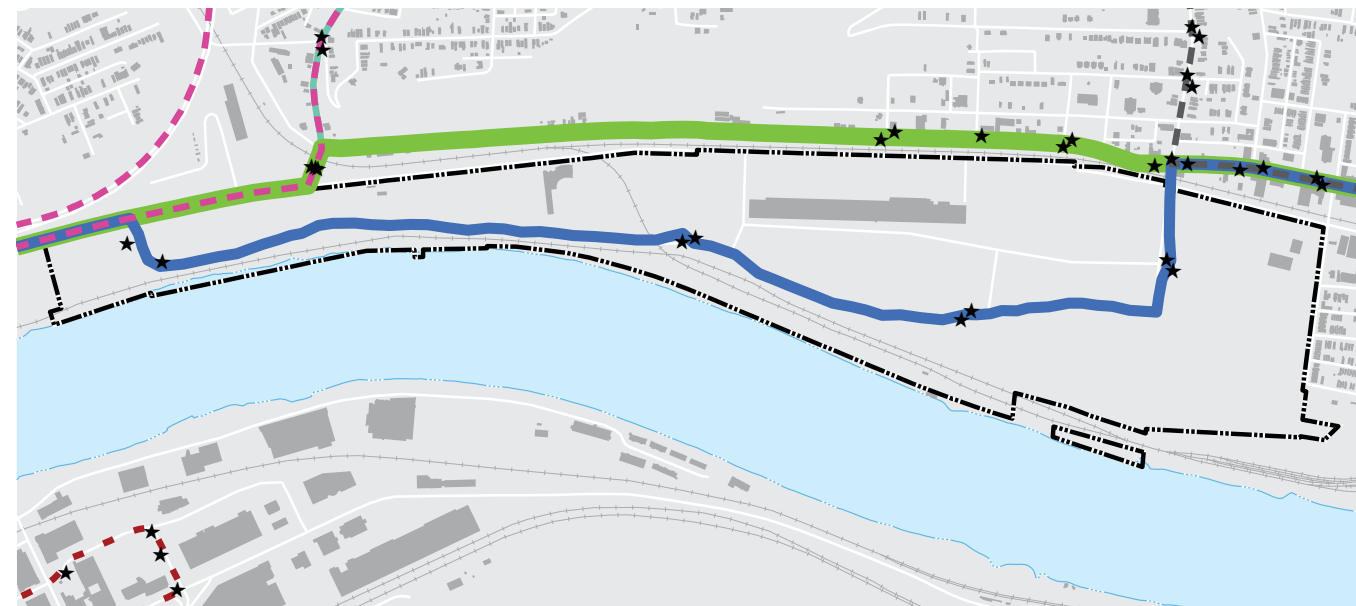
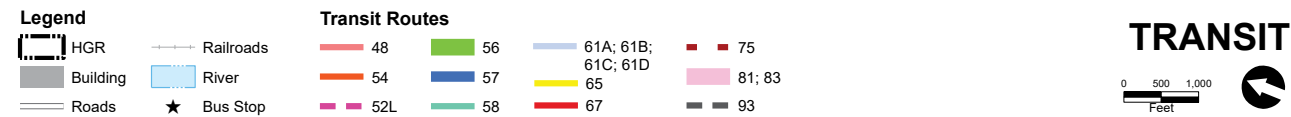
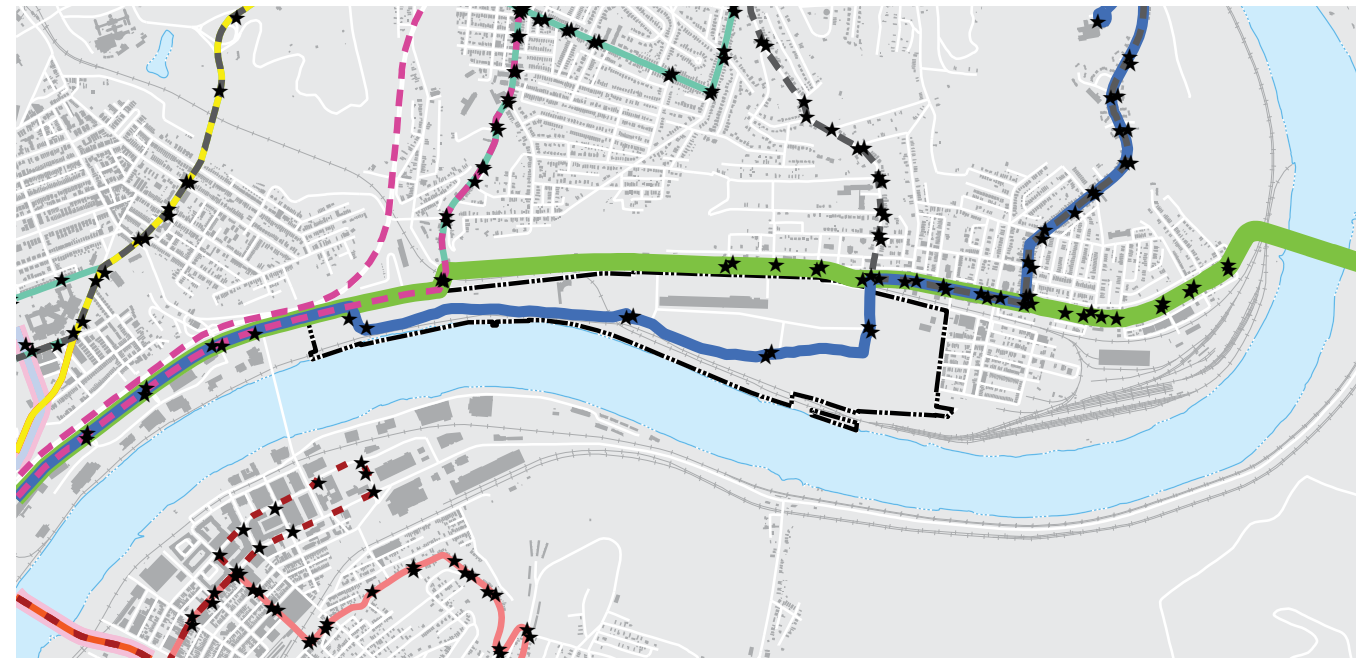
During the planning-design process, we reviewed the following:

- Hazelwood Green Preliminary Land Development Plan (PLDP) (City of Pittsburgh)
- Greater Hazelwood Neighborhood Plan (City of Pittsburgh)
- Three Rivers Conservation Plan (Allegheny County)
- Open Space PGH (City of Pittsburgh)
- Greenways 2.0 (City of Pittsburgh)
- Mon-Oakland Mobility Plan (City of Pittsburgh)
- A Guide to Riverfront Development (2014) by Riverlife

All requirements from the aforementioned documents are compliant with the Riverfront Master Plan.

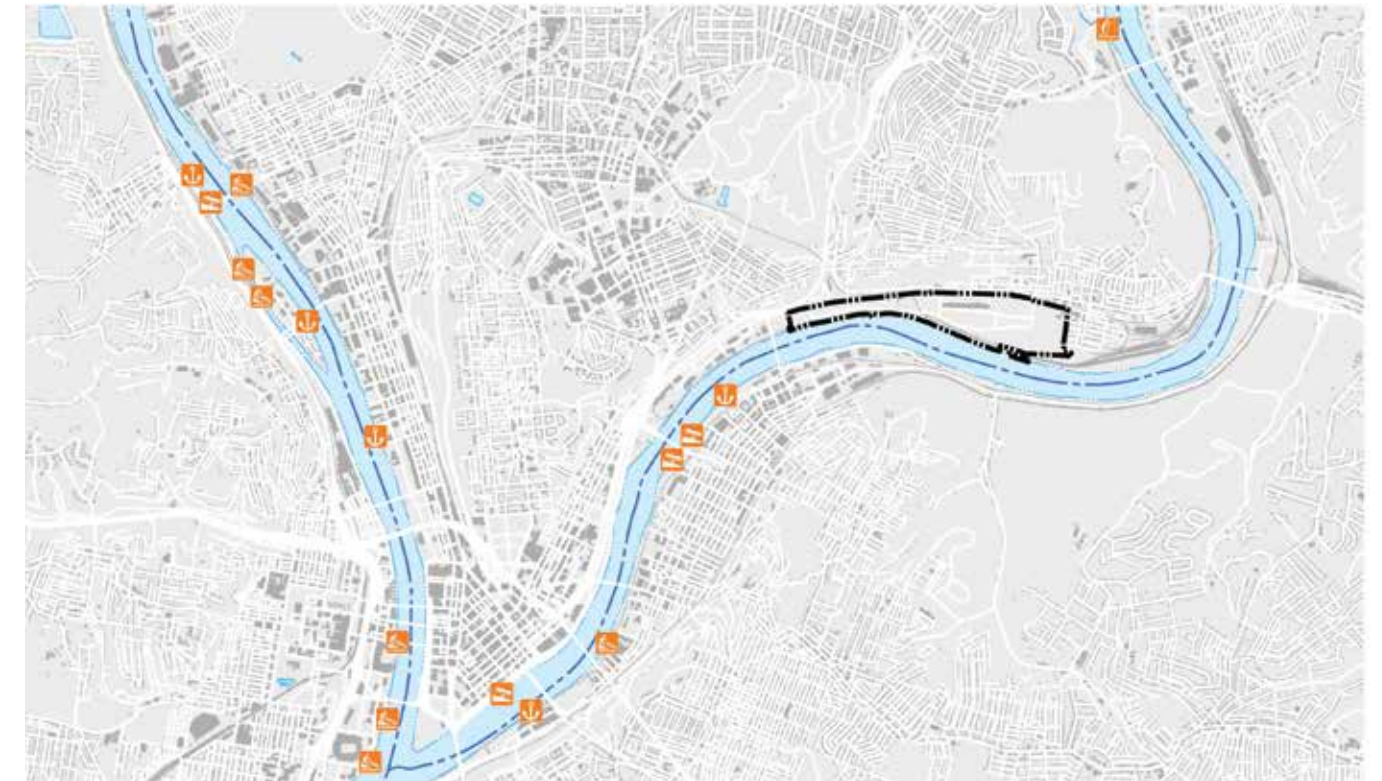
PUBLIC TRANSPORTATION AND TRANSIT

A few bus routes service the Hazelwood Green District and the Greater Hazelwood neighborhood. One bus line directly travels Blair Street and could drop off or pick up people at the Riverfront area in the future. As mentioned during the stakeholder interview process, a rideshare station may be considered and potentially planned for the Hazelwood Green Plaza after the groundbreaking for site improvements.

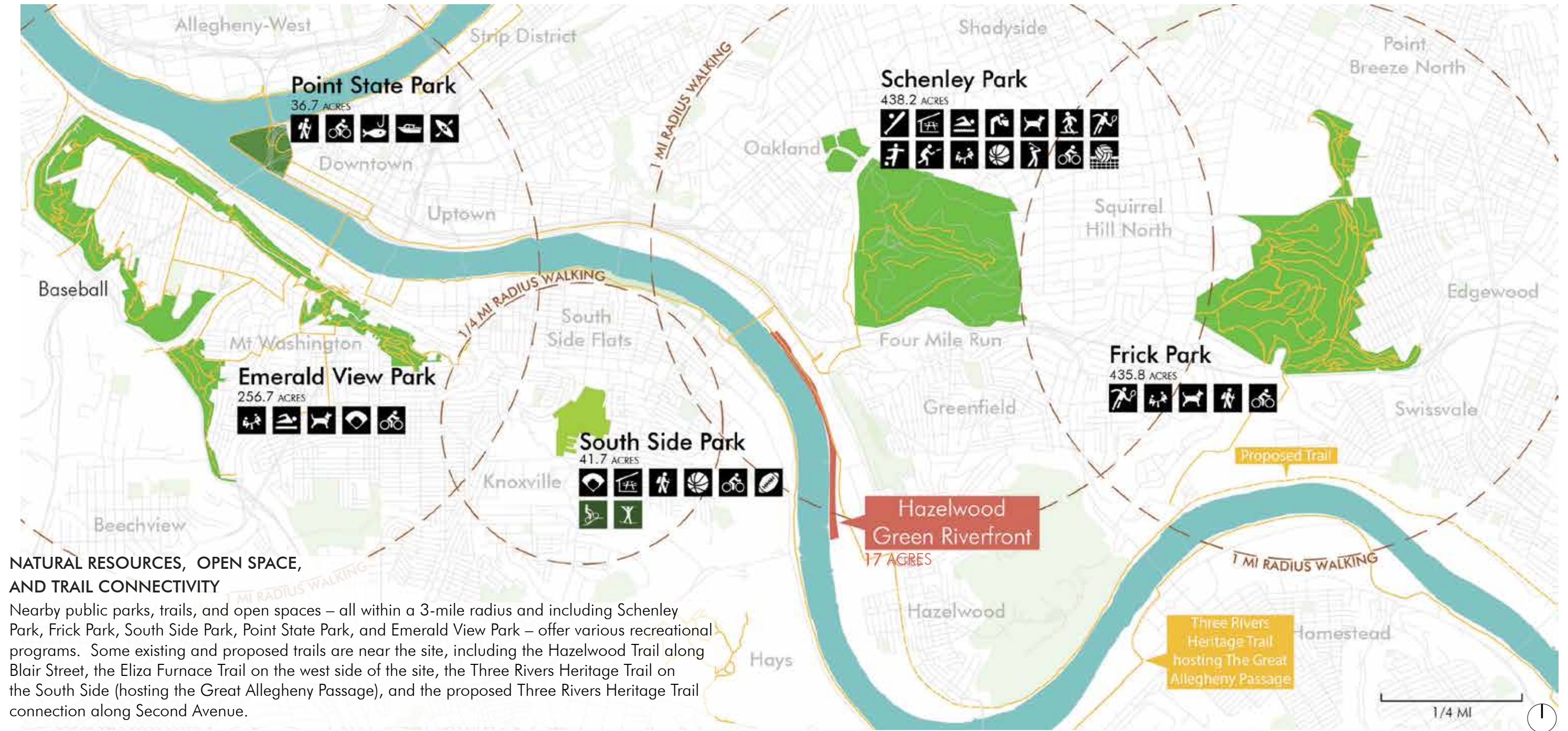


RIVER ACCESS POINTS

Water trails are recreational waterways on lakes, rivers, or oceans between specific points; they may contain access points, day-use, and camping sites for the boating public. Water trails emphasize low-impact use and promote resource stewardship. The Mon River adjacent to Hazelwood is a segment of the Three Rivers Water Trail. Mapping shows water recreation-related amenities, including marinas, boat ramps, boat/kayak launches, and fishing piers a few miles upstream and downstream. Currently, though, no water access is available within nearly two miles on the east side (Hazelwood side) of the Mon River.



REGIONAL OPEN SPACE AND AMENITIES



NATURAL RESOURCES, OPEN SPACE, AND TRAIL CONNECTIVITY

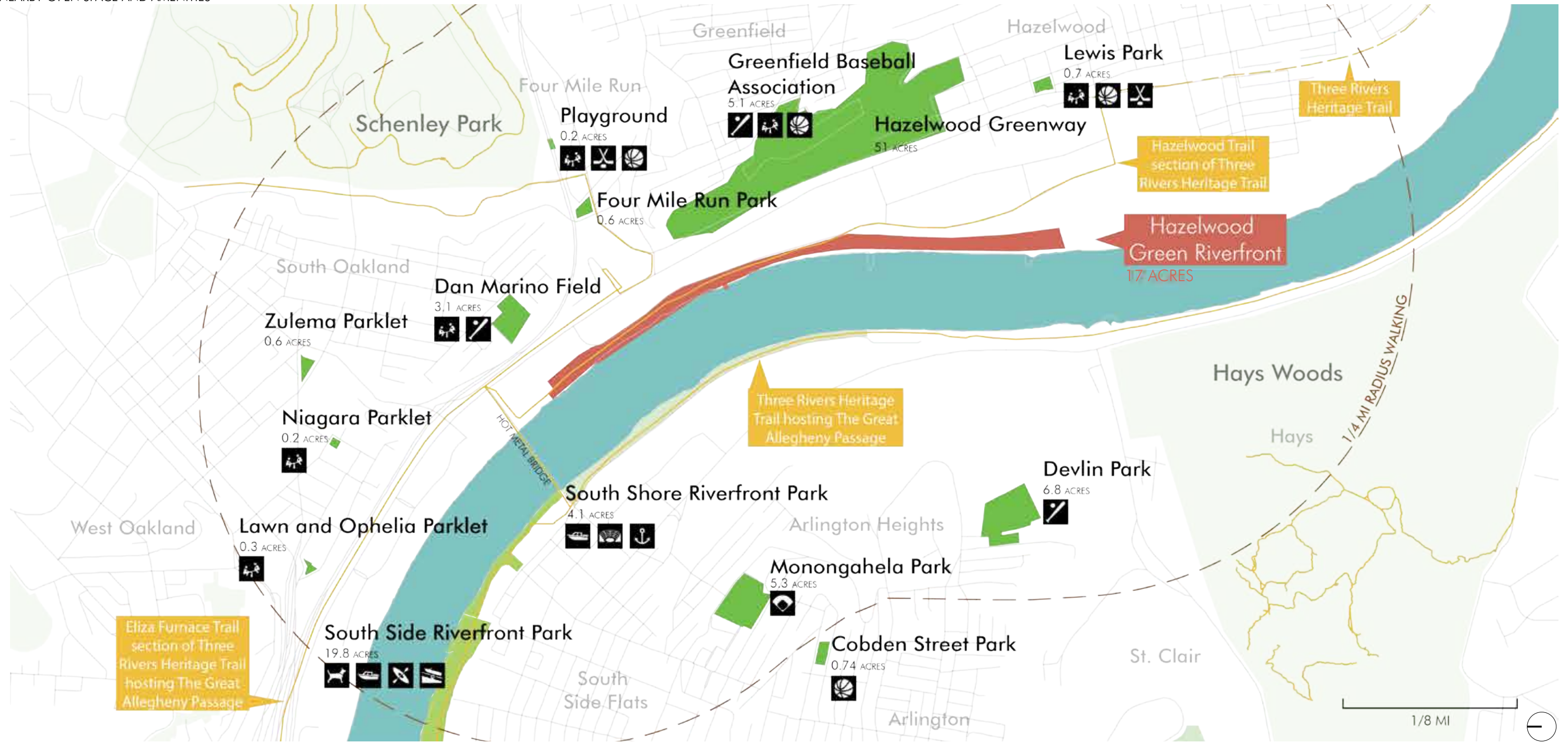
Nearby public parks, trails, and open spaces – all within a 3-mile radius and including Schenley Park, Frick Park, South Side Park, Point State Park, and Emerald View Park – offer various recreational programs. Some existing and proposed trails are near the site, including the Hazelwood Trail along Blair Street, the Eliza Furnace Trail on the west side of the site, the Three Rivers Heritage Trail on the South Side (hosting the Great Allegheny Passage), and the proposed Three Rivers Heritage Trail connection along Second Avenue.

LEGEND

Baseball	Dog Park	Play Field	Water Fountain	Picnic	Skate Park	Volleyball	Boating Dock	Hiking	Fishing	Pool	Air Hockey	Pump Track	Streets	State Park
Soccer	Golf	Playground	Basketball	Frisbee	Bike Path	Performance	Boating	Kayak	Tennis	Boating Dock	Football	Ropes Course	Trail	Open Space (Private Parks, Neighborhood Park, Cemeteries and Other Open Space)
Existing Amenities														
Aspirational Recreation Amenities														

--- Proposed Trail

NEARBY OPEN SPACE AND AMENITIES



LEGEND

Baseball	Dog Park	Play Field	Water Fountain	Picnic	Skate Park	Volleyball	Boating Dock	Hiking	Fishing	Pool	Air Hockey	Pump Track	— Streets	Neighborhood Park
Soccer	Golf	Playground	Basketball	Frisbee	Bike Path	Performance	Boating	Kayak	Tennis	Boating Dock	Football	Ropes Course	— Trail	Open Space (Private Parks, Cemeteries, Community Park and Other Open Space)
Existing Amenities														
Aspirational Recreation Amenities														

--- Proposed Trail

EXISTING SITE CONDITIONS

SITE FEATURES

Several barriers along the Hazelwood Riverfront site perimeter are obvious after reviewing surveys, maps, as-built drawings, and a few in-depth group site investigations from land and water. These include railroad tracks, CSOs, and steep slopes on the water's edge as well as next to Blair Street. The site sits well above the floodplain because of decades of fly ash buildup.

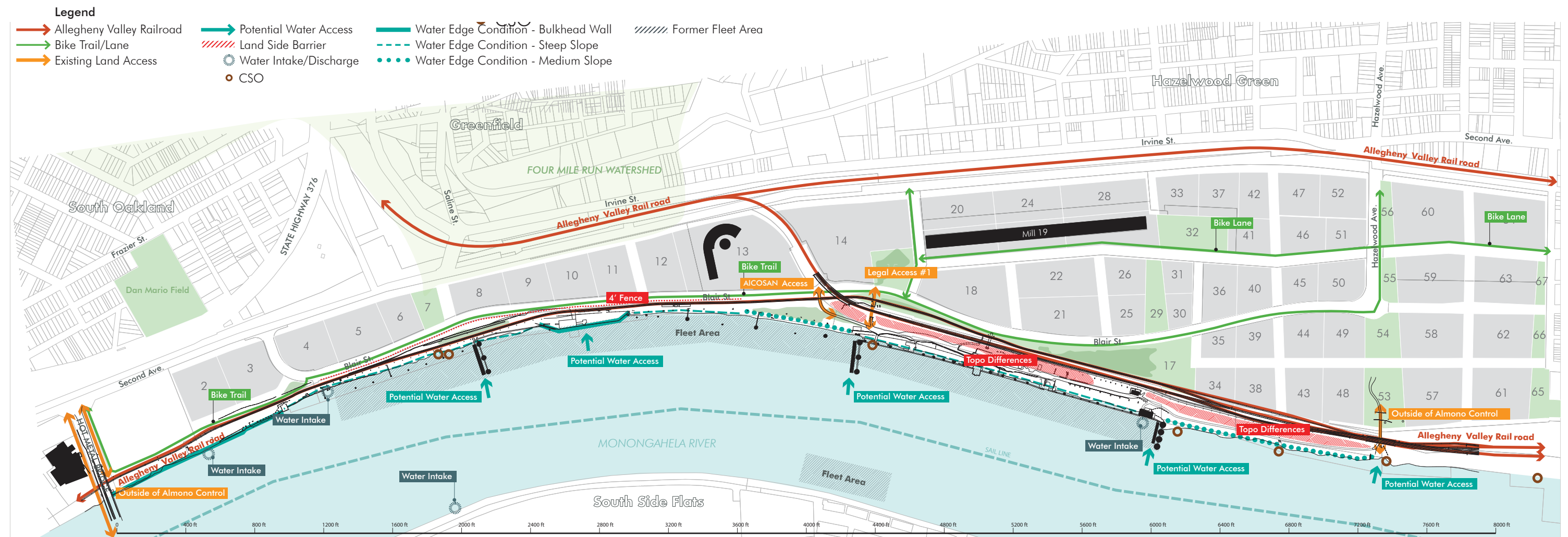
Fly ash, an industrial product, was dumped there over the years; thus, the property has gradually risen higher above the water level. The floodplain, in this case, is not a significant concern for any development purpose, except toward the south end of the Hazelwood Avenue side.

ECOLOGY

As common on former industrial sites, all site soils are highly compacted. Some land is even coal combustion residual (fly ash dumping). Currently, invasive species cover the site's southern edge (from the Pump House to the Hazelwood Avenue extension); along the steep river edge, established spontaneous plant species mitigate edge erosion.

River sedimentation, accumulated at the foot of the fly ash bank, supports vigorous vegetation forming a green buffer and energy dissipater for River waves.

EXISTING SITE FEATURES AND CONDITIONS



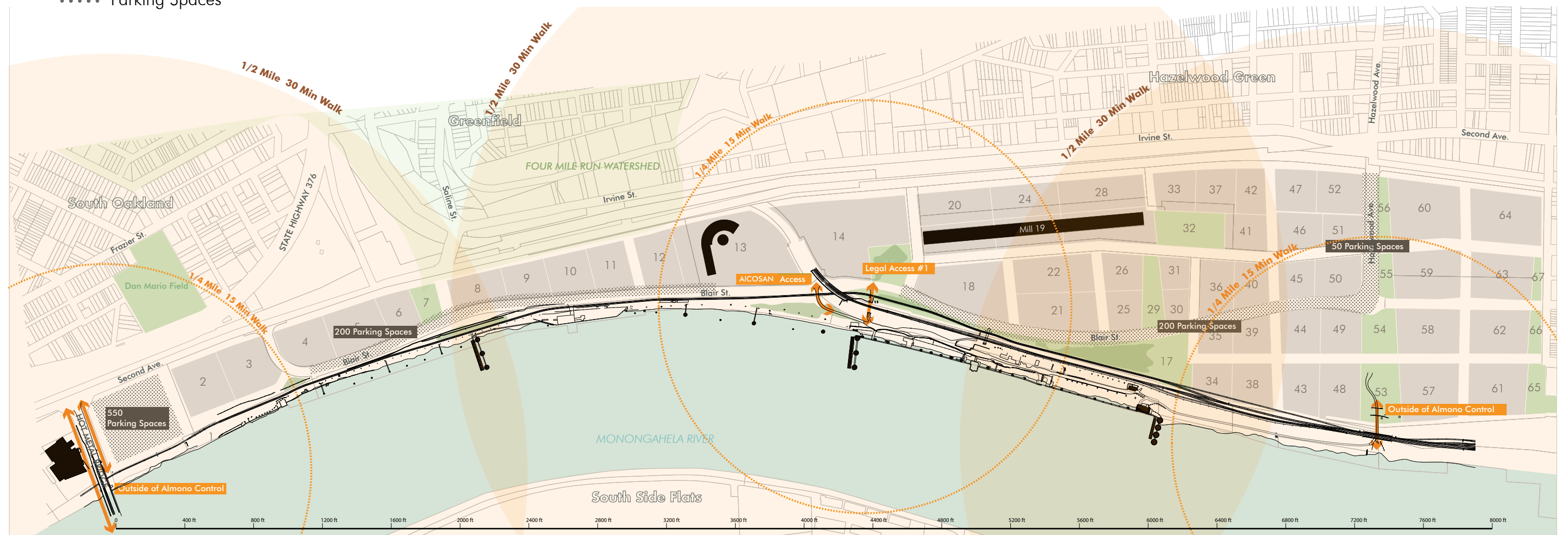
SITE ACCESS

Access is a primary site challenge. The location of the four access points barely serves any of the existing communities within a 15-minute walking distance. Given geographical reality, the planning amenities, possible access points for visiting, vehicular drop-off, delivery, maintenance, and operation are essential.

Legend

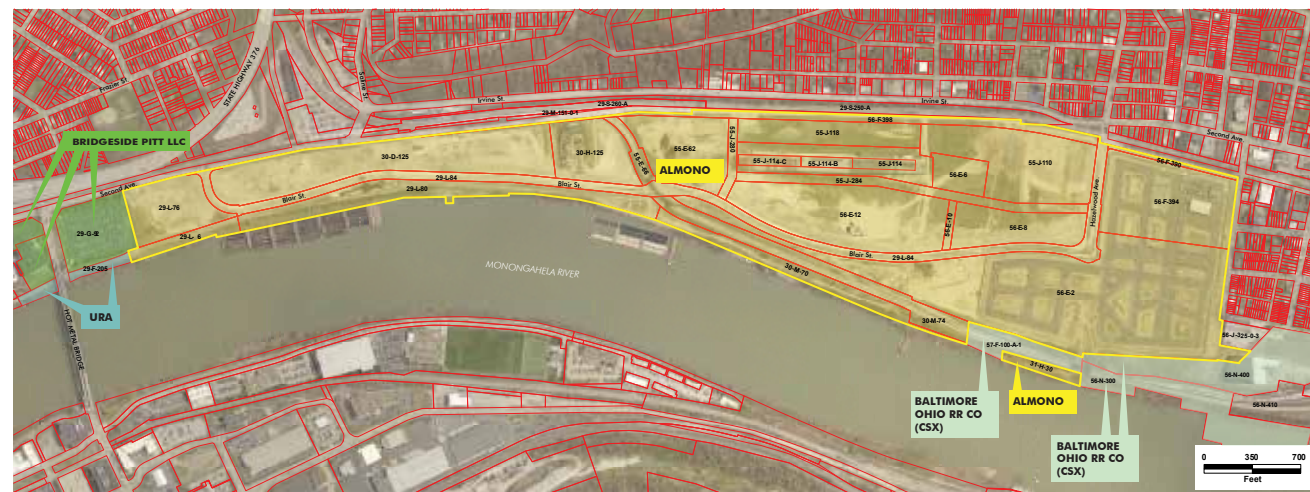
- 1/2 Mile 30 Min Walk
- 1/4 Mile 15 Min Walk
- Parking Spaces

EXISTING SITE ACCESSES AND WALKING DISTANCE ESTIMATION



LAND OWNERSHIP AND EASEMENTS

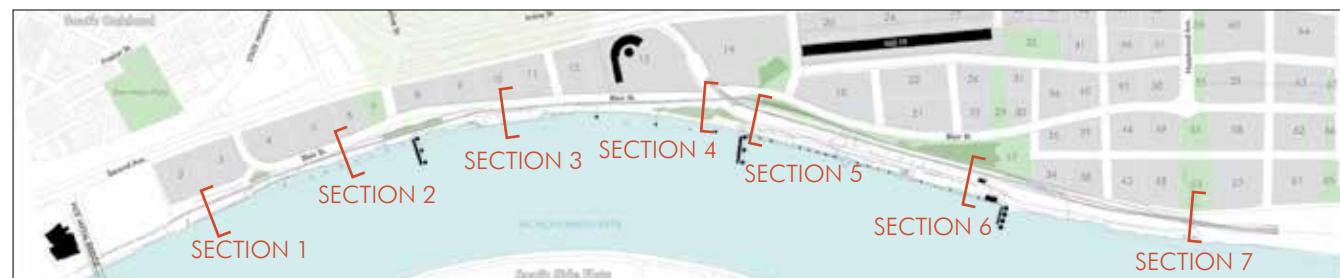
On the Hazelwood Avenue (south end) part of the site, CSX's land ownership cuts off access to the Riverfront, where the Greater Hazelwood Community mainly desires it. Restoring the Hazelwood Avenue extension to the Riverfront is critical to this Master Plan effort. Along the north segment of the site, the railroad company holds an easement agreement to use the land along some of the narrowest parts. Currently their operation includes transporting goods after midnight. This reality results in the Master Plan's proposed multi-use corridor (the Linear Plaza).



OWNERSHIP OF PROJECT SITE AND SURROUNDING PARCELS

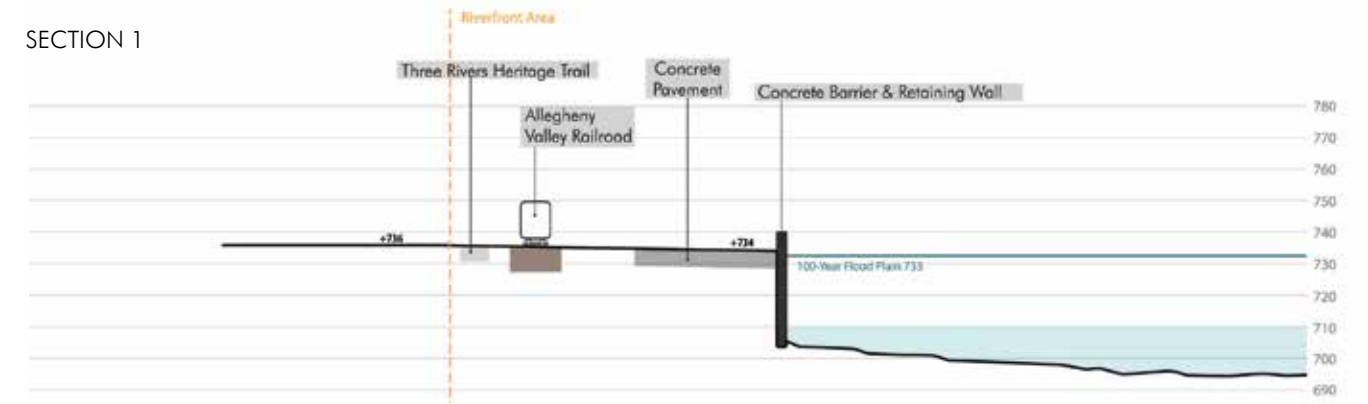
ELEVATIONAL RELATIONSHIPS

The following pages depict seven existing site sections created from the site's north end to its south. From the orange vertical, dashed line to the right-hand side are the areas of the Riverfront parcel. In most places railroad tracks and the status of the railroad agreements consume premium corridor space.

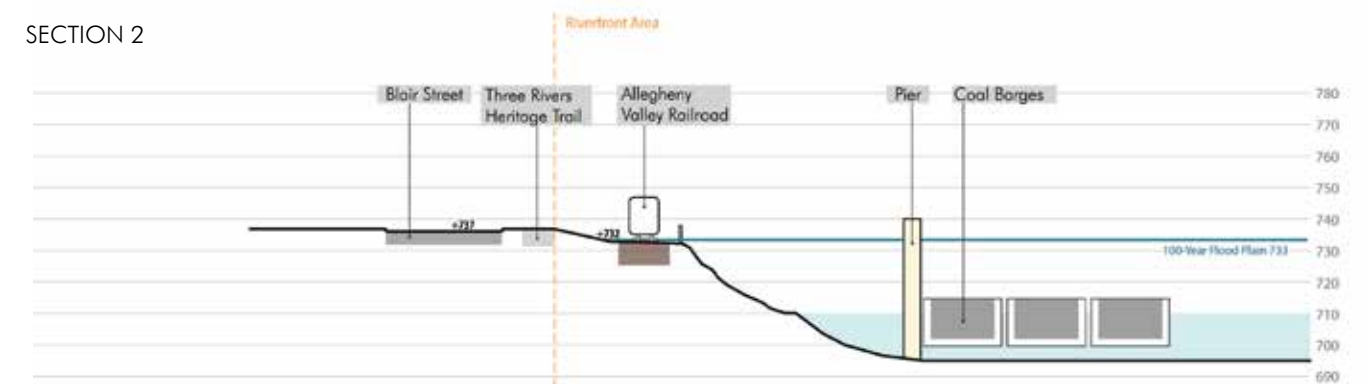


SECTION LOCATIONS

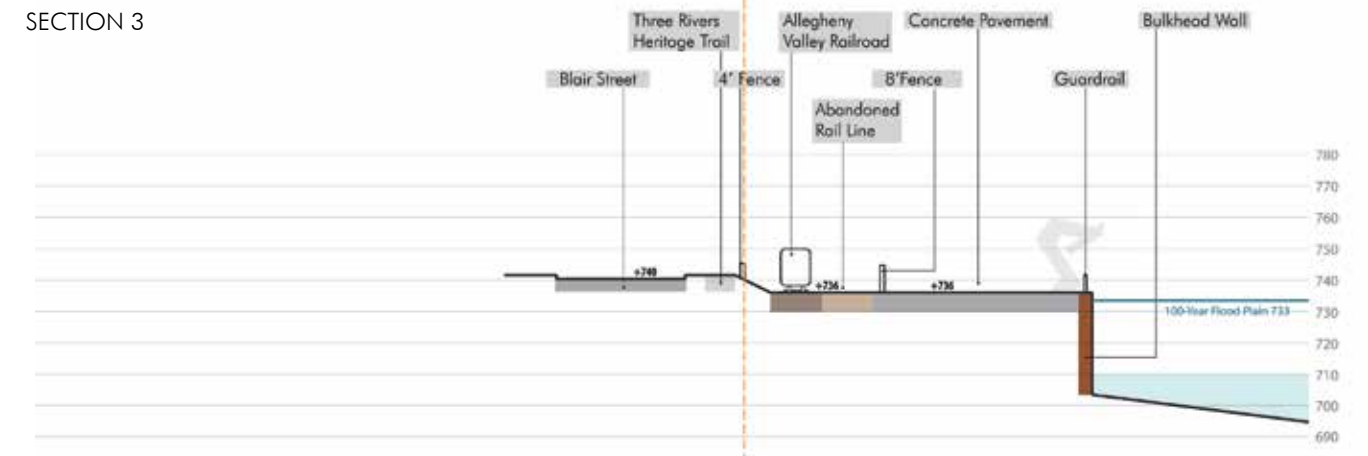
SECTION 1



SECTION 2



SECTION 3

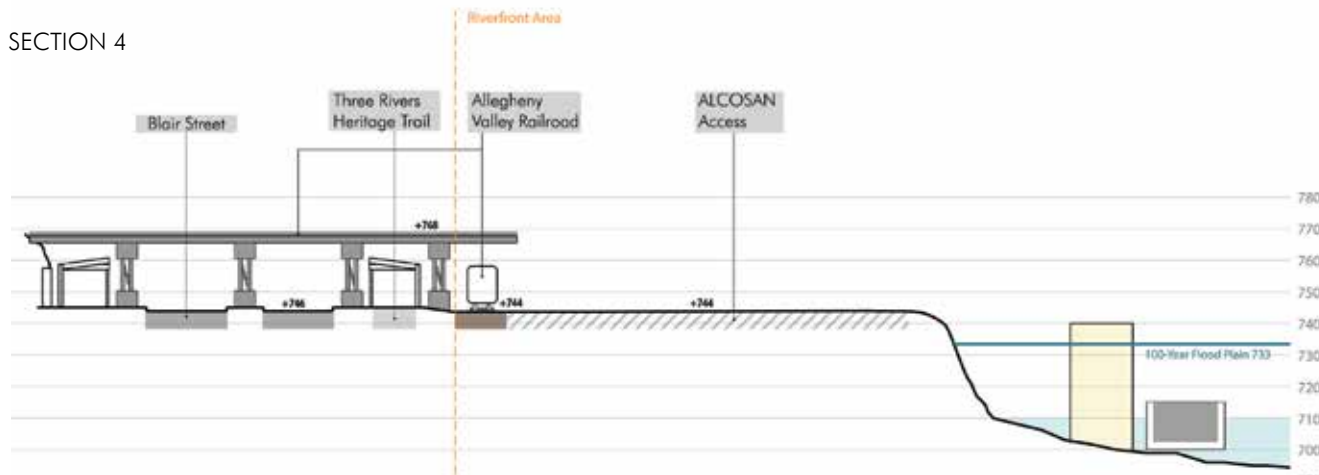


Section 1 illustrates the downstream section where the railroad runs between the Three Rivers Heritage Trail and the flat concrete pavement on the riverside.

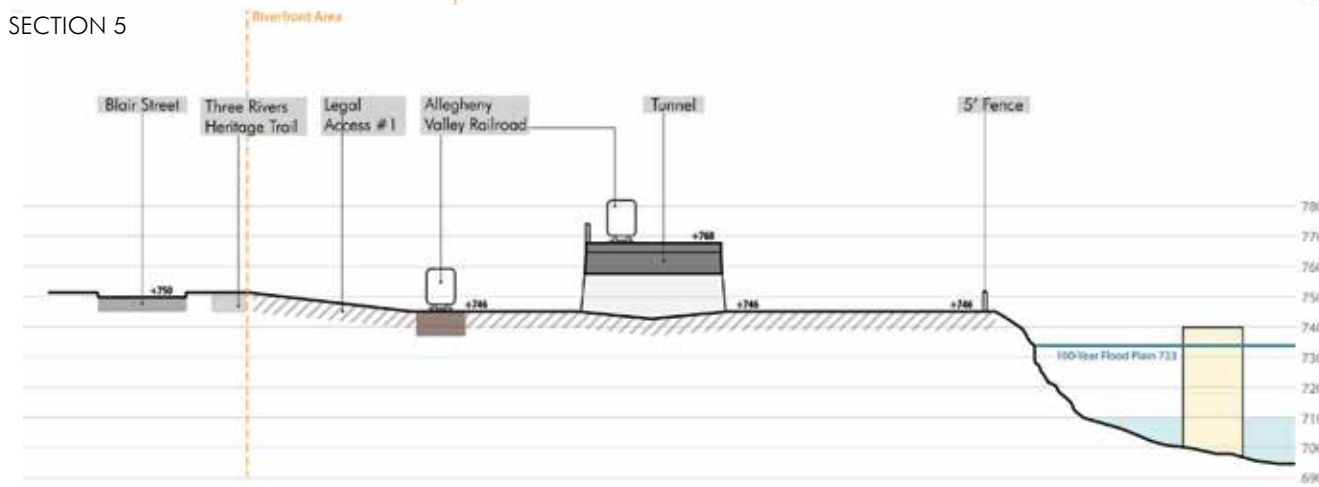
Section 2 depicts the railroad in context to the width of the site.

Section 3 reflects the dimensions at Coal Loader #1.

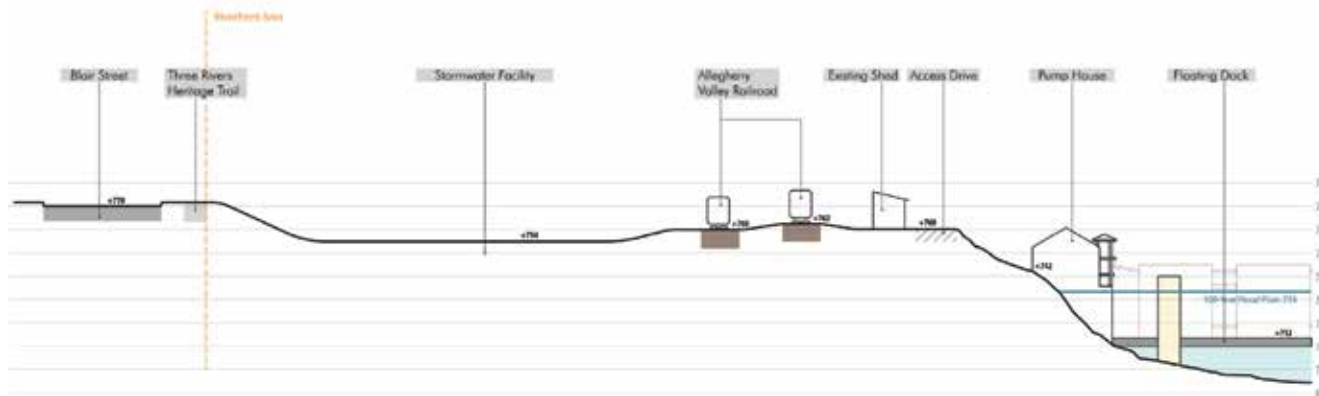
SECTION 4



SECTION 5



SECTION 6

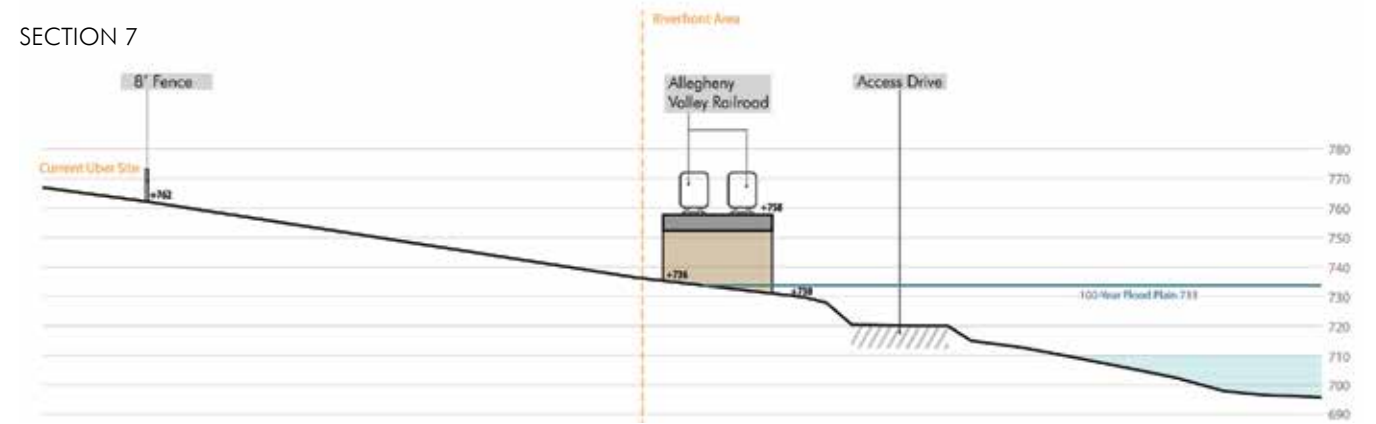


Section 4 shows the most expansive area of the site with comparatively flat access from Blair Street. While crossing the railroad to access the site is a default, it also has the best visibility along Blair Street and provides safer crossing.

Section 5 depicts a typical site segment with an average 70-foot-wide flat surface, the cliff's steep edge, elevated rail tracks, and (sometimes) retaining walls.

Section 6 explains the elevational relationship at the Pump House, where a stormwater pond and two active railroad tracks are between Blair Street and the Pump House. The Pump House, built on steep slopes, directly connects to the Mooring Cell Clusters #3 and the River.

SECTION 7



Section 7 cuts through the Hazelwood Avenue extension line, where the Riverfront site is closest to the water elevation. This may be the best location to access the water if no one plans long switchback ramps.

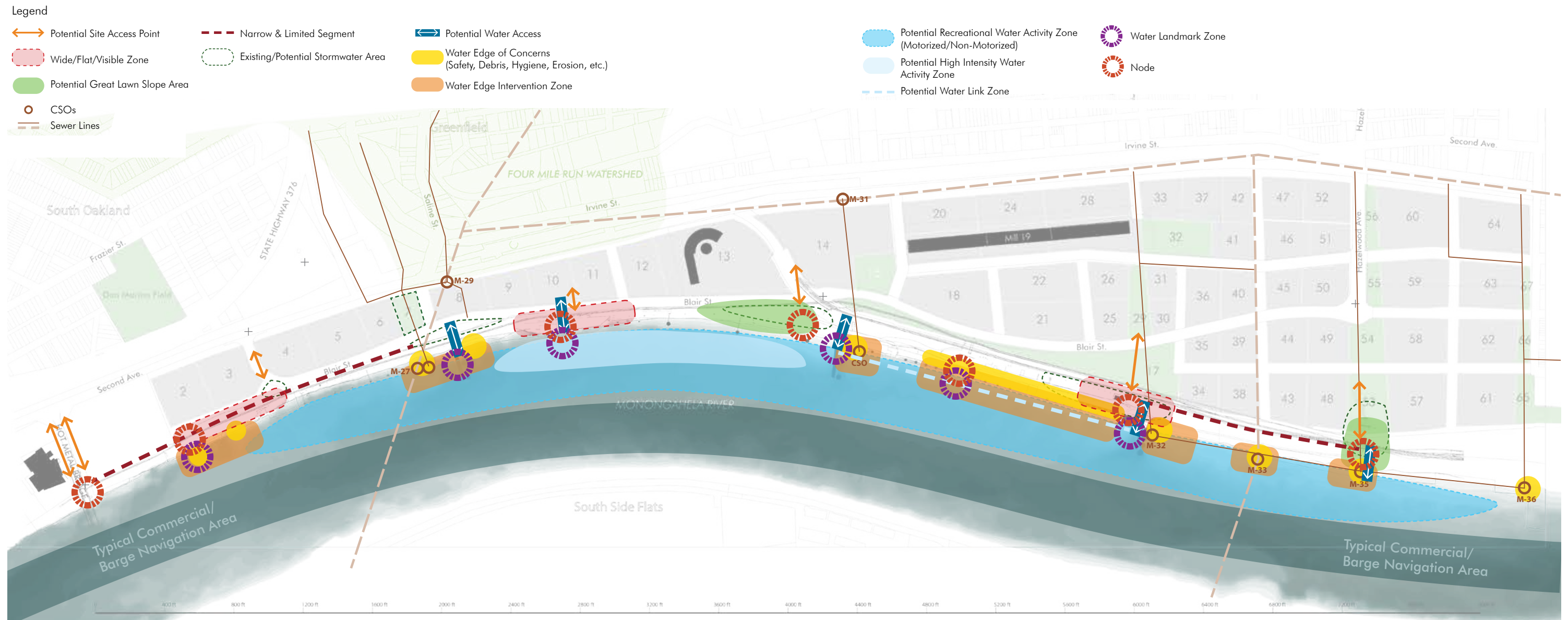
SITE INFORMATION & ANALYSIS

OPPORTUNITIES AND CHALLENGES

As part of the master planning effort, specific information was gathered and assessed to establish a basis for the site's potential. Site features that have strong influences were analyzed to determine the workable parameters for the proposed facilities.

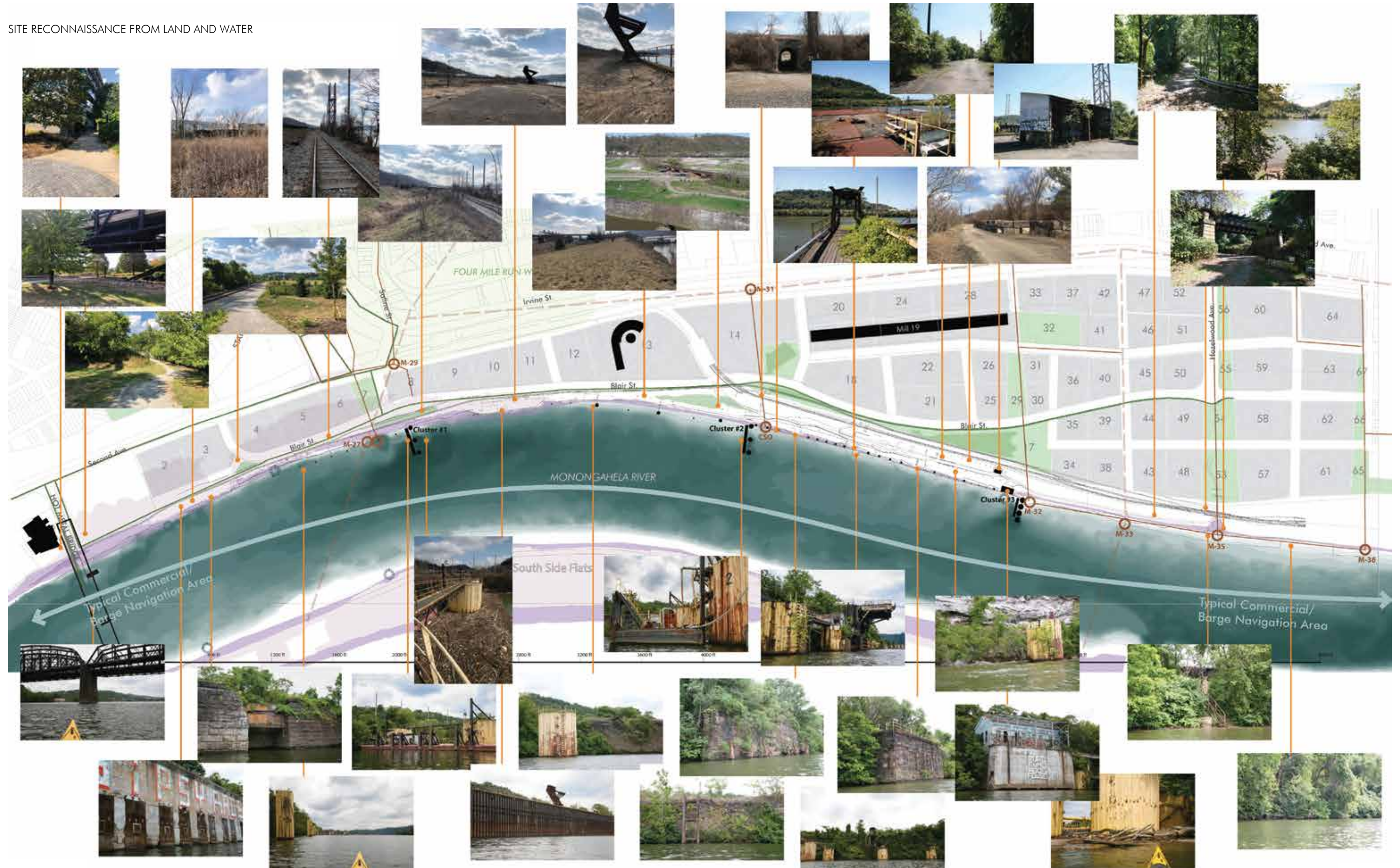
Inventories for site structures, existing infrastructure, water depth, landform, floodplain, and planting conditions build on the site's existing conditions' study; lists were completed on land and via kayak from the River.

The synthesis of challenges and opportunities for various recreation and supporting programs considers areas for potential land/water access, open lawn zones, flat/wide/visible zones, and recreational water activity zones/links. Areas of concern are mapped to pinpoint CSOs, extremely narrow spaces, and identified water-related safety/hygiene/erosion zones.



SITE OPPORTUNITIES AND CHALLENGES

SITE RECONNAISSANCE FROM LAND AND WATER



EIGHT NODES

Integrating existing industrial artifacts, size of space, relationship to water, and circulation considerations, six locations along the water and seven locations from the land (five of them overlapping) create a total of eight places. Those land nodes, from downstream to upstream (from north to south or from the Hot Metal Bridge end to the Hazelwood Avenue end) are:



1. Hot Metal Bridge Connection to Great Allegheny Passage

Toward the Hot Metal Bridge, Almono no longer owns the Riverfront land; however, the universally accessible connection back to the ramp of the Great Allegheny Passage on the Bridge needs consideration. (See recommendation in Part 4, Vision.)



2. Water Discharge Platform

This platform is most visible from the Mon River, Hot Metal Bridge, and South Side. Hazelwood Coke Works once used this area to discharge water. The structure's roof is a large, flat concrete platform that projects into the River and offers views of Downtown Pittsburgh, the Hot Metal Bridge, and river activity.



3. Railroad Corridor with Stormwater Pond – Mooring Cell Cluster #1

This area is the narrowest section of the Riverfront (only about 50 feet wide) and consists mainly of steep slopes and the Mon-Con Railroad. The widest spot within this node currently accommodates a stormwater pond. It is a node aligned with a PLDP planned road, sewer lines, CSOs, Cluster #1, and a potential connection to the Eliza Furnace Trail. Numerous mooring cells dot the river's edge and form one of the three fleet areas that the former Hazelwood Coke Works operated. The fleet area offers shelter from river traffic and creates an opportunity for water access and water sports/activities. Another challenge in this location is the steep descent to get to water level.



4. Coal Loader #1

The Coal Loader is erected above a bulkhead wall that is 500 feet long and towers nearly 30 feet above the water. The bulkhead creates a level landing that is one of the rare wide and flat areas along the Hazelwood Riverfront. Easily accessible from Blair Street, this has the potential for meaningful redevelopment and could become a destination along the Riverfront.



5. "S" Curve with Tunnel – Mooring Cell Cluster #2

This location is one of the widest portions along the Hazelwood Riverfront. This node provides a gateway to the Riverfront because of its proximity to the one currently existing, legal, at-grade railroad crossing. It also offers a stunning view of Downtown Pittsburgh and the Mon River's upstream reach. Blair Street's construction incorporated a series of stormwater basins to support future development. They could be modified or reshaped to accommodate other recreational uses and activities in the future.



6. Coal Loader #2

Coal Loader #2 is also a remnant of Hazelwood Coke Works' operation. Coal loaders transferred coke from the barges to the Coke Works. Coal Loader #2 appears to be minimal when viewed from the land but is composed of numerous buildings, platforms, and structures that step down the hillside to the water's edge. The top of the Coal Loader has a large deck surface that offers open views of the River and of Downtown Pittsburgh.



7. Pump House with Mooring Cell Cluster #3

Built in 1870 for industrial use, the Pump House pulled water from the Mon River to support coke production and remains intact 150 years later. The Pump House, connected to the adjoining mooring cells through a riverside balcony/catwalk, potentially offers phenomenal upstream and downstream views.



8. Hazelwood Ave Extension/Railroad Trestle

As mentioned, historically Hazelwood Avenue extended to the Riverfront and served as a connection to the Hazelwood neighborhood. It is the closest location for residents to enjoy Riverfront amenities. In the 1950s this connection, through vacation of land, accommodated the railroad.

FOUR ROOMS

To further distill the complexity throughout the site, we identified four “rooms” of the entire Riverfront stretch, which are segments with similar spatial qualities. From upstream to downstream, they are:

Room 1

This is a narrow section from the landside with limited nighttime railroad use and no access to water. The waterside is highly visible from the Hot Metal Bridge; it is a gateway to the Riverfront site and has the water discharge structure as a landmark.

Room 2

This is the widest section on land and, when coupled with stormwater management area changes, allows for gatherings and social activities while providing excellent access to the water. The waterside is between the Mooring Cell Cluster #1 and #2 and appears suitable for active water recreation.

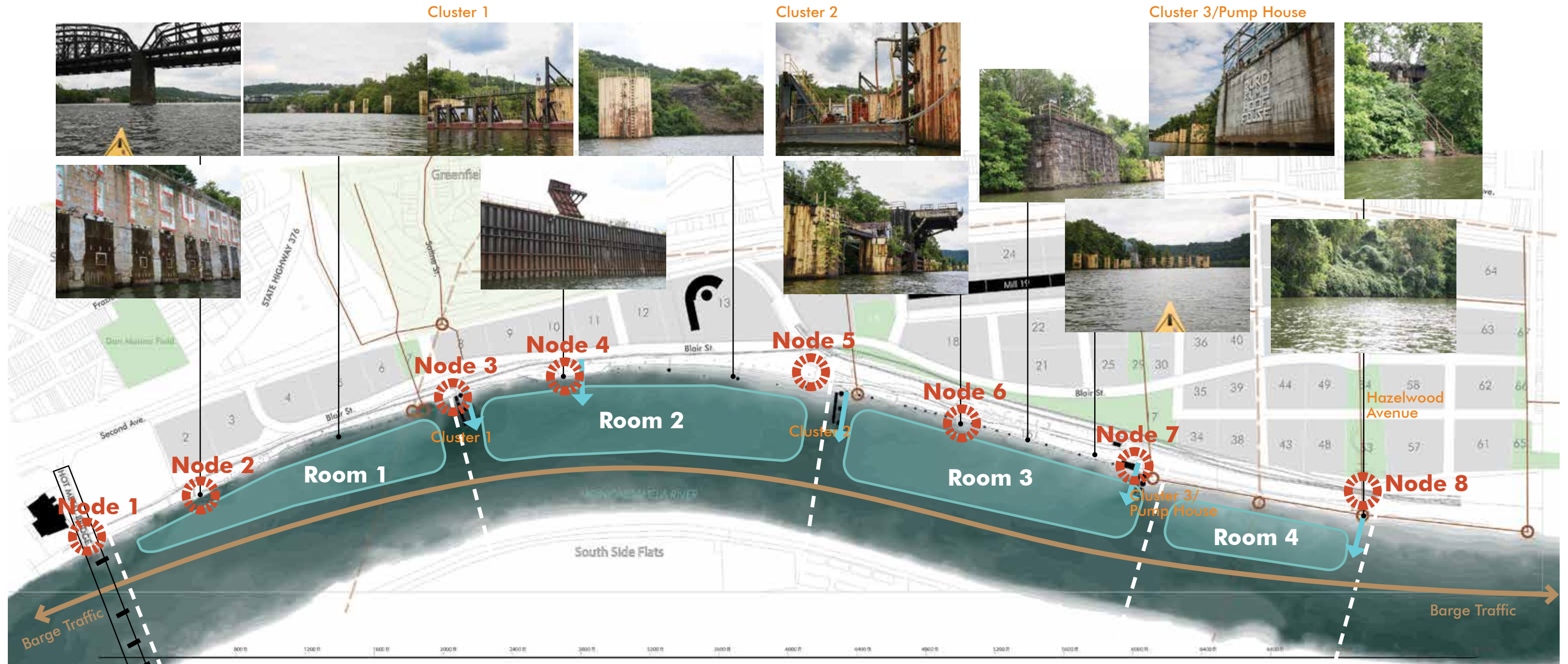
Room 3

This is a secluded, narrow section on land with a “wild” vibe along the river’s edge. There are opportunities for overlooks, event decks, a non-motorized boat dock, and floating amenities on the water. It has better access to water, a safe harbor area for beginners, and a great fishing location.

Room 4

From the landside it has premium access to water and nature.

FOUR ROOMS AND EIGHT NODES



UTILITIES, SOIL STABILITY, AND STRUCTURE ASSESSMENTS

UTILITIES

In the existing condition assessment, the location and capacity of the existing utilities, including communications, electrical, gas, sanitary sewer, and water lines, are identified. The 2018-19 Blair Street construction established full-service utility lines with adequate capacities along its entire length. Underground duct banks carry electrical and communication lines; any potential utility connection to the Riverfront site could extend from Blair Street.

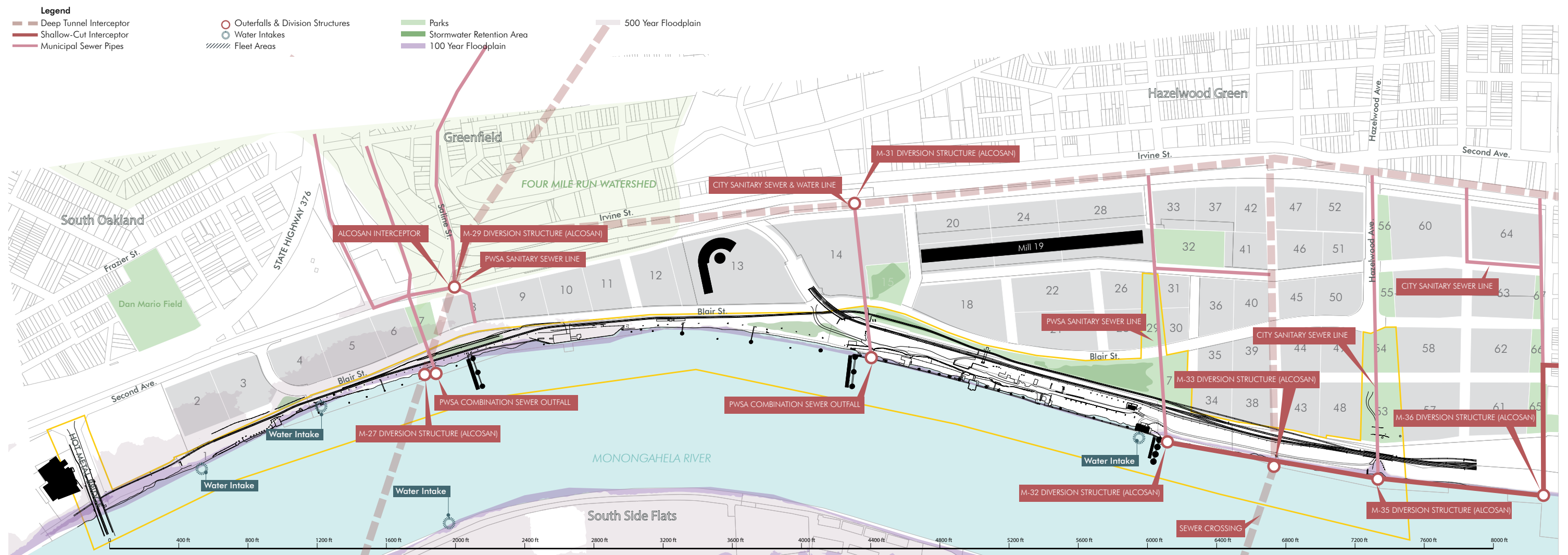
COMBINED SEWER OVERFLOW (CSO) ASSESSMENT

The Pittsburgh Water & Sewer Authority (PWSA) combination sewer system collects stormwater runoff, domestic sewage, and industrial wastewater into a single pipe with conveyance typically to the ALCOSAN Wastewater Treatment Plan. However, during heavy rainfall and snowmelt events, wastewater volumes in combined sewer systems can overload the treatment plant because of the increased stormwater flows. Combined sewer

overflows alleviate the wastewater treatment plant by occasionally discharging excess wastewater directly into nearby streams, rivers, or other water bodies. These overflows contain stormwater and untreated human and industrial waste, toxic materials, and debris.

This site has six (6) combined sewer overflows located along the Mon River to serve the PWSA combination sewer system. The image below depicts these CSOs and main sewer lines. Because of the CSOs' associated biological and environmental concerns, the master plan gives these areas special consideration. Recreational

activities, such as kayaking, fishing, swimming, paddle boarding, and boating, should be protected from the CSO's bacteria, viruses, and diseases. Sign installations notifying the public of CSO events can advise people about the potential health risks of conducting recreational activities in these areas.



EXISTING INFRASTRUCTURES, CSOS AND FLOOD PLAN

SOIL AND RIVER BANK

All of the soil on the site is categorized as urban soil and has been heavily compacted by industrial activity. Some of the river’s edge was even formed from fly ash, a by-product of coke production. Stormwater ponds have been constructed at the “S” Curve and toward the north end of Blair Street. Soil in the existing stormwater ponds has been amended to support rain garden plants.

The riverbank that runs along the Mon is in good condition. The Riverfront is comprised of sections of stone retaining walls, sheet pile retaining walls, vegetation, and fly ash slopes. The areas of the Riverfront that are vegetated are stabilized, do not have visible erosion, and should remain vegetated to prevent future soil loss. Three sections of fly ash slope are present along the River because of the former steel mill operations. Based on visual observation, there is no noticeable evidence of slope

movement, which would indicate that the shear stresses developed from forces applied to the slope had exceeded the strength of the slope and in-situ materials. It may be reasonable to assume that the slope is relatively stable, and any loss of material is only occurring at the face of the slope instead of immediately affecting the entire slope’s stability. Some minor erosion is occurring at the toe of these slopes, but that may be mitigated by the addition of floating islands. Prior to site development, it is recommended that a geotechnical engineer be engaged to evaluate the fly ash slopes. Protecting the toe of the slope, laying back the slope, controlling stormwater runoff, replacing fly ash material with a suitable embankment material, or providing a lining could be considered. It would be wise at this time for the fly ash slope to receive toe protection and remain in place. That process can be treated as an educational/historical feature that demonstrates how people have negatively altered the natural landscape.

EXISTING STRUCTURE

An assessment was conducted of each structure along the Riverfront. The purpose of this assessment was to gauge the overall condition of the existing structures to determine which ones could be feasibly incorporated into the Master Plan. The structures were observed only by land. Their subsurface status is unclear. Each structure was visually accessed and earned a rating of “satisfactory,” “fair,” “poor,” or “critical.” See below for a summary of each rating:

- Satisfactory – The structure requires minor modifications and repairs to be implemented into the Master Plan.
- Fair – The structure requires major repairs to be implemented in the Master Plan.

- Poor – The structure requires extensive repairs and may not be feasible to implement in the Master Plan.
- Critical – The structure is unsafe and beyond repair.

Most of the site’s structures have been classified “fair” or “satisfactory” and could be incorporated for future re-purposing of the site. Some potential reuse options for these items could include being part of overlooks, anchoring for floating docks or walkways, gathering areas, educational/historical areas, and recreational areas. Only two (2) structures are noted to be in poor condition: Structure G1 and Structure I - the Coal Loader #1. Repurposing of those two items may involve major refurbishing.

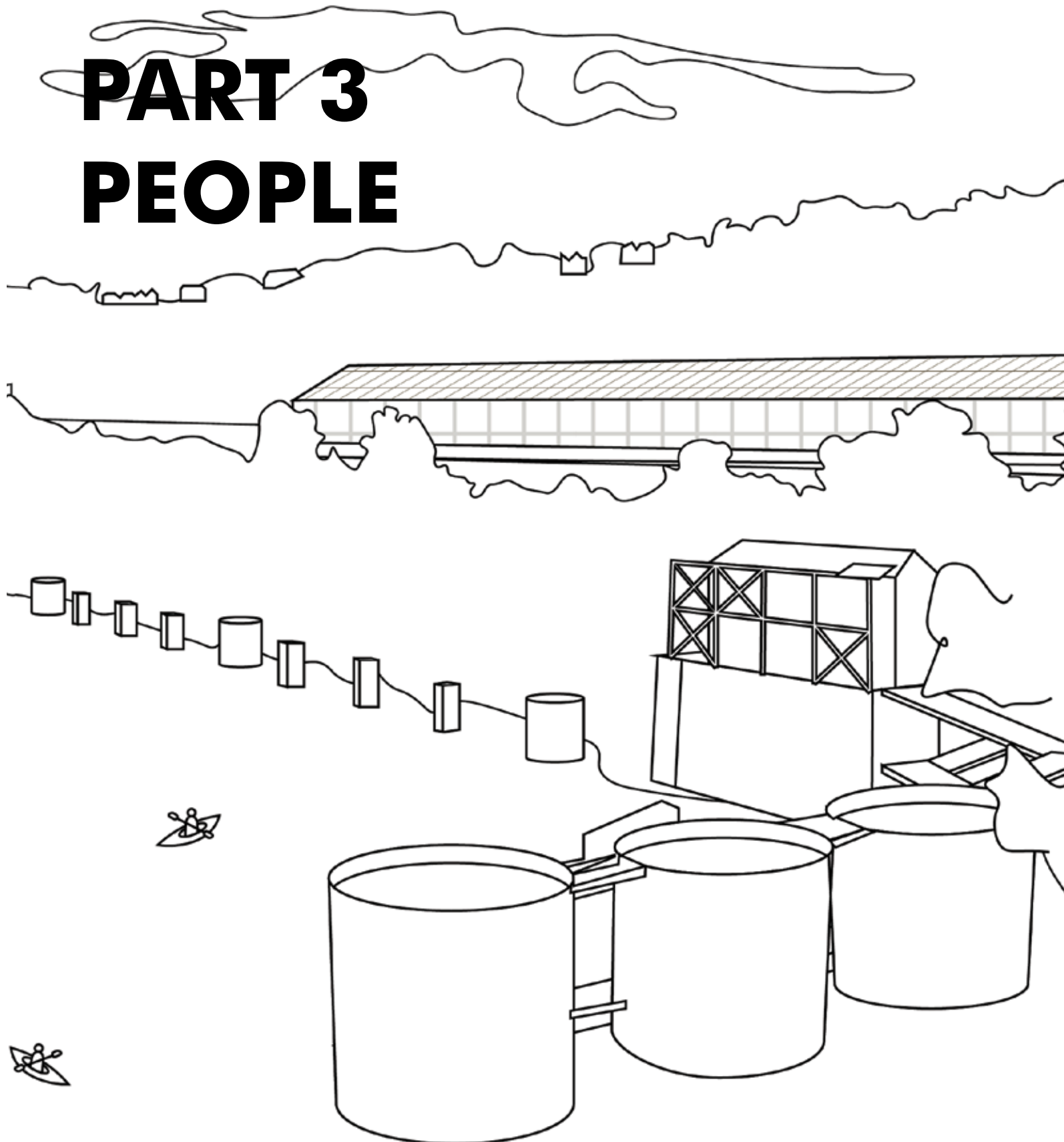


DEBRIS IN THE RIVER



STRUCTURE STABILITY ASSESSMENT

PART 3 PEOPLE



OVERVIEW

More than three generations of Greater Hazelwood residents are disconnected from its Riverfront. Since industry consumed the area decades ago, the shoreline has remained closed to the general public.

Fortunately, the Greater Hazelwood neighborhood plan calls for restoring public access to the Riverfront, and Almono shares this goal.

Balancing Landowner and Community Interests

This project is grounded in both the neighborhood’s and Almono’s desire to return the Riverfront to the area citizens and visitors. Almono’s leadership must be comfortable with the proposed plan and its ability to implement it. PA DCNR has provided opportunities to incorporate the City, neighborhood leaders, and regional open space stakeholders in imagining a new future for the undeveloped Riverfront.

Despite private property owners’ having once operated in a vacuum, public involvement is now a critical part of a healthy community. Quality public engagement is of the utmost

“This community has been a Riverfront community forever, but it hasn’t felt like that.”

These words of Sonya Tilghman, Executive Director of Hazelwood Initiative, align with a sentiment shared by many throughout the master planning process.

importance in this historically disenfranchised neighborhood.

A commitment to thorough interaction – and to the people of Greater Hazelwood – has guided many decisions throughout the master planning process. One choice was to change the project’s name midway through the planning process. Initially referred to as the “Hazelwood Green Riverfront” because of the site’s location in that development, project leadership decided to focus upon the whole “Hazelwood Riverfront.” More than a symbolic gesture, this term conveys that the Riverfront is for all – not just for those interacting with future development.

Methodology

Despite the COVID-19 pandemic, a robust and inclusive public engagement process successfully occurred. A mix of digital and in-person outreach techniques helped the project team connect with many participants without marginalizing any groups. While one important goal was learning from various stakeholders, the outreach strategy design team has produced a realistic plan that Almono can implement over time.



A CHECK FOR \$100,000 is turned over to the City to vacate streets in an area between Second Avenue and the Monongahela River. Jones & Laughlin Steel Corp. will install a battery of coke ovens there. Left to right are Mayor David Lawrence, President C. L. Austin of J. & L., and Adolph Schmidt, vice-chairman of the Urban Redevelopment League.

IN 1952 THE CITY OF PITTSBURGH VACATED THE STREETS BETWEEN SECOND AVENUE AND THE MONONGAHELA RIVER SO THAT JONES & LAUGHLIN STEEL CORP. COULD INSTALL NEW COKE OVENS.

Key components of the engagement process included:

Project Leadership Team (PLT) Coordination

Representatives of Almono and PEC formed the Project Leadership Team. This group has met seven times to make critical decisions based upon public participation and Advisory Committee feedback. They will be the group that commits to laying out steps for long-term fundraising, construction, operation, and management. Several PLT members also served on the Advisory Committee. The PLT's and the Advisory Committee's close communication ensured that vision and feasibility were considered simultaneously.

Advisory Committee Coordination

A project Advisory Committee convened to provide a high-level, multi-sector thinking. The 20-person committee represented neighborhood, City, county, university, regional, and statewide perspectives. Included in the Advisory Committee, Almono's liaisons ensured an aligned project vision with the owners' plan implementation capacity.

This committee met seven times, primarily virtually, from June 2020 to August 2021. The group met at critical junctures to offer feedback and to assist with public engagement efforts. Most members also participated in the project's optional site tours and public meetings. Some committee members and their organizations will continue to play a role in advocating and planning for the Hazelwood Riverfront's future.

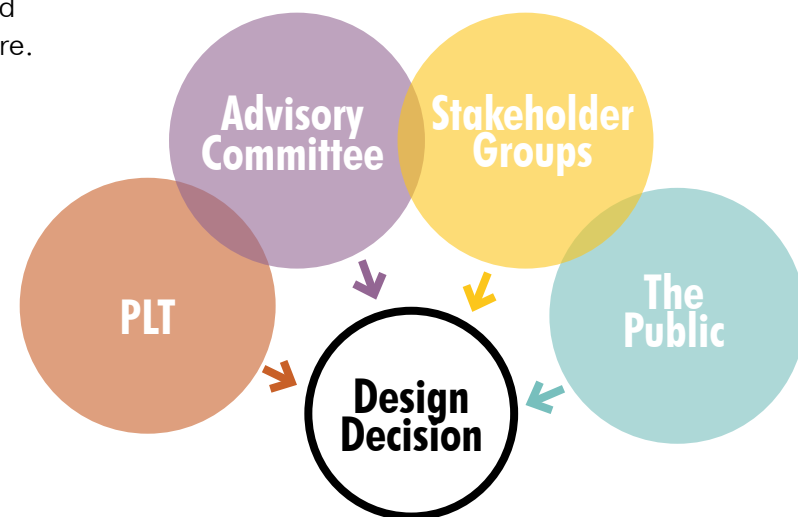
Public Participation (a set of surveys, a fall multi-day design workshop, a spring public meeting, and more)

Community outreach consisted of virtual/digital and in-person methods. The most intensive outreach efforts included a 3-day design workshop, a virtual meeting, and neighborhood- and city-wide surveys. The immediate neighborhoods' and Pittsburgh-area residents contributed ideas, needs, issues, concerns, insight, and preferences throughout this process.

Stakeholder Engagement

Before the COVID-19 pandemic, stakeholder engagement was planned via large group meetings and workshops. DCNR approved a work scope adjustment because of restrictions on public gatherings. Instead, 24 stakeholder organization interviews took place virtually between July 2020 and March 2021. Each generally lasted 30-45 minutes and included talking with 1-4 members of every stakeholder organization. The interviews proved to be an effective way of gathering meaningful feedback from each organization. Stakeholders remained informed throughout the project and were invited to an October 2020 design workshop as well as to an April 2021 public meeting.

The following pages detail public participation and stakeholder engagement efforts.



PUBLIC PARTICIPATION PROCESS

Historically cut off from its Riverfront, Greater Hazelwood has aimed to make trust-building and relationships an essential part of the project. Multiple rounds of transparent and inclusive public engagement achieved this goal.

Hazelwood Riverfront's unique nature will draw a broad range of future users and stakeholders. At the project's outset, the participation process was carefully designed with a multi-layer approach through various means, methods, and formats to ensure comprehensive feedback within the everchanging COVID time. The process centered on three major engagement events. Each round included a combination of activities and efforts to achieve a specific goal.

The first round consisted of formal surveys and site familiarization to catch people's attention and to cast a broad net for ideas. Opinions about preferred activities supported the development of the preliminary concepts.

The Design Workshop capped the second round by successfully engaging people to provide feedback about the preliminary concepts. Via concept layouts, people specified their inclinations toward the character of each space (natural, tranquil, active, or social-oriented). That information supported the fine-tuning of the master plan's design details in the master plan.

The third round intended to build ongoing consensus for the final master plan. That plan incorporates people's feedback. The neighborhood outreach and the project portal efforts continued to operate from beginning to end, both provided the latest updates to the public in real-time.

CONTINUOUS ACTIVITIES

NEIGHBORHOOD OUTREACH

- People attended and presented at multiple community meetings and gatherings via Hazelwood Initiative, Greater Hazelwood Community Collaborative, Art Excursions Unlimited, Hazelwood Local, and Community Kitchen. Even when not offering a presentation, participants enabled relationship building and information sharing about neighborhood happenings.
- Project updates and meeting invitations were shared via *The Homepage* (a local monthly newspaper), social media, event flyers, media coverage, and notices shared with local non-profits, the faith community, and others.

DESIGN WORKSHOP STORYTELLING IN THE NEIGHBORHOOD



PROJECT PORTAL

- A comprehensive project banner, posted along the Hazelwood Trail adjacent to the site, kept interested parties informed. One section of the banner, which included a web link as well as a QR code, updated residents about public meetings and how to learn about meeting outcomes.

THE FIRST ROUND

SITE FAMILIARIZATION

- Currently the site is not accessible to the public because of the unprotected cliff edge and barriers of legal agreement regarding access; but a virtual site tour, developed with an informal survey, has enabled people to learn about 13 unique points of interest. Despite the pandemic closedown, more than 1,800 visitors viewed the tour by April 2021.

- Advisory Committee members toured the site. Some of them (including neighborhood residents) had never been to the Riverfront before the tour.

FORMAL SURVEYS

- Formal surveys were developed in various formats, including a combination of online and paper-based forms. The latter, designed to reach senior residents lacking access to the internet, were distributed at a senior day event, via a YMCA food distribution, and at the October workshop. Content-wise, a Neighborhood survey, a City-wide survey, and an age-appropriate survey for Propel Hazelwood's 6th- to 8th-grade students at Propel Hazelwood were developed. The City-wide survey focused on asking general preferences about desirable site uses, while the Neighborhood survey provided a few more questions regarding open space needs for local residents. The Student survey was shortened and simplified for educational purposes.

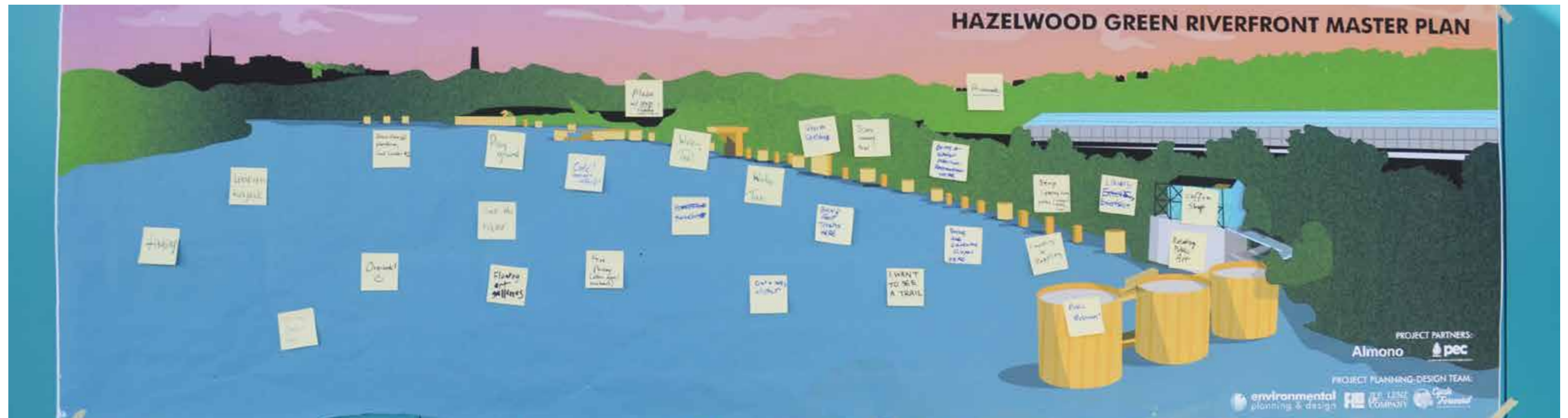
- The breakdown of survey responses was (with numbers rounded):
 - City-wide (digital): 180
 - Neighborhood (digital): 130
 - Neighborhood paper (print, primarily seniors): 30
 - Propel students: 70

THE SECOND ROUND

DESIGN WORKSHOP AND PUBLIC MEETING

- A three-day design workshop (with COVID-19 precautions taken) took place Oct. 15-17, 2020. Participants attended various components, including a community social, public preview of design concepts, a public open house, and a concluding public meeting. Each day's design iterations and presentations built from the previous day's

- feedback and survey input received. The concluding presentation, live-streamed via Facebook to reach those not comfortable with an in-person meeting, was viewed 168 times. An interim report was produced following the workshop and is available online.
- A pop-up storytelling event took place in conjunction with the design workshop. Working with the Greater Hazelwood Historical Society, residents were invited to share their Monongahela River stories and to have them recorded.



DESIGN WORKSHOP COMMUNITY COMMENTS

THE THIRD ROUND

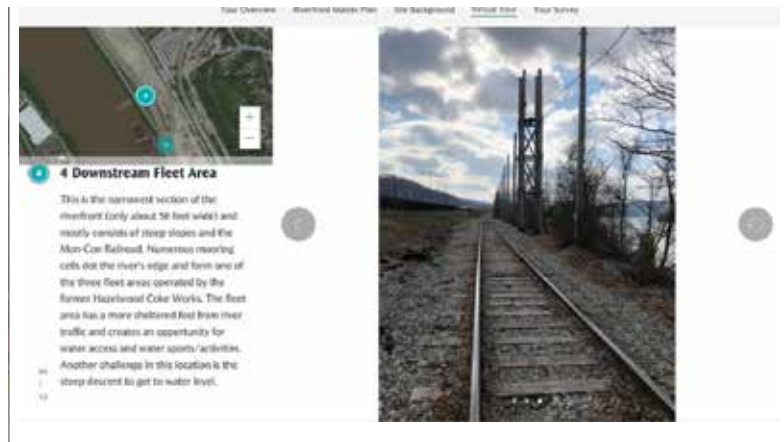
A VIRTUAL PUBLIC MEETING

- Final design concepts were presented, and feedback was collected. The Master Plan effort concluded with an early spring virtual public meeting. Eighty individuals registered for the meeting; more than 90 attended.

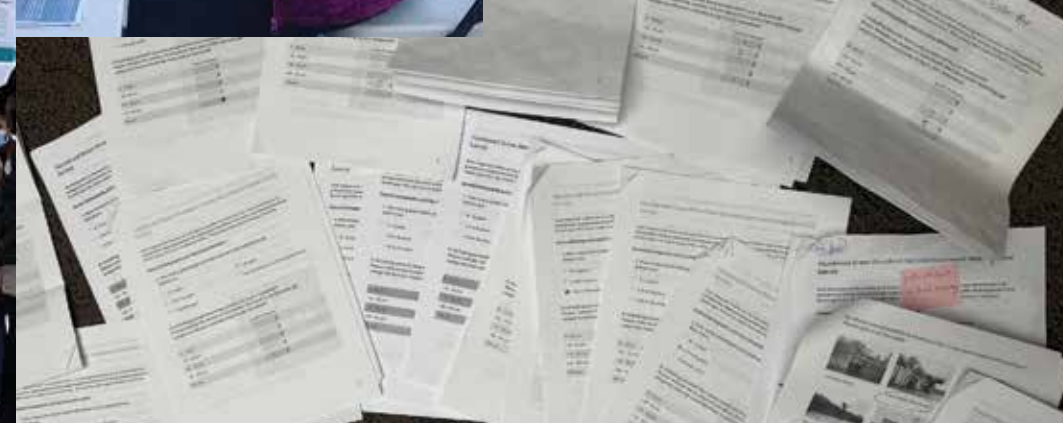
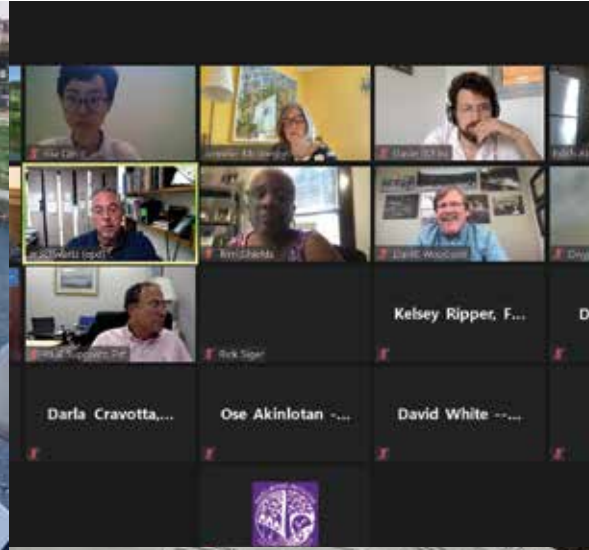
- A project video was produced before the April 7 public meeting to generate enthusiasm and to inform people about the project. The video was shared on social media was viewed 109 times.

In addition, other outreach methods included:

- Nature photos from the site were submitted to The Homepage throughout Spring 2021 to depict the current trail's and Riverfront's natural beauty.
- Art Excursions Unlimited hosted an intimate discussion about the River's tie to the public art recommendation of the project. Topics ranged from art possibilities to some personal and shared community pain points related to the River and industrial uses.
- Project announcements were made prior to the October workshop and April public meeting. Both garnered significant regional media coverage.
- Updates were made to the Hazelwood Green website, www.hazelwoodgreen.com/Riverfront.



Online Hazelwood Riverfront Master Plan engagement opportunities included a project webpage, a virtual site tour (the project's most visited engagement tool), multiple online surveys, re-occurring social media postings, blog posts through the Pennsylvania Environmental Council, and multi-day live-streamed workshops. Non-tech-oriented communication avenues included a paper-based questionnaire distributed via the local food bank/YMCA cooperative, a kiosk erected in the center of the neighborhood, a multi-day in-person workshop, a radio interview feature story via the local public radio affiliate, a Pittsburgh Business Times newspaper article, a Pittsburgh Post-Gazette article, an in-person storytelling event, and the cherry on top: frequent, consistently scheduled phone conversations with a wide range of neighborhood, faith-based, and school groups to arrange distribution and collection of paper-based materials.



KEY TAKEAWAYS

The **survey results** indicated, among other findings, that people are primarily interested in opportunities for interaction with nature, music and art appreciation, tasting/dining, and relaxing/socializing on the site. The most desired activities include biking, walking/jogging, kayaking/canoeing, and local events. Seniors' favorite activities are events. A café, restrooms, and overlooks were the most named desired amenities. The top concerns cited were related to safety (railroad crossings, lighting, visibility) and accessibility.

Feedback about **incorporating art** into future site improvements was received at the workshop and in other meetings. As a result, a group of public art consultants was brought on board to make recommendations.

The **April public meeting** attendees' comments were positively received. People are enthusiastic about the project and eager for implementation to begin.

Top PASSIVE activity choices:
 Music/Art Appreciation
 Nature Interaction
 Relaxing/Socializing
 Tasting/Dining

Top ACTIVE activity choices:
 Biking
 Walking/Jogging
 Kayaking/Canoeing
 Local Events

Top DESIRABLE AMENITY choices:
 Cafe
 Overlooks
 Plaza
 Restroom

Top CONCERNS:
 Safety at railroad crossings
 Adequate lighting
 Visibility from other public spaces
 Accessibility for people with limited mobility

	CITY 123	NEIGHBORHOOD 84	SENIOR 24	YOUTH 61
ANSWER CHOICES	RESPONSES	RESPONSES	RESPONSES	RESPONSES
Craft and Games	4.07% 5	7.06% 6	20.83% 5	40.98% 25
Casual Play	17.89% 22	22.35% 19	16.67% 4	26.23% 16
Music/Art Appreciation	52.03% 64	52.94% 45	58.33% 14	21.31% 13
Nature Interaction	69.11% 85	61.18% 52	20.83% 5	29.51% 18
Photography	13.01% 16	5.88% 5	16.67% 4	18.03% 11
Relaxing / Socializing	38.21% 47	48.24% 41	62.50% 15	44.26% 27
Sight Seeing	20.33% 25	16.47% 14	20.83% 5	9.84% 6
Wellness/Contemplation	15.45% 19	11.76% 10	4.17% 1	8.20% 5
Barbecuing and Gathering	17.07% 21	20.00% 17	45.83% 11	27.87% 17
Tasting/Dining	43.09% 53	42.35% 36	29.17% 7	49.18% 30

SURVEY RESULT: PEOPLE'S CHOICES OF TOP PASSIVE ACTIVITIES ON SITE

	CITY 123	NEIGHBORHOOD 84	SENIOR 24	YOUTH 61
ANSWER CHOICES	RESPONSES	RESPONSES	RESPONSES	RESPONSES
Biking	72.36% 89	60.00% 51	33.33% 8	49.18% 30
Walking/Jogging	67.48% 83	75.29% 64	45.83% 11	22.95% 14
Climbing	11.38% 14	11.76% 10	0.00% 0	18.03% 11
Extreme Sports	1.63% 2	1.18% 1	4.17% 1	37.70% 23
Fitness	13.01% 16	10.59% 9	25.00% 6	26.23% 16
Kayaking / Canoeing	49.59% 61	49.41% 42	25.00% 6	14.75% 9
Local Events	43.09% 53	44.71% 38	83.33% 20	26.23% 16
Swimming	10.57% 13	12.94% 11	33.33% 8	50.82% 31
Water Skiing / Wakeboarding	2.44% 3	3.53% 3	0.00% 0	14.75% 9
Winter Sports	12.20% 15	11.76% 10	12.50% 3	24.59% 15

SURVEY RESULT: PEOPLE'S CHOICES OF TOP ACTIVE ACTIVITIES ON SITE

	CITY 123	NEIGHBORHOOD 84	SENIOR 24	YOUTH 61
ANSWER CHOICES	RESPONSES	RESPONSES	RESPONSES	RESPONSES
Cafe	51.22% 63	57.65% 49	58.33% 14	65.57% 40
Play Area	18.70% 23	36.47% 31	41.67% 10	45.90% 28
Overlooks	40.65% 50	31.76% 27	25.00% 6	37.70% 23
Pavilion	13.01% 16	42.35% 36	16.67% 4	37.70% 23
Plaza	24.39% 30	18.82% 16	29.17% 7	14.75% 9
Restroom	57.72% 71	51.76% 44	54.17% 13	31.15% 19
Art	25.20% 31	14.12% 12	37.50% 9	22.95% 14
Parking	19.51% 24	9.41% 8	0.00% 0	6.56% 4
Interpretive Signage	16.26% 20	8.24% 7	0.00% 0	3.28% 2
Industrial Artifacts	26.83% 33	18.82% 16	4.17% 1	11.48% 7

SURVEY RESULT: PEOPLE'S CHOICES OF DESIRABLE AMENITIES ON SITE

Which **INDUSTRIAL ARTIFACTS** would you like to see repurposed on the riverfront?
 Please select all that apply.

SURVEY RESULT PEOPLE'S PREFERENCE OF EXISTING INDUSTRIAL ARTIFACTS

STAKEHOLDER INTERVIEWS

ORGANIZATIONS INTERVIEWED

Neighborhood Perspectives	Government/Institutions
Hazelwood Initiative	Allegheny County
Greater Hazelwood Community Collaborative	Alcosan
Center of Life	Carnegie Mellon University
Four Mile Run/Lower Greenfield	City of Pittsburgh Department of City Planning (neighborhood, Riverfront, and environmental planners)
Oakland Planning & Development Corporation	City-County Task Force on Disabilities (ADA coordinator)
	City of Pittsburgh Office of Equity
Advocacy/Outdoor Recreation/Conservation	Councilman Corey O'Connor
Bike Pittsburgh	Innovate PGH
Friends of the Riverfront	Pennsylvania Department of Conservation and Natural Resources
Healthy Ride	Pennsylvania Department of Environmental Planning
Pittsburgh Parks Conservancy	Pittsburgh Water and Sewer Authority
Riverlife	University of Pittsburgh
Venture Outdoors	Urban Redevelopment Authority of Pittsburgh

HIGHLIGHTS

Key themes that emerged during the stakeholder interviews included:

- Safety is paramount.
- Nearly all stakeholders noted the importance of diversity, equity, inclusion, and accessibility.
- Addressing connectivity challenges and finding ways to integrate the site with the rest of the neighborhood are necessary to success. Said one stakeholder: "It would be a bad outcome if there were lots of nice ways to get to the River from CMU's building but no easy access from the neighborhood."
- Activating the Riverfront (both the land and water) is critical for safety and for creating a sense of ownership among residents. Programming the Riverfront "would not [sic] make it such a waste to have so much water and no access to it."

- Connection challenges and constraints exist. The Riverfront's location is beyond what many people are willing to walk (from residential areas), and the trail is not well connected to the city-wide trail network.
- Potential exists for the Hazelwood Riverfront to offer a public space that is different from the currently available Riverfront spaces in the City. This improved Riverfront "could create a sense of public ownership that doesn't exist in other spaces." While Riverfront improvements present the local neighborhood with the most to gain (or to lose), the Hazelwood Riverfront is of City-wide importance.

While a variety of organizations and individuals were engaged, there are still more perspectives that existed. As one stakeholder noted, it is important to acknowledge that "the people we engage with don't speak for everyone." Learning from more than two dozen stakeholder organizations and leading a robust public participation process aimed to mitigate this challenge. The team will continue to engage the public during the implementation phase.

STAKEHOLDERS' COMMENTS

"There is a clamoring desire for Riverfront access in Hazelwood."

"In a city of three rivers, we need more access to the rivers."

"People are willing to walk longer if the walk is a pleasant one and is safe."

"Direct connectivity, programming, information sharing, and education lead to feelings of connection more than amenities alone."

Hazelwood is "a Riverfront community, but you can't get to the river."

"Connection to big green spaces doesn't happen really easily in Pittsburgh."

"Make people feel included."

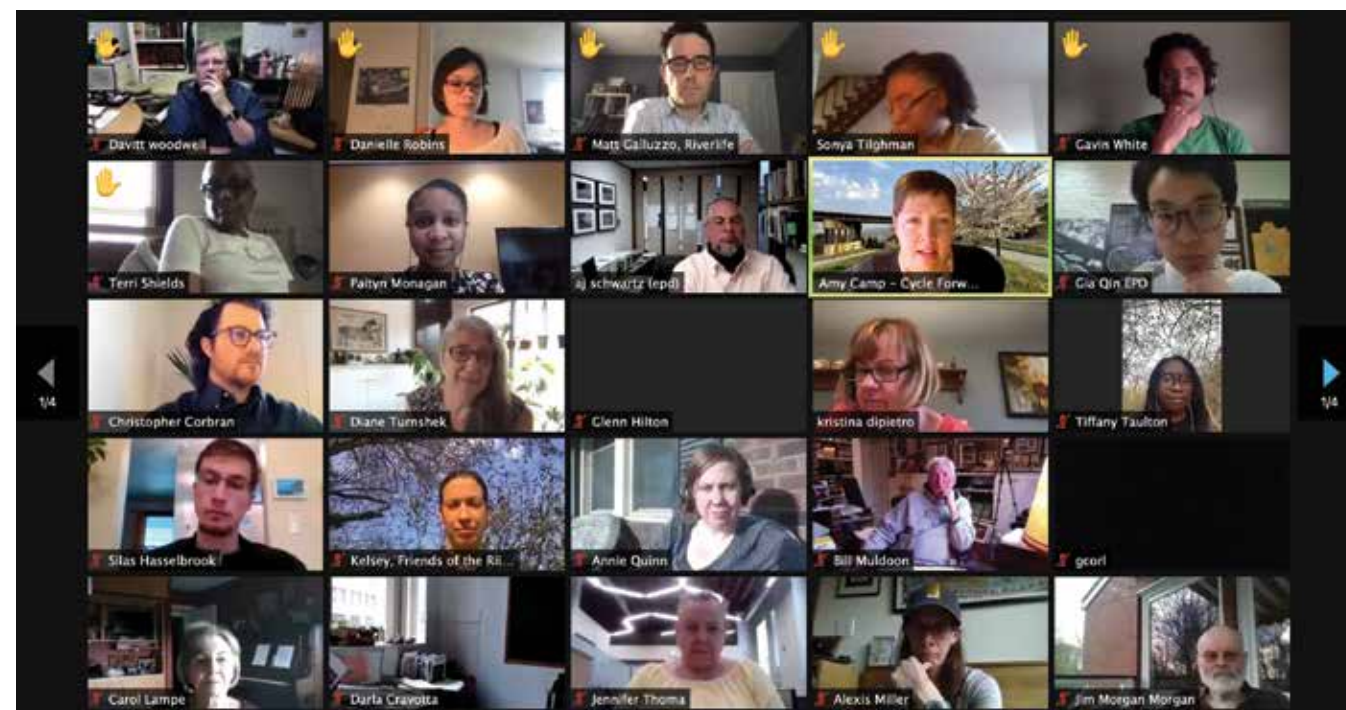
CONCLUSION

Feedback informs the Master Plan design and the recommended design solution at every project stage. Through the diverse formats of the engagement process, certain design elements that received enthusiastic feedback included:

- Art installations
- Art and nature discovery features
- A special event space at the S-Curve
- Aerial pedestrian connectors from the Riverfront to the Plaza
- Water access
- A Hazelwood Avenue connection
- Community event spaces
- A multi-use linear plaza
- Floating walkways

The public was excited about a floating pool idea, but it was reconceptualized as a floating play space because of feasibility, cost, and operational concerns. The idea of a marina received strong opposition from the Greater Hazelwood residents while other neighborhoods supported it.

The community preferences, based upon synthesizing site feasibility and public feedback, translate into additional design features in the following Part. They take spatial requirements, ecological functionality, the practicality of structural/existing conditions as well as physical solutions into consideration. For example, the scheme's conceptualized man-made archipelagos (floating islands) create a protected, safe harbor for water activities and improve the River's edge as well as fish habitat ecology.



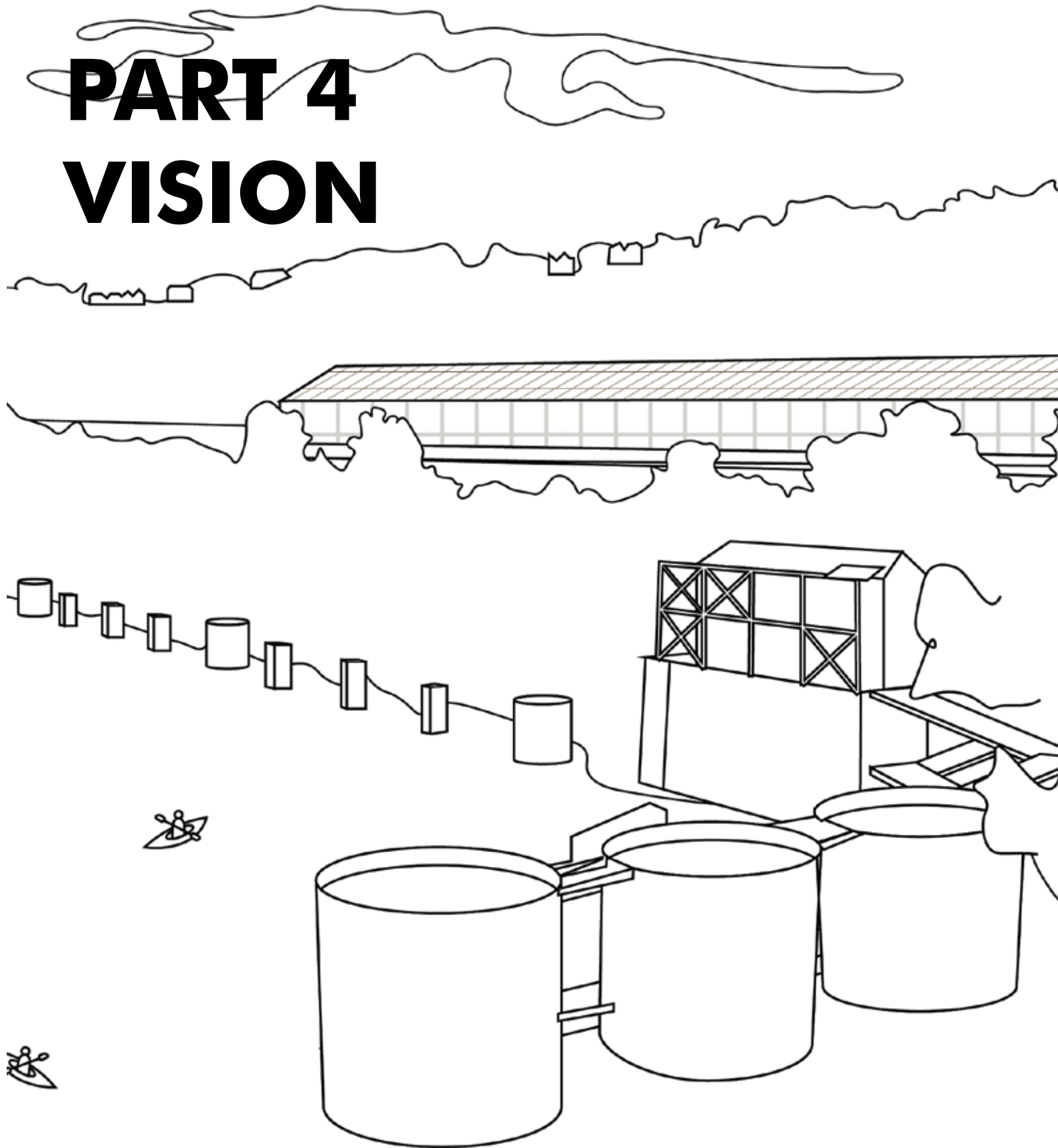
VIRTUAL APRIL 7, 2022 PUBLIC MEETING



THE PLANNING-DESIGN TEAM WORKING ON THE SITE



PART 4 VISION



OVERVIEW

This Part reveals the Riverfront’s detailed design. Various design elements and proposed amenities were evaluated based upon public engagement, stakeholder interviews, and Advisory Committee feedback (see Part 3). This Part will also cover the evolution of concept scheme iterations, scheme comparisons, and integration into the Master Site Development Plan (MSDP).

The Master Plan suggests a series of universally accessible site features. They include the kinetic plaza, linear plaza, steel and glass plaza, a

gathering place, a river stage, a wilds adventure trail with fitness equipment and ecological restoration zones, floating walkways on water, overlooks, fishing piers, kayak launches, and a string of floating islands to protect the riverbank. An extension of Hazelwood Avenue houses a series of civic uses, such as boathouses, recreational equipment rental areas, community spaces, and training spaces.



3D RIVERFRONT VISION AT THE GATHERING PLACE

CONCEPTUAL SCHEMES AND INTEGRATION

The Master Plan’s proposed features evolved through a meticulous process. After engaging several groups, community needs became influential in creating two distinct concept schemes that present the site’s potential amenities. Schemes reflect the lens of public preference, site feasibility, spatial standards, capital investment, and maintenance challenges. During the second round, the public, the Advisory Committee, and the Project Leadership Team offered their feedback for each scheme. As a result, an integrated design

scheme emerged, by balancing feedback, site constraints, and operating reality. This integrated scheme works as the basis for the MSDP draft. All schemes assume that the Hazelwood Avenue access will be restored and extended to the Riverfront. The current stormwater retention area would move to underground systems creating on-surface public space. These assumptions stem from stakeholder interview discussion with the City of Pittsburgh Planning Department.

COMMUNITY NEEDS

More than 20 stakeholder interviews and more than 400 public surveys identify desired activities, amenities and concerns. In developing the initial concepts, the stakeholders and the public expressed definitive opinions about the:

- Need for community gathering spaces
- Desire for more trails and connections to the neighborhood
- Water access and enjoyment
- Opportunities for art, nature, and history appreciation
- Activities and places that encourage food tasting and dining

- In addition, a series of issues or concerns were also expressed/indicated. These include:
- Safety at the railroad crossings
- Safety on the water
- Visibility and security during the day and night
- Speed of traffic on trails
- Accessibility for people with limited mobility



LOCAL RESIDENT AND ADVISORY COMMITTEE MEMBER REVIEWING AND DISCUSSING THE CONCEPT SCHEMES



COMMUNITY COMMENTS

SCHEME 1

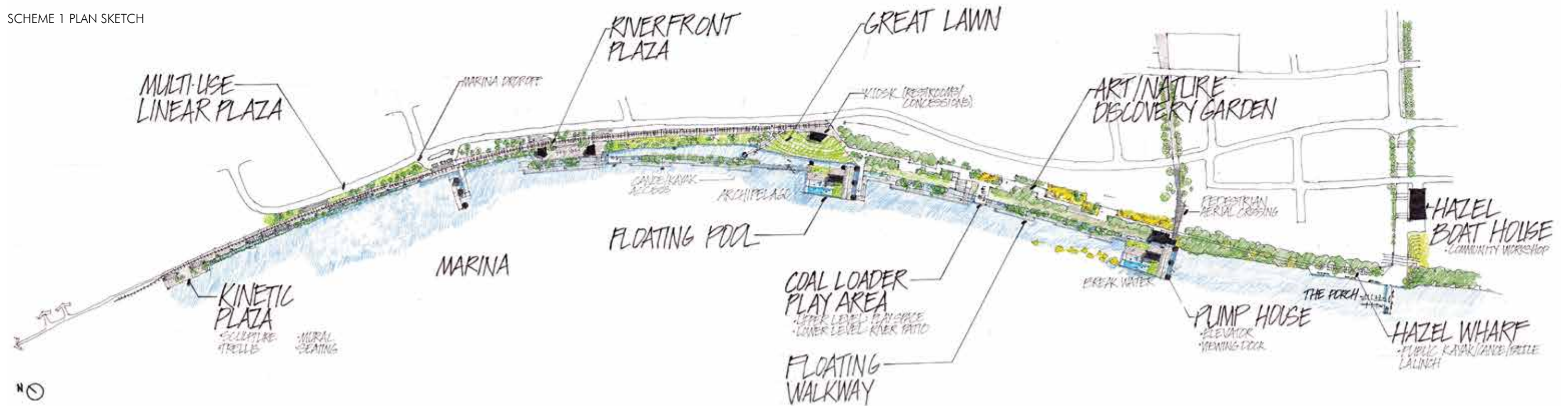
This collection of design elements emphasizes the lateral connectivity on land. It negotiates the narrower sections of the site by using a multi-use linear plaza promenade strategy. The purpose of this scheme focuses upon resolving the connectivity challenges on land. From the downstream area of the site to the S-Curve, with a wide paved corridor, the linear plaza integrates the existing railroad, bike path, and pedestrian walkway into a single space. This promenade envisions having a “porous” interface with Blair Street and allowing park users to access the street via continuously accessible connections or a series of steps and ramps. From the S-Curve to the restored Hazelwood Avenue extension, two pathways – one on land and one floating on water – link the site. The floating walkway would host a series of islands in between to allow regenerative ecology and to provide a unique aquatic experience. The on-land pathway transforms the heavily

paved site into a series of art and natural discovery gardens with seating and sightseeing space. Finally, this scheme has several key programming elements along its spine. Those include: a sloping lawn at the S-Curve with a floating pool, a renovated Pump House with an outdoor viewing deck, an aerial pedestrian crossing from the Pump House area through parcel 17 and 29 connecting to the proposed Hazelwood Plaza, and a multi-purpose Boat House with community event spaces at the restored Hazelwood Avenue extension.



SCHEME 1 CONNECTION DIAGRAM

SCHEME 1 PLAN SKETCH



SCHEME 2

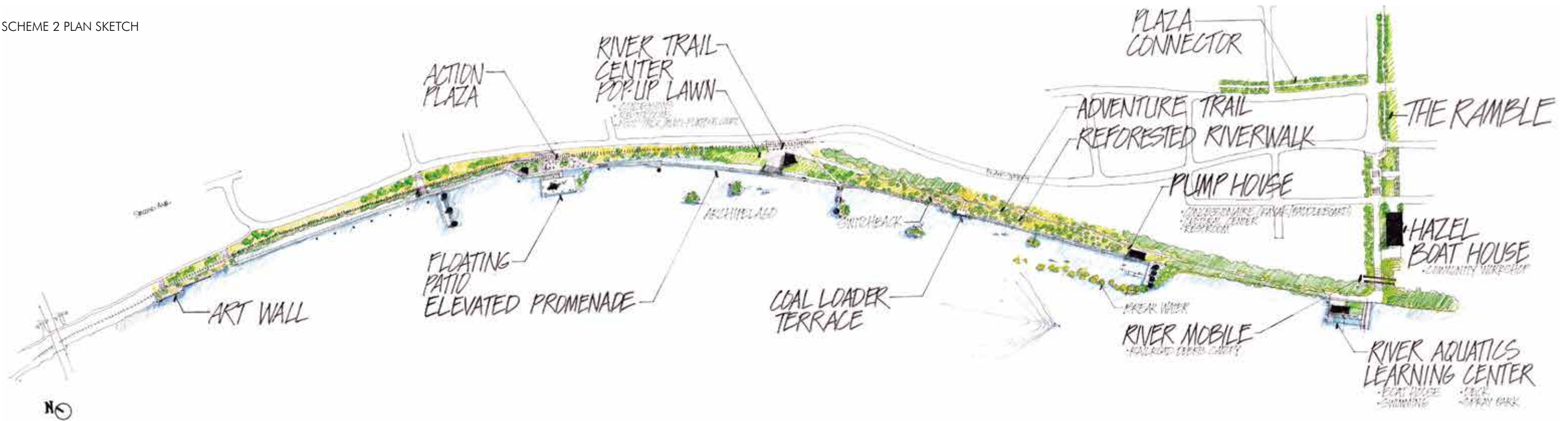
This scheme explores a different connecting solution (an elevated walkway) to deal with the extreme width limitation at the downstream segment and to continue having the Mon-Con railroad in operation. This scheme makes a bold move in the upper stream segment to restore the existing fly ash slope for long-term ecological mitigation and continuing the elevated walkway strategy to re-grade the fly ash slope within a restricted space. Above the existing River piers and dolphins, an elevated walkway is proposed to be a "Promenade on Water." This approach ensures minimum disturbance of the current railroad. The elevated walkway connects back to the site at critical points, where wide enough, to create quality public space. Site access to

Blair Street occurs at nodes along the site and throughout other planned road extensions. The primary nodes are the Coal Loader #2 Plaza, the S-Curve, and the restored Hazelwood Avenue extension. The rehabilitated existing fly ash slope – from the S-Curve to the Pump House – allows for a restorative planting area. Similar to the first design, this scheme utilizes amenities that anchor the site and integrate it with the community. Some critical site amenities are a river aquatics learning center, a boat house with community event space, repurposed Pump House with educational uses, a river trail center with comfort stations, and an archipelago of floating islands for plant and bird habitat.



SCHEME 2 CONNECTION DIAGRAM

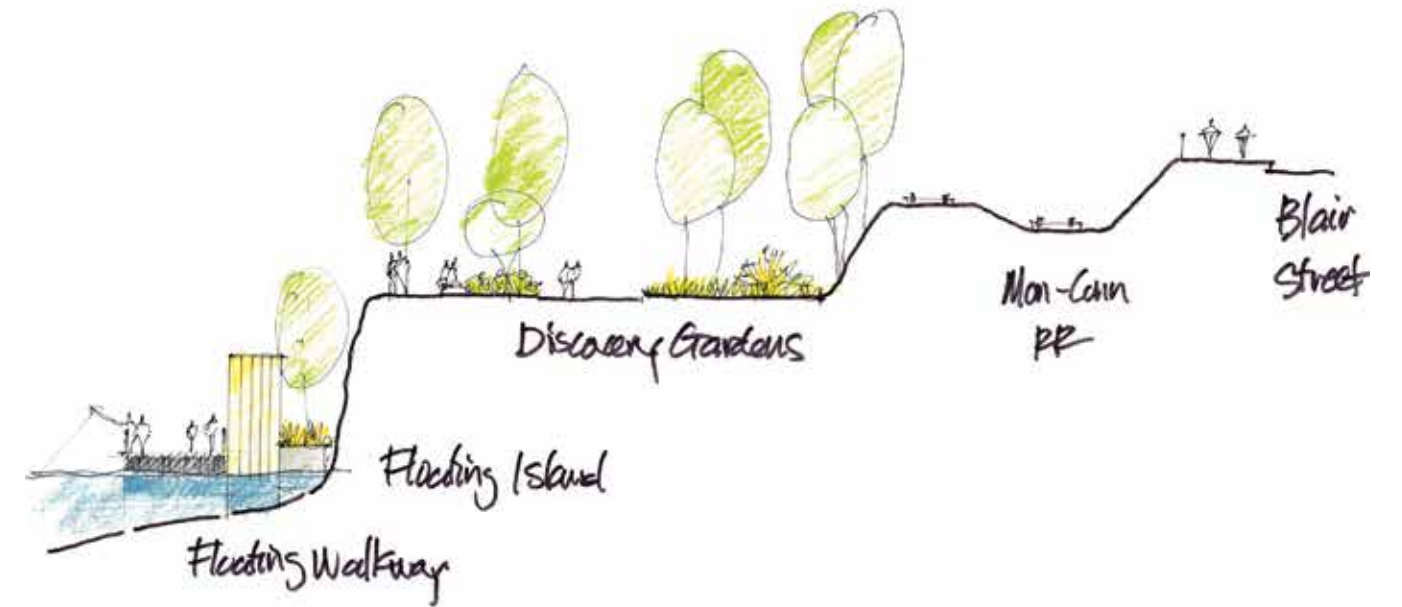
SCHEME 2 PLAN SKETCH



INTEGRATED SCHEME

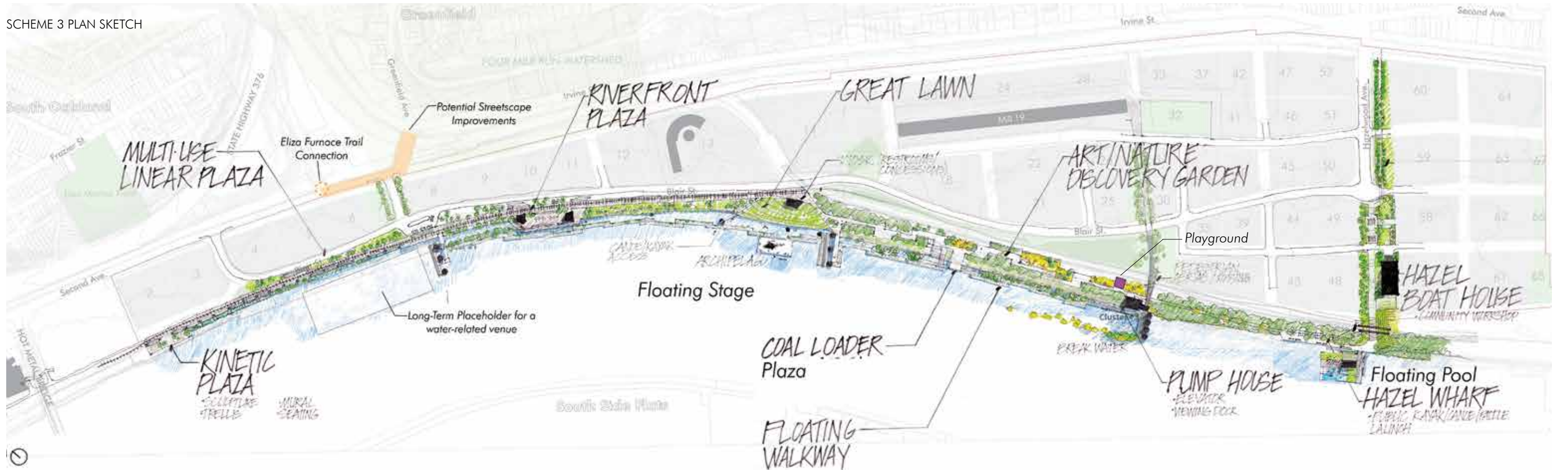
The general public, Advisory Committee, and the Project Leadership Team shared their feedback about the two concept schemes. Then the two concept schemes were adapted, refined, and integrated into a more cohesive representative scheme. In the integrated scheme, the primary connection between the Hot Metal Bridge and Hazelwood Avenue extension is established on land, with a multi-use linear plaza along the Mon-Con railroad segment. The primary nodes are the Kinetic Plaza (on Water Discharge Structure), Coal Loader #2 Plaza, the S-Curve, the Pump House, and the restored

Hazelwood Avenue extension as the Hazelwood Wharf. Both schemes show the Hazelwood Avenue extension functioning as a graciously sloping promenade for civic use. A floating walkway system is proposed between the Pump House (Cluster #3) and Cluster #2 with floating islands anchored on pilings; the walkway on the water also connects Cluster #2 and Cluster #1 with a water stage area for more extensive gathering opportunities.



SCHEME 3: CONCEPTUAL SECTION OF ART/NATURE DISCOVERY GARDEN/TRAIL AND FLOATING WALKWAY

SCHEME 3 PLAN SKETCH



MASTER SITE DEVELOPMENT PLAN

The Integrated Concept Scheme developed into the Master Site Development Plan. Detailed design for new and renovated structures, landscape, site furniture, green infrastructure, art, and more were further examined. The quality, or character, of each Riverfront area was carefully sculpted with focus upon creating a place that can support neighborhood activities and provide unique experiences for all users.

DEVELOPMENT PROGRAMS AND SPACE TYPOLOGIES

With design features identified and design schemes consolidated, the development programs were explored with more details and specifications. In planning terms, a “program” indicates the spaces and infrastructure supporting certain activities. Project goals, established at the beginning of the project, are translated into five types of space (Space Typology). In other words, the spaces are designed to fulfill the goals. They are:

COMMON GROUND
INCLUSIVE
CONNECT
CULTURAL ACCESS
TRANSFORM
MENDING WELLNESS
WATER
COHABITATE
AUTHENTIC
HISTORICAL
CELEBRATE

CO-HABITAT SPACES

These are the type of spaces that accommodate energy generation and ecological restoration while actively being used by people.

RE-PURPOSED SPACES

It re-invents the industrial artifacts for civic and educational purposes.

SOCIAL SPACES

It is where people meet, hang out, gather, and get to know new friends.

MOTION SPACES

It is space that utilizes the existing site features, such as a steep slope, or a jogging trail to accommodate fitness demands with exercise amenities.

ME SPACES

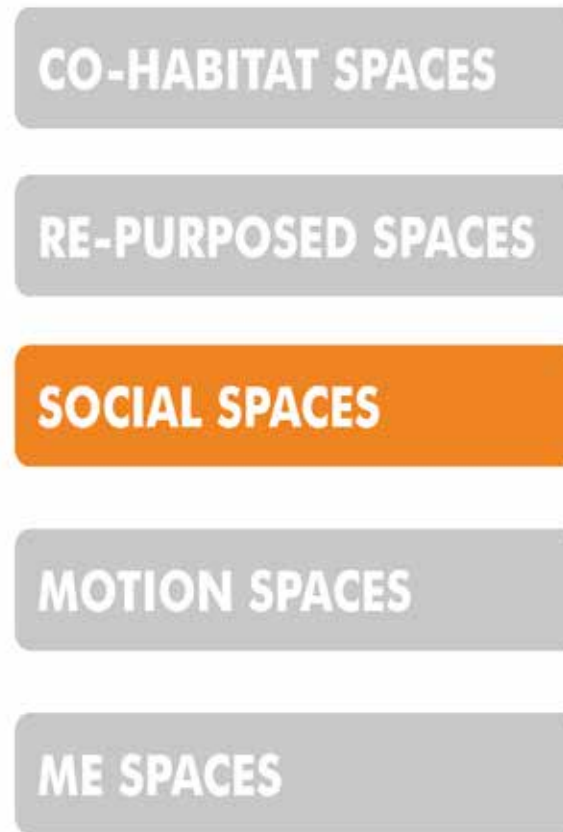
It is the contemplating nook to simply enjoy the quietness and to feel the River breeze.

In the image below, the social space programs are listed and color-coded with their space typology. Some of the programs belong to more than one typology (e.g., tidal powered mural artwork on the water discharge structure (Gipsy Raded) is categorized as co-habiting space because, in the same space, art and energy generation co-exist.

This is also a re-purposed space, which transforms old industrial structures to a plaza.



PROJECT GOALS TO TYPES OF SPACES



Tidal powered mural art	Clusters with overlook and ADA vertical connection	Cool Loader #2 glass viewing deck
Interactive artwork	Future water related venue	Floating walkway
Steep slope planting scheme	Seating steps with shade tree planting	Cool Loader #2 nest swings
Rain garden	Cool Loader #1 splash fountain (ADA) plaza	Fitness-rail/textured path
Pollinator garden	Mooring and dolphins luminating public art	Fitness-challenging/stepping trail
Wayfinding/Interpretive signage	River hammock on floating walkway	Fitness-structural shapes training field
Bike racks	Viewing deck (seating, fishing & prep)	Fitness-ping pong tables
Bike station	Floating islands	Fitness-informal semi squash walls
Solar kiosk (info, charging)	Event lawn	Fitness-play bumps
Horizon zip-line	Concession with solar panel and rain harvesting	Fitness-wavy/bouncy fields
River swings	Pumphouse with solar panel and rain harvesting	Pumphouse climbing wall
Platform seating	Boathouse with solar panel and rain harvesting	On-grade boardwalk with infrastructure
Railroad poles re-purposed public art	Elevated stage	Eco restoration area
Solar panel shading structure	Kayak launch	Sponge street
Pocket planting along rail	Amphitheater	Restroom with grey water system
Vehicular drop-off	Stone pier platforms	Mon-Conn promenade

CHARACTER ZONES OVERVIEW

In Part 2, the riverfront edge is divided into four “rooms” based on their spatial quality from both land and water. In Part 4, the rooms are further developed as four distinct character zones, which play different roles in the overall Riverfront Master Plan and accommodate various recreation activities. They are:

THE PASSAGE

Room 1, with narrow land width and the active Mon-Con railroad, it is a pass-through type of space. On the water, this area is overlapped with the river navigation channel, which has heavy river traffic.

THE LOUNGE

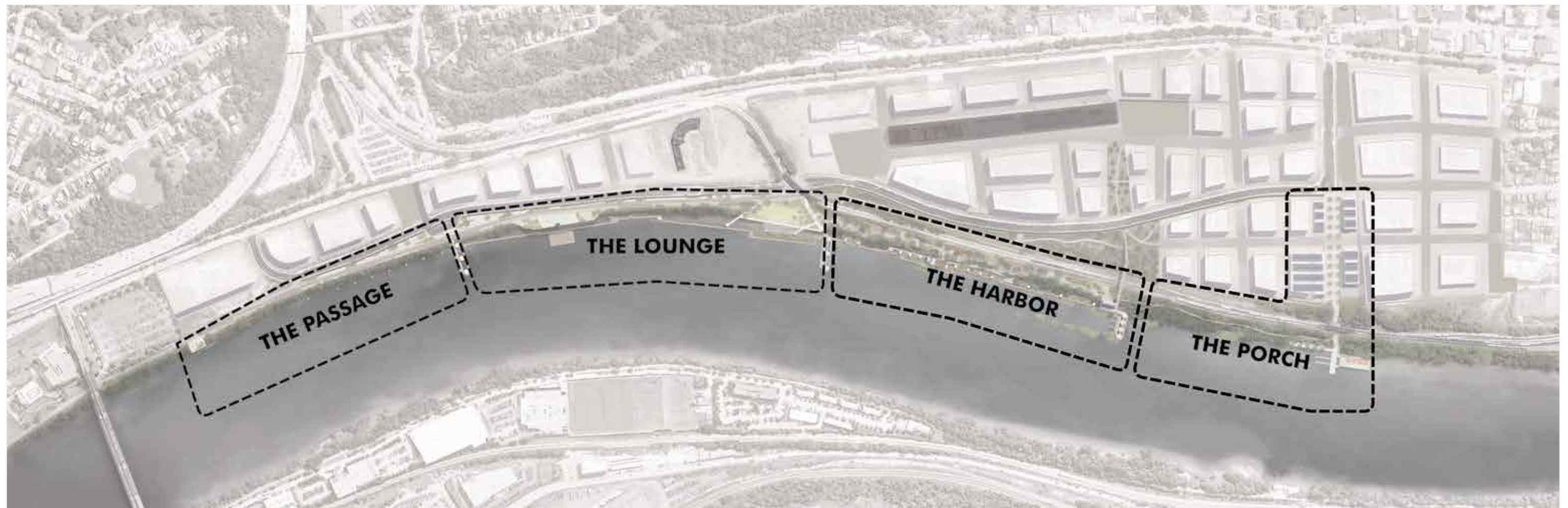
Room 2 is a rare segment with adequate width for sizeable programs. It is also the most visible area while traveling on Blair Street. Naturally, it lends itself as the “lounge” of the entire Riverfront.

THE HARBOR

Room 3 is the Riverfront section that is away from the navigation channel. The river current is also buffered by the array of piers and moorings. This is an ideal area for beginner paddlers. On land, it is segregated from Blair Street by elevated railroads. Nature has started to reclaim the paved coke work yard.

THE PORCH

Room 4, the part closest to the Greater Hazelwood neighborhood, is the community’s front porch. To offer residents a range of recreational opportunities, water activities related to civic amenities are planned.



CHARACTER ZONE PLAN

CHARACTER ZONES DESIGN

THE PASSAGE

As introduced in the aforementioned Character Zones' Overview, this is the extremely narrow section with limited night-time railroad use and with an immediate cliff side limiting water access. A multi-modal promenade Linear Plaza, which accommodates pedestrians and cyclists during the daytime but which has railroad operation after midnight, is proposed. The edge at Blair Street is designed with seat steps, ADA ramps, shade tree planters, pollinator gardens, and underground stormwater containers. These amenities will create an inviting edge to Blair Street, the future (people) artery of the area.



THE LOUNGE

As the Riverfront's widest section, the Lounge will accommodate large gatherings and more social activities. The existing Mooring Clusters #1 and #2 provide the foundation for a vertical connection between land and water. A Gathering Place on the lawn is proposed here with a green roof pavilion and a river stage to provide an unparalleled view of the River and Downtown Pittsburgh.

The current stormwater management area will be renovated by using underground cisterns. On the water, floating walkways and floating islands will meander through the existing dolphins and piers and be connected by universally accessible ramps anchored to the mooring clusters. If there is ever the opportunity, Room 2 is conducive to include a transient (non-marina) water facility.







THE HARBOR

This is the space for beginner paddlers, chimney swifts, and pollinator gardens. The Wilds Adventure Trail, proposed along this segment, will feature discovery moments with fitness stations, cardio steps, structural steel monkey bars, rain gardens, birdhouses, and all kinds of “accidental wilderness.” On the water, the floating walkway is anchored on an array of piers and dolphins. Clusters of floating islands will be designed to create a breakwater, to protect riverbank erosion, to purify CSO flows, and to provide wildlife habitat.

While having a mile of length, the Harbor’s narrow width provides few access points to get down to the water level. As pressure exists for a variety of functions and uses, the concept of multi-use is magnified in this portion. Anytime there are multiple uses in the park directly along the River, design can deal with some of it, but management will appear at the forefront. River activities both on land and water will need to learn to co-exist.



THE PORCH

For the Greater Hazelwood neighborhood, this area is their back porch to the River. At the end of the Hazelwood Avenue extension is the Hazelwood Wharf, whose low elevation is the most accessible spot near the water. Here on repurposed barges, a floating splash pad/floating ball courts/floating farm (as a complement to other community urban agriculture efforts), a kayak launch, and fishing piers are designed with strong support from the local community.



SITE DESIGN BY AREA

DOWNSTREAM SECTION LINEAR PLAZA

The Linear Plaza is a Riverfront promenade along the Riverfront that can visually bring people closer to the water. The fence along Blair Street would be eliminated, and seating steps with ADA ramps would be designed to join the two spaces instead of separating them. Fifty feet in length, the new Plaza can stretch from Blair Street to

Second Avenue as it introduces accidental wilderness as well as seating areas and restores the area to people. There are solarpanels, sculptural wind turbines, and landscaped seating areas. Rain gardens and water retention basins can be underneath them. The railroad on-site is designed like a streetcar but used only rarely and at night so the pavement's texture and style should change to provide safety enhancements along the tracks and to encourage seeing them. Accidental wilderness is along the future Plaza's edge and will prevent people from being close to the drop-off.



EXPLANATION



A **Multi-Use Linear Plaza** is a narrow but flexible paved public space that could potentially allow for shared space between low-volume rail traffic and pedestrians. Additional analysis is underway, but this design solution could provide a unique vision for this area of the park and is similar to precedents in other parts of the United States and abroad where train/trolley use and pedestrian use coexist in the same space. The challenges with this solution are pedestrian safety and the signalization for the train, whether through lighting or other means. The benefit of this design solution is more usable space.



A **Floating Stage** can extend the ground plane into the River. Accessibility design along with anchoring/mooring to something durable will shape the scale and size of this year-round installation. A surface water stage highlights the water plane's advantages without deterring or reducing stormwater capacity. In maintaining viability, a management structure will program the space so that it is distinguished from other stage venues along the Three Rivers.

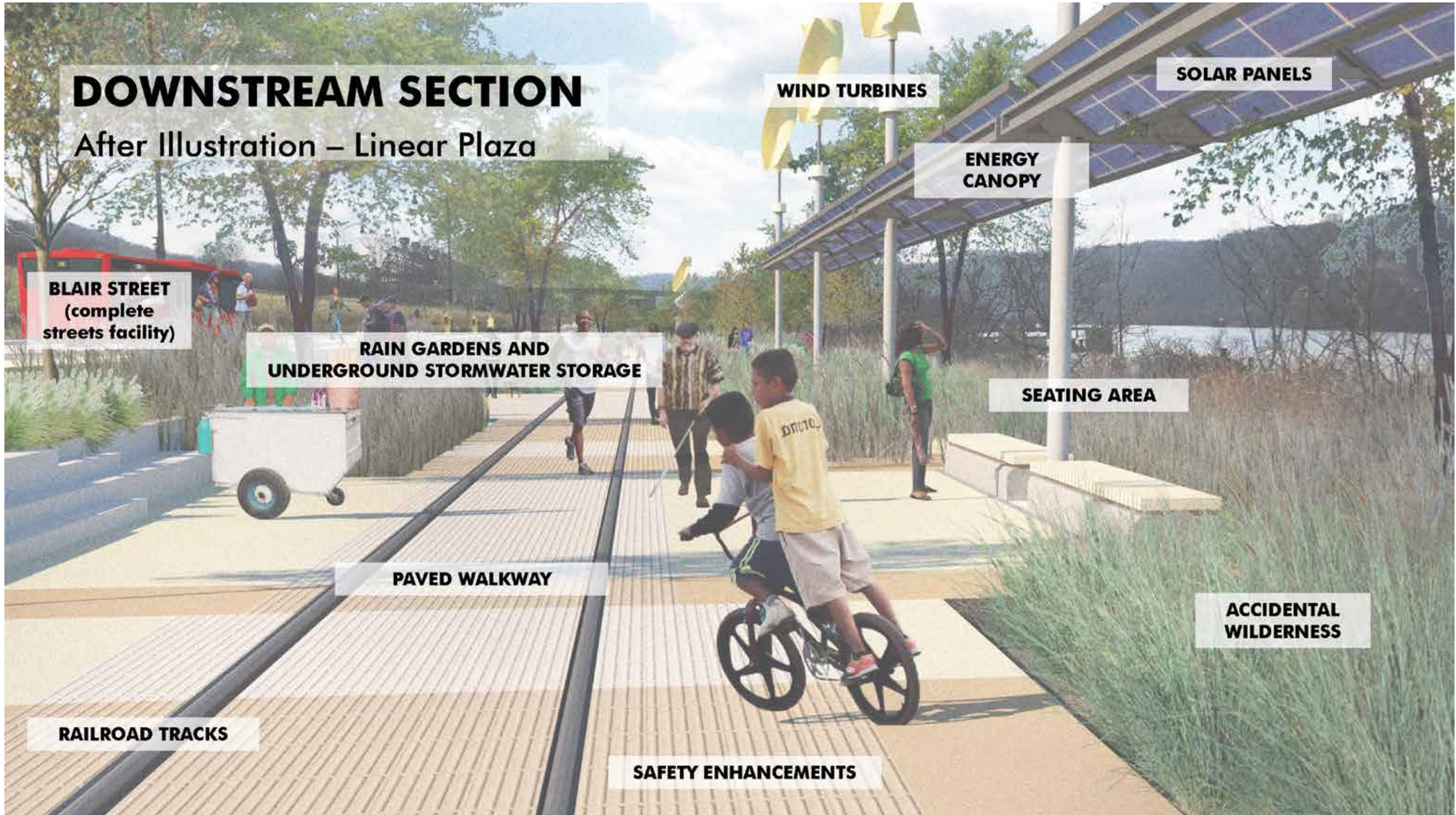
DOWNSTREAM SECTION

After Illustration – Linear Plaza



DOWNSTREAM SECTION

After Illustration – Linear Plaza



BLAIR STREET
(complete streets facility)

RAIN GARDENS AND UNDERGROUND STORMWATER STORAGE

PAVED WALKWAY

RAILROAD TRACKS

SAFETY ENHANCEMENTS

WIND TURBINES

ENERGY CANOPY

SOLAR PANELS

SEATING AREA

ACCIDENTAL WILDERNESS

EXPLANATION



A **Gathering Lawn** is a level or gently sloping lawn and is a way to provide people an opportunity for gathering places, a desire expressed by the input to date. It is a location where spontaneous activities can happen and is suitable for river gazing, sunbathing, sitting, talking, and people watching. This design feature allows for flexibility because the lawn can either be flat or gently sloped. The most important benefit is that this design feature adds green space to the park's design, but the site is so narrow that a gathering lawn may be difficult to achieve and possible in only a few locations.

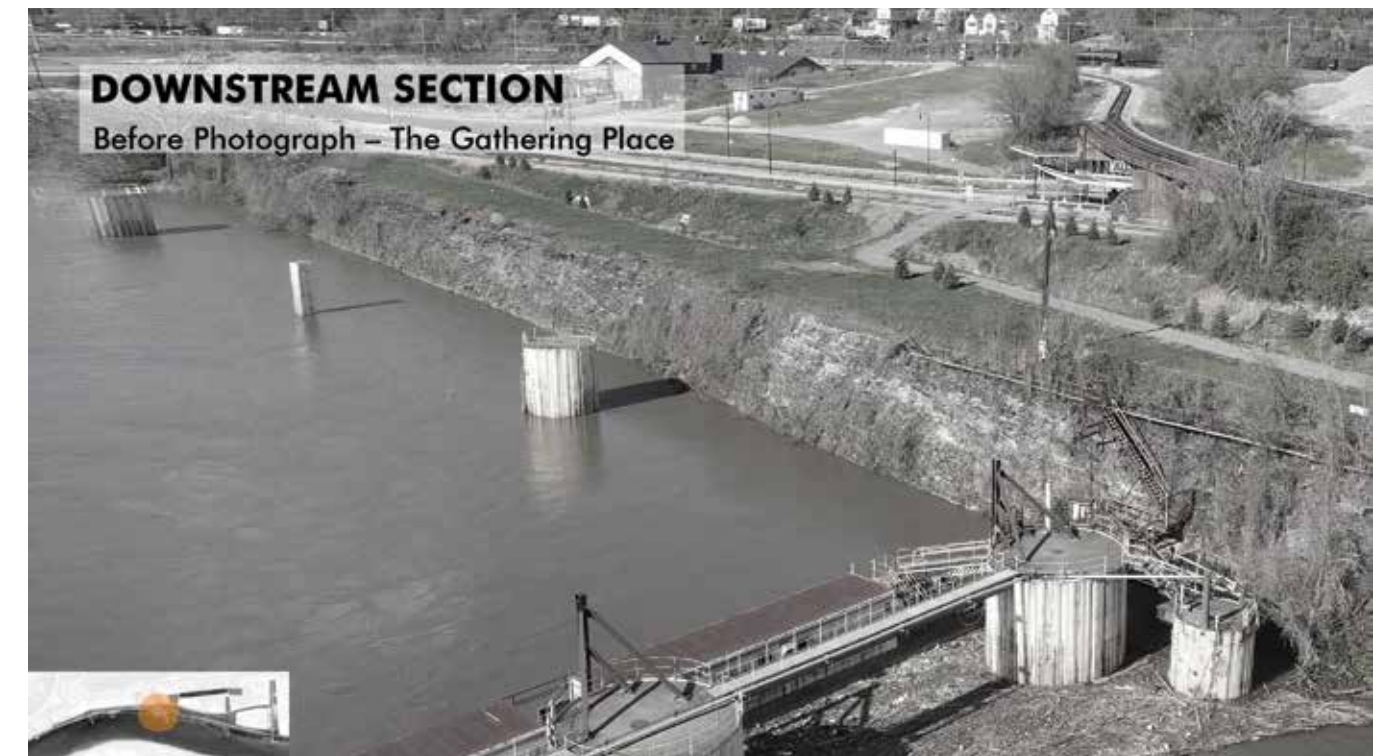


A **Floating Walkway** is an alternative, on-the-water path that Riverfront park users can enjoy. Encompassing a concrete dock with additional pilings, this structure is useful in tandem with existing mooring cells to create a linear walkway on water. This river surface structure can enable park users to stroll while also creating an energy dissipater to protect the shoreline. This walkway's location should consider areas where the greatest amount of fly ash exists as such slopes have eroded over time. Depending upon the route desired, the walkway could link some or all of the floating islands.

DOWNSTREAM SECTION
THE GATHERING PLACE

The Gathering Place extends to Blair Street, being a direct access point on the site. There is a pavilion with a green roof at this access point that provides restrooms and the park sign for way-finding. From the pavilion, a lawn area expands from the street to the stage. Underneath the lawn, a stormwater basin helps collect water and runoff. The stage is set on top of a dolphin and a mooring cell.

The gathering place connects to the water using the ramps on the mooring cluster #2. An ADA kayak launch is designed here. The floating walkway rises with an ADA ramp and hovers above the water. Along the River's edges, there are floating islands that are bathtubs of native plants on the water.



DOWNSTREAM SECTION

After Illustration – The Gathering Place





UPSTREAM SECTION
STEEL AND GLASS PLAZA

The Steel and Glass Plaza will be a repurposed coal loader. The 3-tiered structure will have an upper, middle, and lower elevation. A community gathering place is on the upper level with a glass surface-floor to unveil the intricate industrial structure. Stairs and an ADA ramp lead to the mid-level elevation.

The mid-level deck, about 12 feet from the water, also has a bait shop and a glass box inside the coal loader operation/observation room. This level allows for fishing and sitting along the deck's edge. Lastly, a ramp to the lower level connects to the floating walkway.





UPSTREAM SECTION

After Illustration – Steel and Glass Plaza

UPSTREAM SECTION

After Illustration – Steel and Glass Plaza



UPSTREAM SECTION
Before Photograph – Steel and Glass Plaza





MAJOR DESIGN FEATURE EXPLANATION



Overlooks are areas for people to obtain a view or lookout. The Riverfront has a substantial number of industrial artifacts along the water's edge; those could provide a place where people can experience the Riverfront by viewing the River, city, and surrounding area. A lot of unique items that people are interested in and want to view are along the Riverfront. Universal accessibility is imperative at these locations so that people with mobility issues can enjoy them.



A **River Swing and Hammock** is a quiet respite from other land or water activities. With the water directly below, lounging on a hammock secured to docking material is a unique way to experience the space. This modest investment requires docking and access to be in place. The hammock's design will determine the level of universal accessibility that can be achieved.



The **Floating Islands** will provide a protective area for kayakers and other paddlers from motor-operated boats on the Monongahela. This strand of man-made islands will also provide opportunities for regenerative design and will encourage a water destination that immerses people with the river in a safe manner. The creation of a fish habitat and shade structure is balanced by positioning this island cluster to construct needed pilings outside of the navigation channel.

**UPSTREAM SECTION
FORECOURT**

The Forecourt, directly adjacent to the Riverfront Plan project site, welcomes opportunity to expand the concept of the riverfront itself. With proposed building development along Blair Street's northeastern right-of-way, the Forecourt's open space serves as another link between the Linear Plaza and the Skywalk.

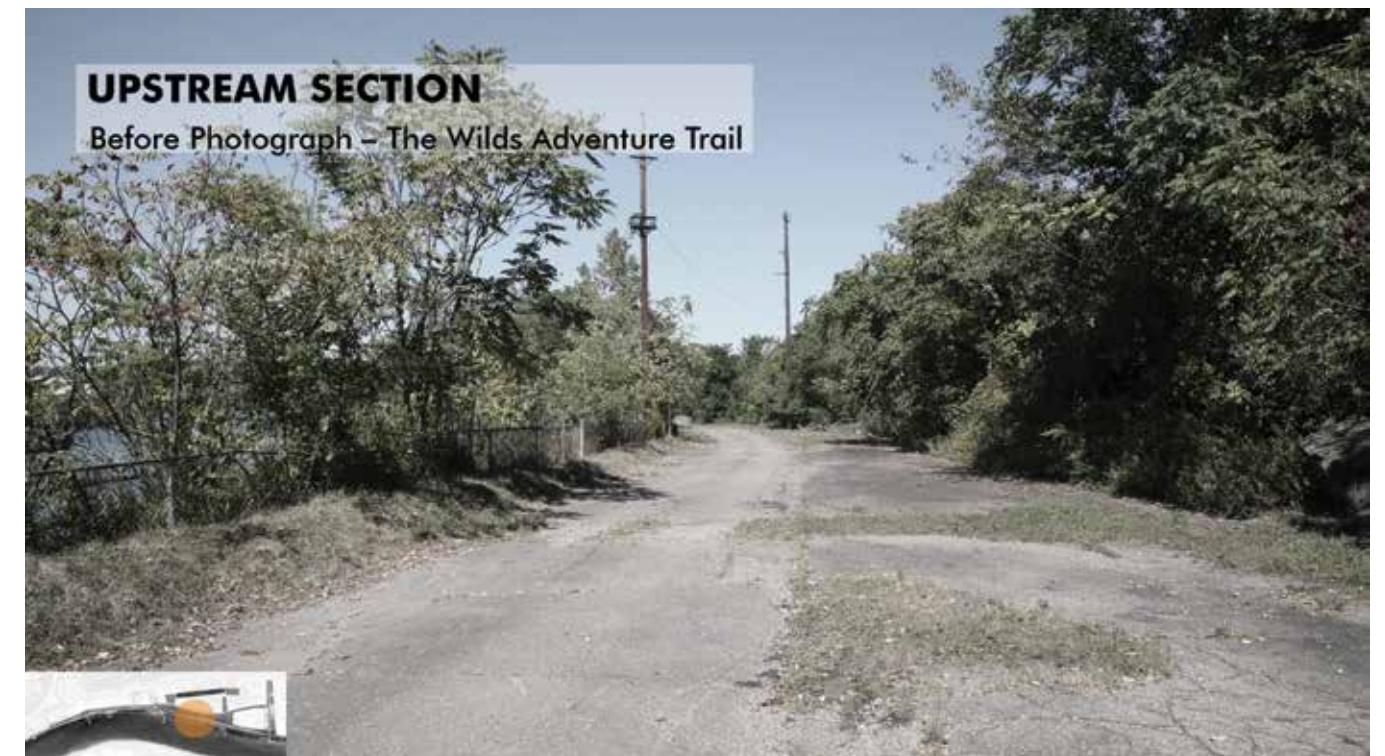
Enhancements of this open space's existing rain gardens and terrain could further expand the Riverfront Plan's design characteristics into the overall development site.



**UPSTREAM SECTION
THE WILDS ADVENTURE TRAIL**

At the top of the riverbank, the trail connecting the Gathering Place to the Hazelwood Wharf is a programmed space for the wilderness and fitness. The accidental wilderness will connect to the two areas and rejuvenate along a meandered pathway, sometimes on a metal grade boardwalk (to avoid unforeseen hazard areas).

Site-inspired art installations, such as birdhouses, formulate a diversified ecology and honor the local culture. Fitness stations are incorporated along the trail as well. At the foot of the fly ash slopes, floating islands will be "planted" to buffer erosion.



UPSTREAM SECTION

After Illustration – The Wilds Adventure Trail



UPSTREAM SECTION

After Illustration – The Wilds Adventure Trail



FITNESS/WELLNESS STATION

FLY ASH REMEDIATION

STEEL BOARDWALK

ART GARDEN

BIRD HABITAT RESTORATION

STORMWATER WETLAND

MAJOR DESIGN FEATURE EXPLANATION



A **Wilds Adventure Trail** is envisioned for the Riverfront and could be a narrow, paved path that allows bikers, hikers, and adventurous pedestrians to access the upper slopes of the riverbank. This part of the design is a gesture at rewilding the landscape and allowing users to feel that they are on a trail in nature. The challenge with this design feature is creating slopes that are stable and durable enough to support frequent use. Most importantly the adventure trail has certain “challenge” portions where users can experience a more physically intense recreation opportunity.



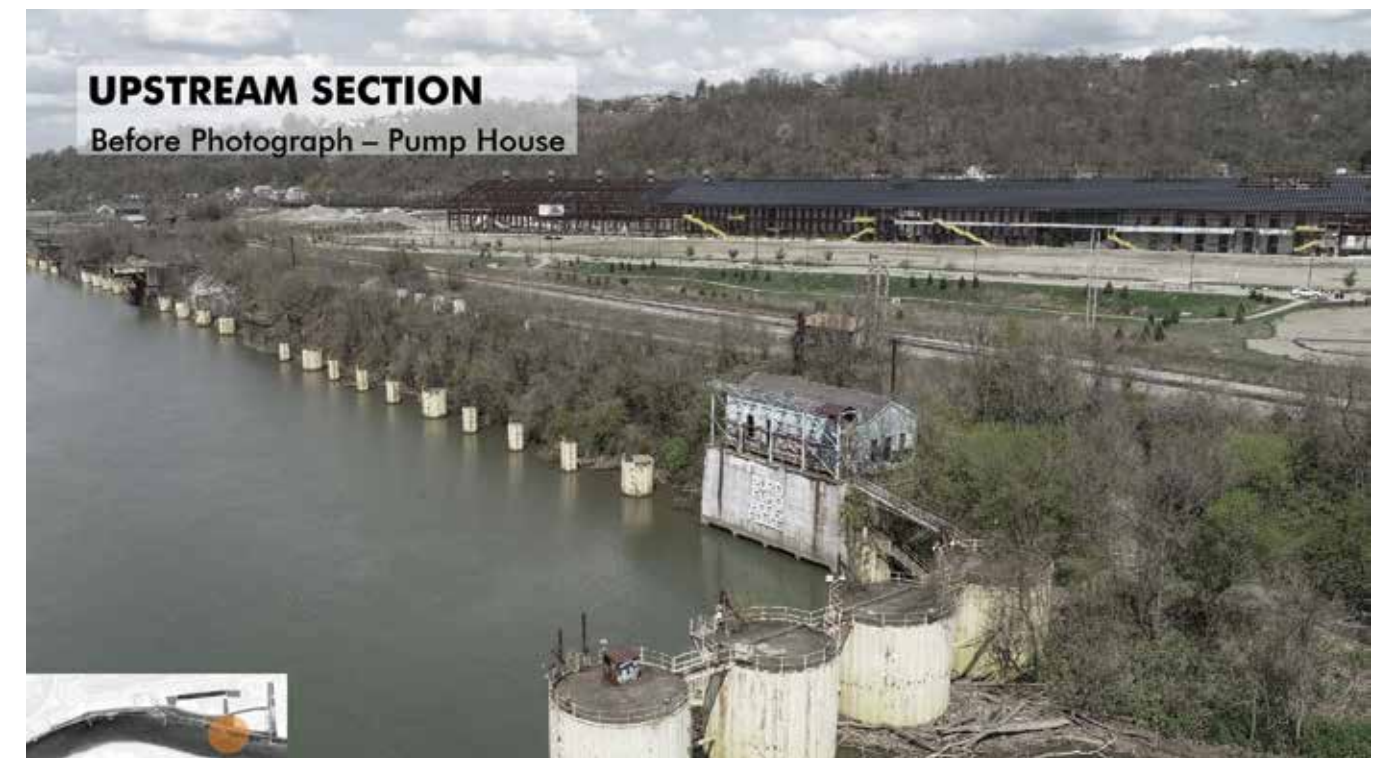
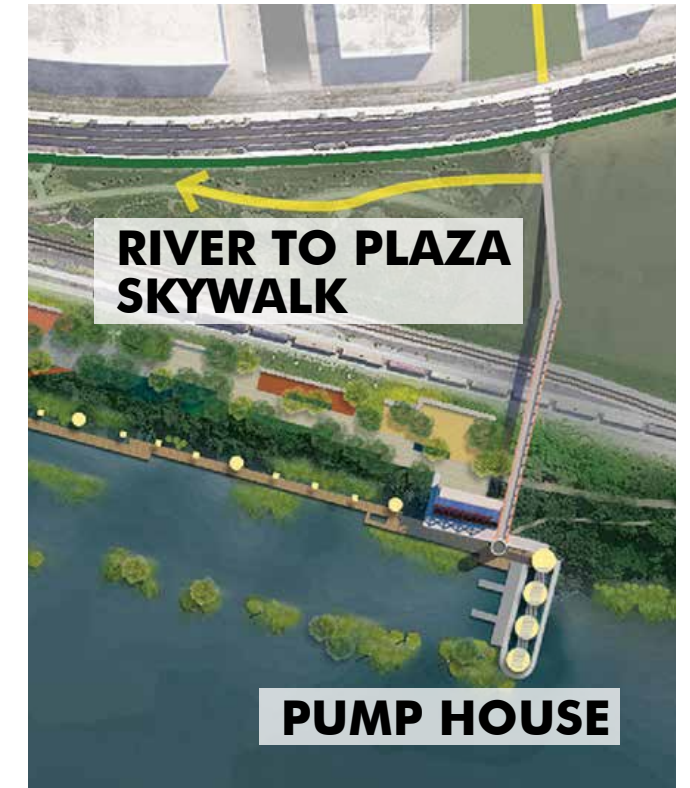
Art/Nature Discovery is the canvas or backdrop of the site’s design and is located all along the entire Riverfront. This design feature is the most flexible and to some degree is the foundation stone of the park from which other design features can pop. There are not many challenges associated with this design feature.



A **Play Space** is an opportunity to create authentic and site-inspired children, teenager, and young adult play spaces on the site. It also represents an opportunity for collaboration and involvement with community artists to make an exceptional play area for children that is not duplicative with what the neighborhood already has and is a celebration of the history, cultural and environmental meaning of the place. It is best to locate this use in an area with high visibility. The benefit of a play space is its active use by the neighborhood which has a robust younger population. The challenges of a play space are its convenient access, safety, and consideration of the existing industrial structures and steep drop-offs of the site.

UPSTREAM SECTION
PUMP HOUSE

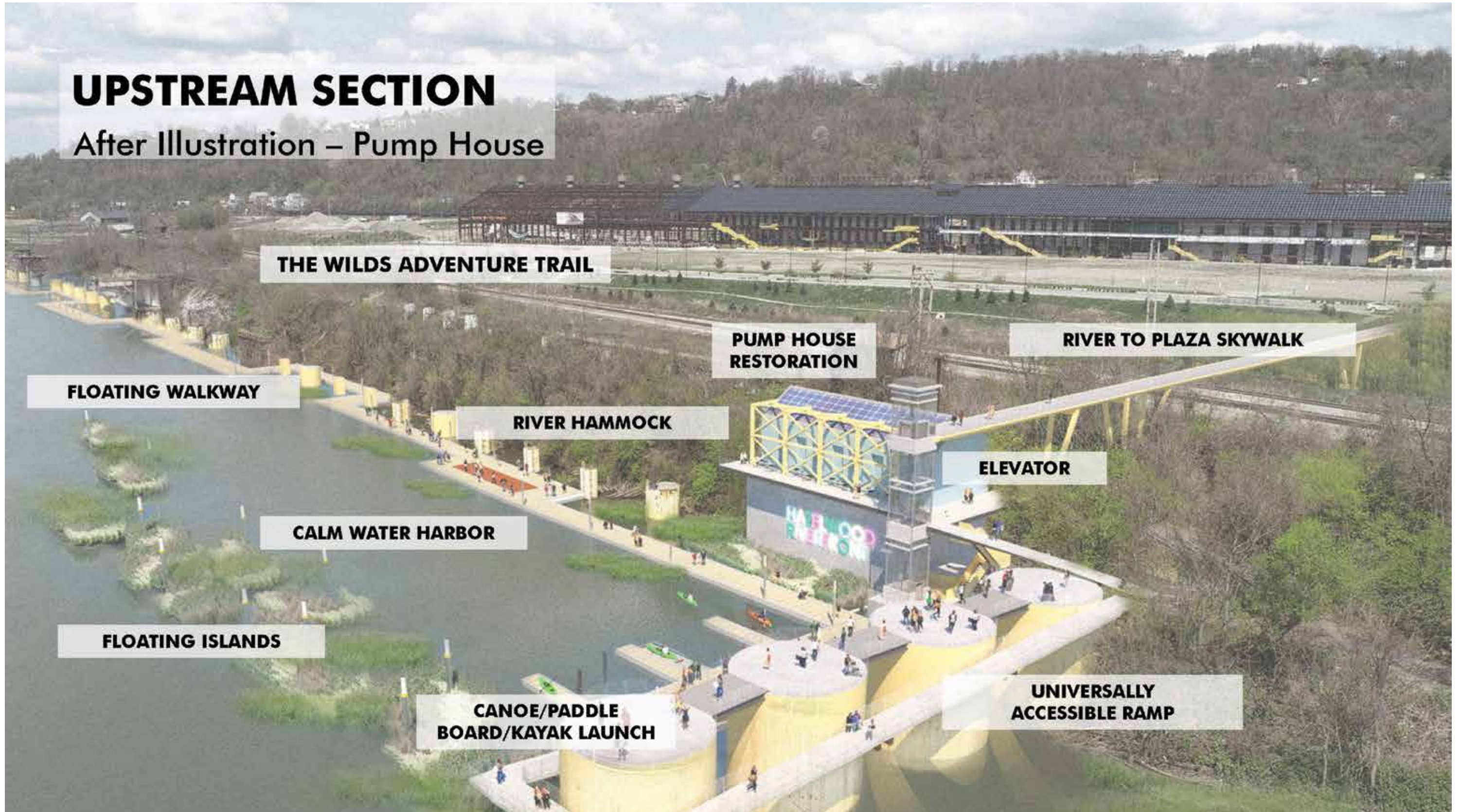
The Pump House can be restored and used for a variety of activities, such as an activity center. It has the potential to be transformed into an anchor for the Riverfront. The area is accessible by the flyover pedestrian bridge that connects Blair Street to the Pump House and the floating walkway. The flyover bridge connects to a water-proof elevator that reaches all three levels. On the mid-level elevation, the Pump House has an outdoor patio facing the River with public access. At this level, people can reach the Pump House entrance and the platform onto the mooring cells. Overlooks on the mooring cells (Cluster #3) are designed to see the entire River. The lower-level platform leads to the floating walkway and kayak launch. In this area, people can kayak and canoe along the River. The floating islands and walkways create safe, calm waters where people can learn to kayak, paddleboard, and enjoy other water recreation activities.



UPSTREAM SECTION

After Illustration – Pump House





MAJOR DESIGN FEATURE EXPLANATION



An **ADA Kayak Launch** is an appealing, low impact way to get Riverfront visitors to experience the River. Because vehicle access to kayak launches is common, access from street-level to the water's edge will require specific coordination in achieving universal accessibility. A limited number of locations along the Riverfront could accommodate this type of access without a more sizable investment. Universal Accessible design should be considered for the Kayak Launch.



A **Breakwater** creates a safe harbor where there is calmer water not as influenced by boat traffic and the resulting wake. The breakwater concept reinforces what many have expressed in the design process: people want to be on the water to try new things but fear the water's roughness. A River "Room" comprised of a constructed linear formation that responds to the River's varying depth (6-19 feet) gets affixed to one of the mooring cells while creating fish habitat and shade structure. Because each of these River Rooms are long and water depths vary, engineering will be necessary to implement this concept safely and effectively.

FUNCTIONAL DIAGRAMS

The functional diagrams illustrate the integrated system of a particular topic (circulation, water and neighborhood access, and infrastructure). They are the networks that glue the zones together.

CIRCULATION

The green elements on the diagram illustrate all universally accessible connections and ADA-compliant switchback ramps. Modes of transportation (bike, pedestrian, and train) are noted in the legend. The plan assumes all ADA routes are designed per the standard to allow EMS vehicles and maintenance vehicles.

Hot Metal Bridge/Great Allegheny Passage(GAP) Connection

The ADA connection to the GAP ramp on the Hot Metal Bridge is made beyond the Riverfront site parcel on the Pittsburgh Technology Center Campus. In the plan, the Hazelwood Riverfront promenade connects to the Riverfront walk in the Technology Center, then follows the sidewalk of Technology Drive and Second Avenue before joining the GAP ramp on the north side of the Hot Metal Bridge.

Eliza Furnace Trail Connection

It is recommended to provide a connection to the Eliza Furnace Trail from the Riverfront in the plan. Due to the limitation of property ownership and topography condition, a connection via Hazelwood Green Parcel 7 with a flyover above Second Avenue would be an option for an ADA-compliant route to the Three Rivers Heritage Trail Parking deck.

WATER AND NEIGHBORHOOD ACCESS

Throughout the Master Plan, there are four neighborhood access points that connect people from the Greater Hazelwood neighborhood,

the City, and the Great Allegheny Passage. There are also six water access points for non-motorized boats, motorized boats, and other types of water recreation.

INFRASTRUCTURE

Utility conduits carrying communication, electric, gas, sanitary sewers, and water are connected from Blair Street to the site. It arrives at four key service points; the coal loader plaza, the gathering area, the Pump House, and the Hazelwood Avenue extension, supporting service for food, drink, events and bathrooms. Those points will further radiate to cover the rest of the segment as needed.

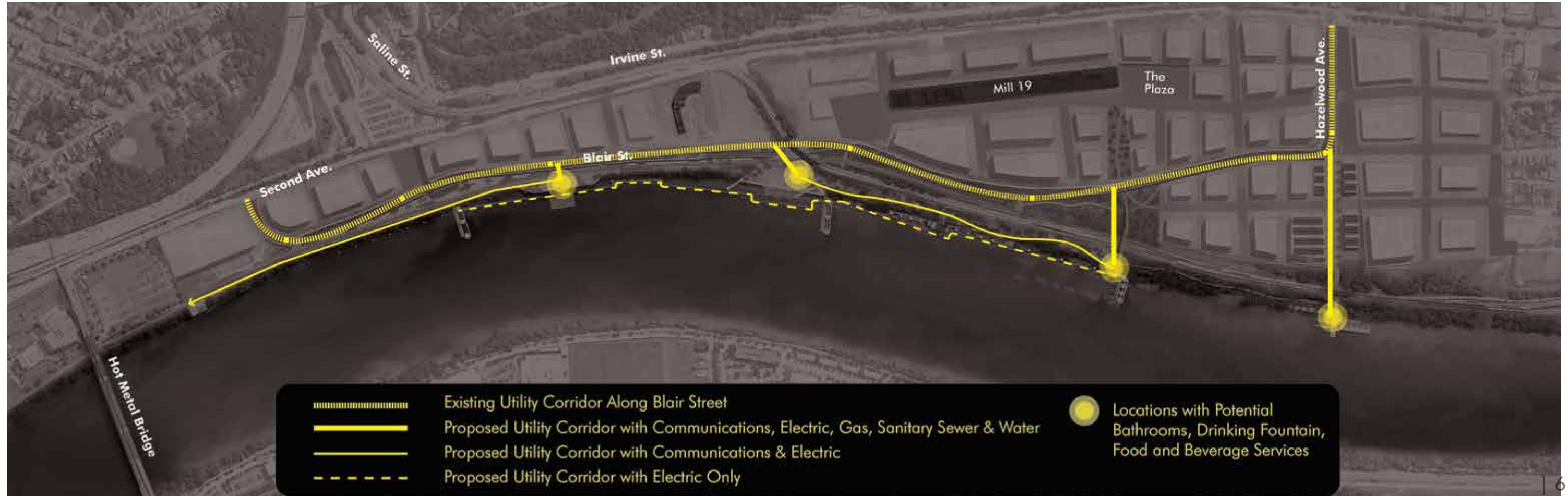


CIRCULATION DIAGRAM

NEIGHBORHOOD ACCESS AND WATER ACCESS DIAGRAM



INFRASTRUCTURE DIAGRAM



WHAT IS A RIGHT-OF-PASSAGE AND WHY IT'S IMPORTANT

A “right-of-passage” is a legal permission a property owner to another individual or entity grants to physically enter, access, and/or traverse a specific space. Permission can be restricted to pedestrians and bicycles only (e.g. prohibits motor vehicles), or it can allow for many modes of transportation. From time-to-time, it is not just limited to access; a right-of-passage permission may also grant rights for acceptable uses of the property (e.g. permits the construction of a picnic pavilion) or may restrict uses (e.g. prohibits the development of a surface parking lot).

Permissions granted as part of a right-of-passage may be legally memorialized as an easement (a definitive area that is publicly recorded at the local county courthouse) or as a property access agreement or license agreement (not recorded at the courthouse). An easement can be structured to ‘run with the land’ and be blind to the parties involved, or it can be drafted for specifically involved parties, not “run with the land,” and could even be structured to terminate at set point in time.

For the MSDP’s implementation, a right-of-passage is highly relevant. As a private entity – a private-sector property owner – Almono enjoys the full rights and benefits, including controlling access, of owning real estate. Almono controls approximately 1.5 miles of riverfront – the same riverfront the public has clearly indicated a rooted desire to be able to visit and enjoy at some point in the future. Further, public funding sources typically can only be used for publicly accessible land/water improvements. Thus, if Almono wishes to pursue public funding in partnership with public-sector or non-profit partners, those grant funds can only be used on land/water areas with some form of public access.

PRECEDENCE ON THE PROPERTY AND IN THE PITTSBURGH REGION

There is precedent within Hazelwood Green for granting a right-of-passage for the public’s use and enjoyment of the property. In 2012, Friends of the Riverfront, the RIDC of Southwest Pennsylvania, and Almono recorded a trail easement from the property’s western most point to a point on Old Second Avenue just west of Mill 19. This 12 foot easement (min. width) states expressly permits the construction, operation, and maintenance of an aggregate/asphalt paved trail. There are other Pittsburgh-region precedents where a public right-of-passage grants the development of a trail or access to a waterway/body. With Friends of the Riverfront, Allegheny Rivertrail Park (formerly known as Aspinwall Riverfront Park) recorded a ‘floating’ easement, traversing the park property, for future trail connection. The Rachel Carson Trail, situated in northern Allegheny County, relies upon a combination of easements and property access agreements to maintain the trail corridor for several decades.

PROPOSED STRATEGY OVERALL

The following summary provides a description of the four distinct areas or corridors where a right-of-passage for the express purpose of safeguarding public access should be preserved as the MSDP’s implementation begins unfolding. The right-of-passage’s primary goal is to define a dedicated pedestrian-bicycle corridor along the Hazelwood Riverfront’s entire length as well as two critical points where future access can be provided between land, the river, and to Mill Plaza. Timing and sequence of how and when access permissions are granted will depend upon some underlying circumstances and may vary from one section of riverfront to another.

RIGHT-OF-PASSAGE AREA #1

Building on Friends of the Riverfront’s existing trail easement, Right-of-Passage Area #1 stretches from the riverfront’s most downstream tip to the Pump House. The western portion of this area coincides with the existing FOR trail easement. This easement should be modified to ‘mirror’ the MSDP’s suggested linear plaza alignment. This corridor should then extend starting at the western side of the Blair Street/CSX flyover structure (or what is more frequently referred to as the S-Curve area along the riverfront) to the Pump House itself. The proposed extension protects the Wilds Adventure Trail and has a unique circumstance because of the multi-purpose design that is envisioned. The trail is proposed to be a slightly elevated

boardwalk hovering above rain gardens and stormwater management. Ultimately, this right-of-passage solution needs to address the operations and maintenance of these infrastructure systems.

Additionally, portions of Right-of-Passage Area #1 overlap where the Mon Conn Railroad has a lease arrangement with Almono. Modification of the Friends’ existing trail easement should also include the long-term need to permit (in a very limited and controlled manner) periodic rail service. The map on the following page provides context. Easements may need to consider any widening to account for features such as the Welcome Pavilion and Gathering Place (situated within the Riverfront’s Lounge).

RIGHT-OF-PASSAGE AREA #2

Area #2 traverses the MSDP’s Porch section and turns eastward to the Blair Street/Hazelwood Avenue intersection. This area completes the riverfront connection between the Greater Hazelwood neighborhood and the Mon River. Different than Area #1, this area provides a right-of-passage across both Almono and CSX property. As a result, this easement will likely need to address CSX Railroad’s operational and maintenance needs as well as to safeguard public safety. Area #2’s eastern leg centers on the vacated portion of the Hazelwood Avenue right-of-way. The Pittsburgh Water and Sewer Authority (PWSA) maintains a sewer easement in the same geographic area, and ALCOSAN maintains a sewer access point in the vacated right-of-way. So, those entities will need to be involved in developing the final right-of-passage solution for maintenance access to those underground infrastructure improvements.

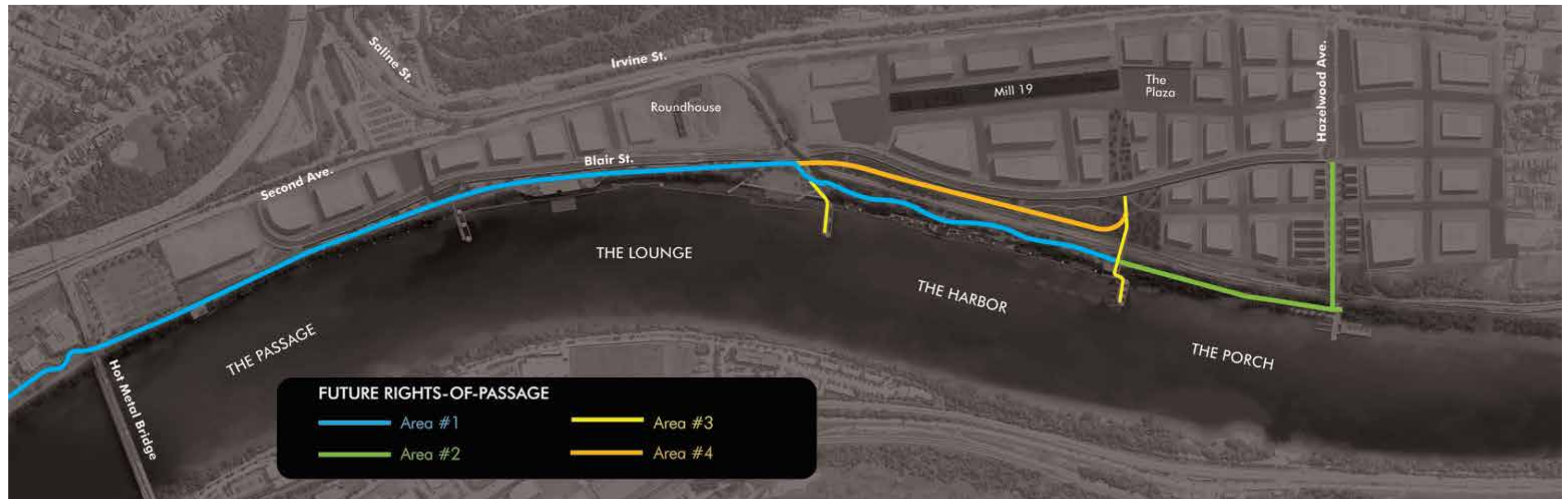
RIGHT-OF-PASSAGE AREA #3

Area #3 addresses the vertical connections between Right-of-Passage Areas #1, #2, and the existing Mill Plaza, another recently constructed open space. One segment of Area #3 is intended to protect the MSDP's Skywalk and, simultaneously, provides direct access to Mooring Cell Cluster #3 and the Mon River. Given the Skywalk's elevated structure to 'fly over' the railroad tracks, this right-of-passage will need to address aerial and ground rights for overhead structures and subsurface foundations. Because of their existing trackage, CSX Railroad may also need to be a party to the right-of-passage solution.

Area #3 includes a second connection. This narrow corridor, most likely no more than 12' wide, is found within the MSDP's Lounge section. This right-of-passage would grant public access to Mooring Cluster #2 where it is possible to create a future vertical connection to the water level.

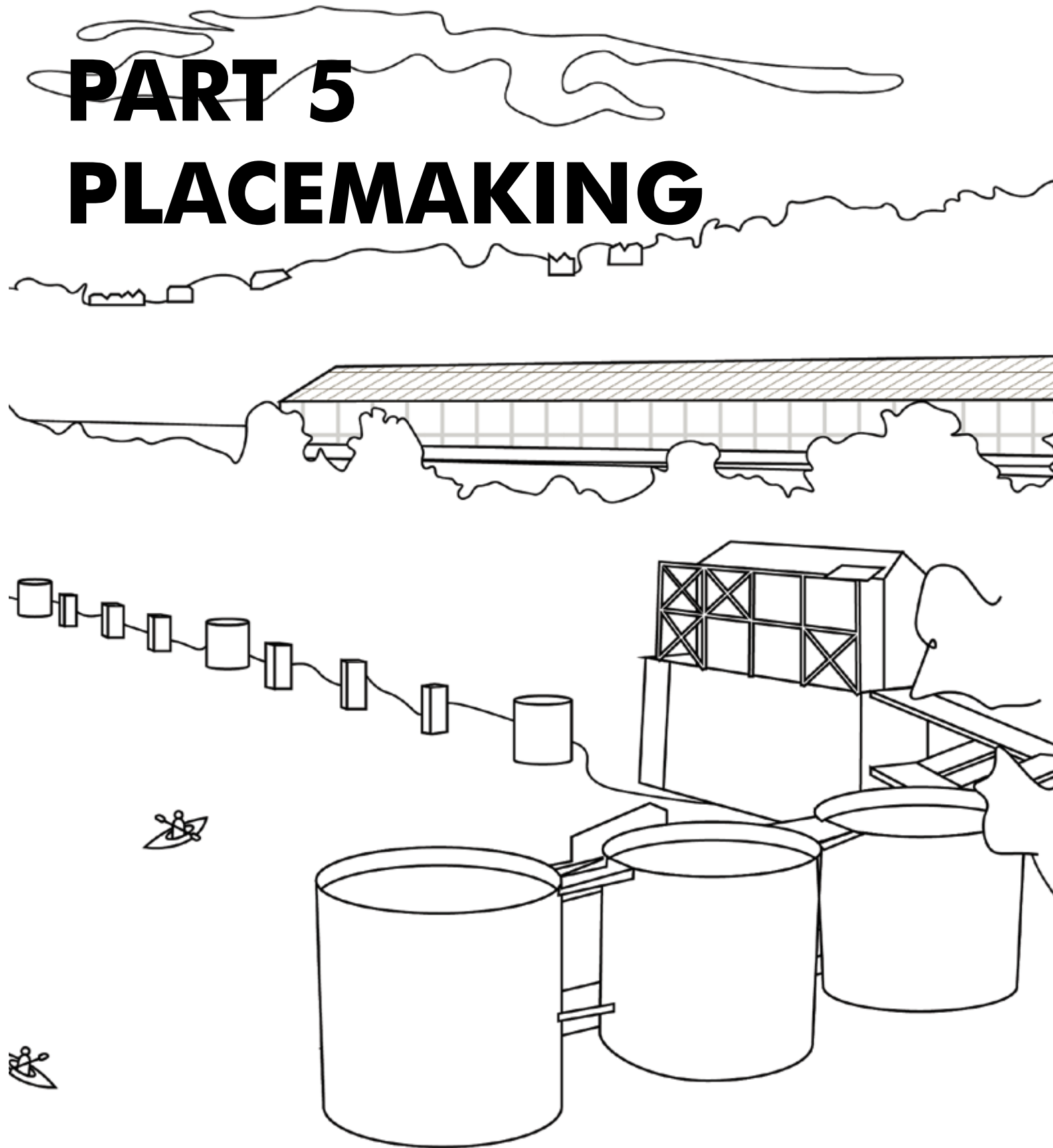
RIGHT-OF-PASSAGE AREA #4

When development or investment occurs within the MSDP's Harbor section, it is recommended an additional right-of-passage be created further enhancing public access as well as directly connecting the proposed Linear Plaza to Mill 19. The corridor provides a slow speed, family friendly complement to the faster bike-ped facility found on Blair Street and is located along the perimeter Hazelwood Green's wet meadow area. It is also one of the MSDP's most highly visible recommendations and the one with the most direct connection to neighborhood's existing residential blocks and Second Avenue.



PART 5

PLACEMAKING



IT IS ALL ABOUT PLACE

Cities and towns throughout the world have come to look more like one another. Stores, buildings, streets, and open space feel increasingly homogeneous. The Hazelwood Riverfront, with its gigantic industrial artifacts, tranquil urban wildness, and multi-cultural neighborhoods, is a place with stories and identities. They formulate the soul and breath of the place. The Master Site Development Plan laid out in Part 4 casts a vision for future development. The vision describes the physical recommendations and specific improvements. In Part 5, the dynamic layers of nature, sustainability, culture, art, and inclusiveness of the Master Site Development Plan will emerge. Those are the ingredients that make the Riverfront lively, authentic, and beloved.

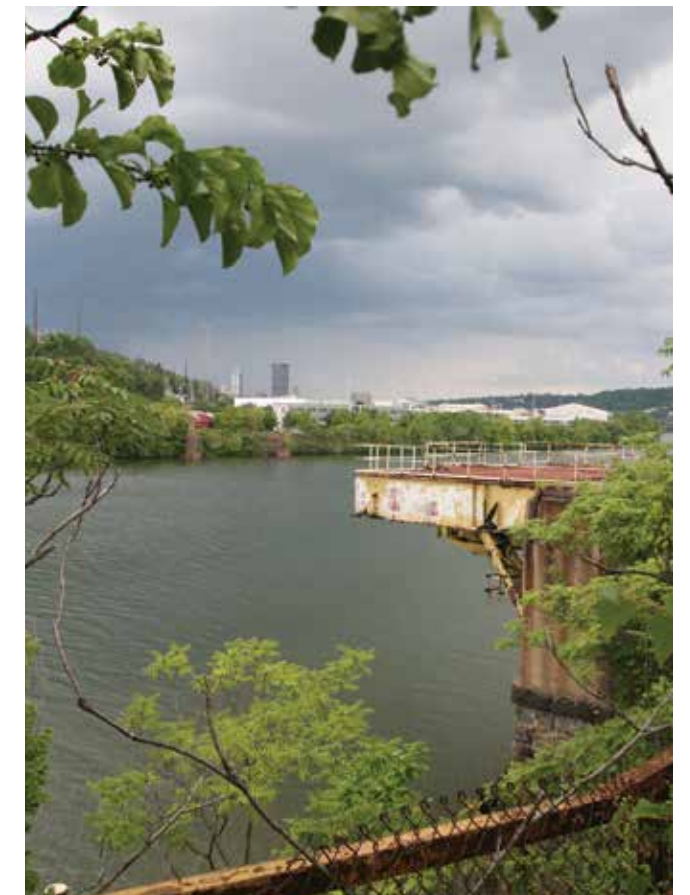
Throughout the planning-design process, those considerations have been deeply infused into every level of the design process. The question of “who, for whom, and how” has been examined by the public, the Advisory Committee, the PLT, and the Planning-Design Team. A comprehensive approach is applied here to ensure the placemaking focuses on people, enjoyment, well-being, stories, memories, and inspirations.

Nature, silently introducing itself back to the site, is a premium asset. Recommendations are developed to facilitate the healing process of the land itself. Sustainable design is vetted via multiple lenses to establish resiliency, incorporate inclusiveness, and support ecological restoration. As the Hazelwood Green District sets up high standards on sustainability, the Riverfront is aligning its vision to demonstrate an innovative and inspiring model. Public art strategies are outlined to fuse nature, history, culture, technology, and communities together.

These recommendations are enumerated in the following content and provide a starting point for more decisive and in-depth discussions as the implementation of the Riverfront site advances into the more detailed design stages.

Placemaking refers to a collaborative process by which we can shape our public realm in order to maximize shared value. More than just promoting better urban design, placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution.

- Project for Public Spaces























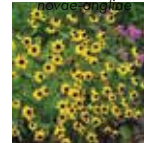

































SITE PHOTO ALONG RIVER EDGE

NATURALIZED LANDSCAPES

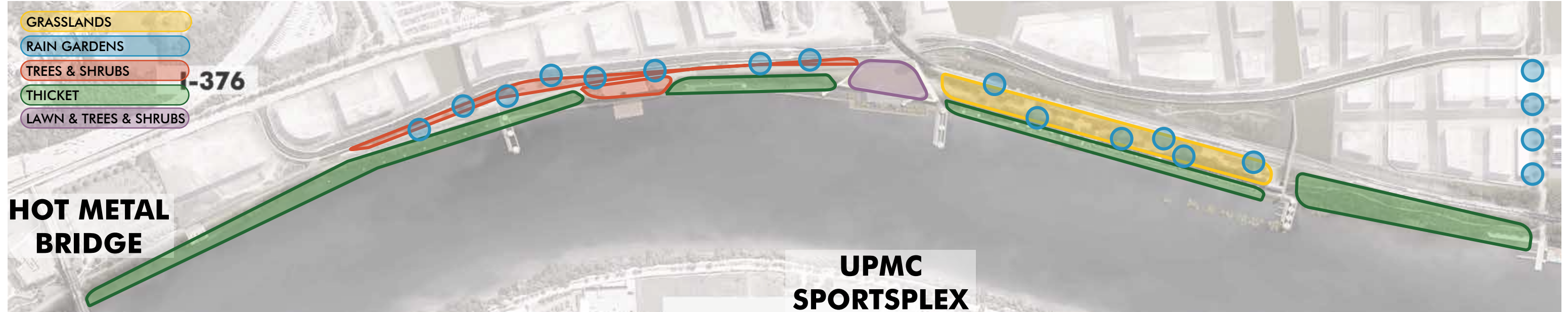
The landscape design at the Riverfront aims to create an alternative urban open space paradigm, which is different from other “manicured” Riverfront open spaces in Pittsburgh. “Accidental wilderness” on the site now makes a unique attractiveness of mother nature taking over the once heavily industrialized land. Various groups expressed their strong preference of having a “Nature Place” to recreate and explore during the engagement process. Following that guideline, native species and a planting palette that emphasizes habitat creation were developed. The planting design embraces the principle of “fostering nature.” It lays out a process rather than a final result. People will experience the constant dynamic of the landscape year by year as plant groups mature and succeed. The experience of submerging in the field grass and viewing Downtown Pittsburgh’s skyline brings a get-away moment from busy urban life.

Per the character of the space and the soil condition, the plantings were designed into four distinct “patches”: the thicket, the wild adventure zone with rain gardens, trees and shrubs, and grass border, to best encourage bird habitat as well as biodiversity.

Illustrated in the chart to the right is the planting palette (a combination of plant species) recommended for each “patch.”

RAIN GARDEN				GRASSLANDS				
 Black Cohosh <i>Actaea racemosa</i>	 Oxeye <i>Heliopsis helianthoides</i>	 Black-Eyed Susan <i>Rudbeckia hirta</i>	 Wingstem <i>Verbesina alternifolia</i>	 Little Bluestem <i>Schizachyrium scoparium</i>	 Showy Tick Trefoil <i>Desmodium canadense</i>	 Blazing Star <i>Liatris spicata</i>	 Three-Lobed Coneflower <i>Rudbeckia triloba</i>	 Wild Strawberry <i>Fragaria virginiana</i>
 Wild Columbine <i>Aquilegia canadensis</i>	 Blazing Star <i>Liatris spicata</i>	 N.E. Aster <i>Symphotrichum novae-angliae</i>	 Culver's-Root <i>Veronicastrum virginicum</i>	 Wingstem <i>Verbesina alternifolia</i>	 Flat-Topped Aster <i>Doellingeria umbellatus</i>	 White Beardtongue <i>Penstemon digitalis</i>	 Culver's-Root <i>Veronicastrum virginicum</i>	 Lyre-Leaved Sage <i>Salvia lyrata</i>
 Swamp Milkweed <i>Asclepias incarnata</i>	 Blue Lobelia <i>Lobelia siphilitica</i>	 Three-lobed Coneflower <i>Rudbeckia triloba</i>	 White Beardtongue <i>Penstemon digitalis</i>	 Green-Headed Coneflower <i>Rudbeckia laciniata</i>	 White Wood Aster <i>Eurybia divaricata/schreberi</i>	 Bee Balm <i>Monarda didyma</i>	 Wild Senna <i>Senna herbacarpa</i>	 Side Oats Gramma Grass <i>Bouteloua curtipendula</i>
 Blue False Indigo <i>Baptisia australis</i>	 Bee Balm <i>Monarda didyma</i>	 Little Bluestem <i>Schizachyrium scoparium</i>	 Helen's Flower <i>Helenium autumnale</i>	 Blue-Eyed Grass <i>Sisyrinchium augustifolium</i>	 Black-Eyed Susan <i>Rudbeckia hirta</i>	 Calico Aster <i>Symphotrichum lateriflorum</i>	 Coral-Bells <i>Heuchera americana</i>	 N.E. Aster <i>Symphotrichum novae-angliae</i>
TREES & SHRUBS				THICKET		LAWN & TREES & SHRUBS		
 Serviceberry <i>Amelanchier spp.</i>	 Black Gum <i>Nyssa sylvatica</i>	 Black Raspberry <i>Rubus occidentalis</i>	 Sycamore <i>Platanus</i>	 Hackberry <i>Celtis occidentalis</i>	 Crab Apple <i>Malus spp.</i>	 Kentucky Bluegrass <i>Poa pratensis</i>	 Sycamore <i>Platanus occidentalis</i>	 White Poplar <i>Populus alba</i>
 Hawthorn <i>Crataegus spp.</i>	 Ninebark <i>Physocarpus opulifolius</i>	 Willow <i>Salix spp.</i>	 NJ Tea <i>Ceanothus americanus</i>	 Carolina Rose <i>Rosa carolina</i>	 Smooth Sumac <i>Rhus glabra</i>	 Tulips <i>Tulipa</i>	 Buttonbush <i>Cephalanthus occidentalis</i>	 Serviceberry <i>Amelanchier</i>

PLANTING “PATCHES” ON PLAN



SUSTAINABLE DESIGN

In the Hazelwood Riverfront Master Plan, sustainability is a multi-faceted concept. Sustainability opportunities were evaluated at the very beginning. Feasible strategies have been outlined. It is reflected through aspects of climate resiliency, energy, water, ecology, restoration, repurpose and reuse, human well-being, and inclusiveness, etc. Those strategies aim to strengthen the ties between people, the built-environment, and communities via climate-adaptive design, ecological system restorations, and community incorporation.

WATER

- Innovative stormwater strategies responding to specific site conditions were developed in the plan, with rain gardens, sponge streetscape, and underground systems, etc.
- Greywater harvesting and recycling could be considered for the pavilion at the Gathering Place, the Pumphouse, and civic buildings along Hazelwood Avenue Extension.

CLIMATE RESILIENCE

- Design the amenities in water (floating walkways, floating playground, floating stages, etc.) with systems adapting to significant water level changes.
- Introduce floating islands around CSOs to mitigate and purify peak flows.
- Increase permeable surfaces throughout the site with significant hardscape reduction from an existing condition.

ENERGY

- Renewable energy could be considered to support on-site energy consumption, e.g., sculpture wind turbines and solar panels could be installed on shade structures,

renovated, or new building roofs where the exposure to sunlight and wind is maximized. There are existing large-scale solar panels on Hazelwood Green district (Mill 19), the proposed solar feature on the Riverfront could utilize the existing solar infrastructure.

- Electric scooters or bike-sharing stations could be planned along Blair Street or Hazelwood Avenue Extension.
- The renewable energy generation process is also designed to be a visible feature of the site through interpretive signage or art to increase public awareness.
- Select shielded light fixtures that minimize light pollution.

ECOLOGY & RESTORATION

- Increase shade trees on the site.
- Introduce native species and planting palettes that support biodiversity; refer to the previous topic Naturalized Landscape.
- Use floating islands to restore riverbank vegetation on the fly ash slope.

MATERIAL

- Use permeable paving materials in plazas and gathering areas to allow rainwater filtering through the surface.
- Salvage existing site materials for proposed improvement, e.g., construction masonry units, structure steels, railroad track fragments, crushed concrete paving. Mill 19 provides an excellent example to demonstrate how to inventory and repurpose site building materials into river swings, amphitheaters, stormwater storage features, etc.
- Select locally produced/regional materials.
- Design materials and color palettes compatible with existing characters.

HUMAN WELL-BEING

- Increase opportunities for people to enjoy an active lifestyle with space designated for exercising, working out, learning, walking, socializing, and healing.
- Preserve the cultural and historical character of the site to strengthen community memories.

EDUCATION

- Design interpretive signs with a consistent design palette to present sustainable features, industrial artifacts, history, and cultural elements to the general public.
- Provide training and learning opportunities through programming.
- Partner with the higher education institutes and the community to explore collaborations.

REPURPOSE AND REUSE

- Repurpose existing structures and buildings on land and water, including the Pumphouse, mooring cells, piers and dolphins, coal loader structure and platforms, and some structurally stable catwalks.
- Reuse existing site hardscape materials and healthy planting materials.

INCLUSIVENESS

In the context of the Hazelwood Riverfront project, inclusiveness indicates providing equally enjoyable experiences to users of old and new, local and regional, slow and fast, and most importantly, opportunity for all. It also means in the future of site improvement, local communities will be closely incorporated. The following inclusive strategies are recommended for the site design, construction, and operation processes. They are reflected in the current Master Plan and implemented throughout this project; while it provides guidelines for future improvement on the site.

- Provide convenient neighborhood access and regional accesses.
- Locate amenities closer to the Greater Hazelwood neighborhood.
- Configure facilities and paths to be ADA compliant (including land and water).
- Plan programs for all income levels.
- Design space with considerations of user preference, especially neighboring communities.
- Balance revenue-generating amenities with full-public access amenities.
- Implement an inclusive planning process in site design.
- Incorporate local communities in site programming.



SITE PHOTO OF THE DEBRIS IN THE RIVER

PUBLIC ART

The public art strategy provides overarching principles and direction for integrating art and potential operating recommendations for art programs on the site. The strategy aims to engage people in meaningful and immersive experiences. Offering guidance pertaining to art formats that foster dialogue between art, people, and the site (inclusive of the neighborhood and historical context) is the aspiration of this endeavor. In short, the art strategy was developed to recommend a roadmap for engaging art and cultural activities along the Riverfront.

The stories of the site provide a rich foundation for art and culture programming and development. The first objective for the art strategy focuses on formulating authentic art formats, which are inspired or connected to the site and its people. A series of design elements and aspects in the Master Site Development Plan are specified for artists' involvement.

Currently, there are existing programming efforts in the Hazelwood Plaza and an artist residency program in the Greater Hazelwood neighborhood. The Riverfront's public art strategies could be considered a piece of the bigger picture for potential synthesis. A tentative art curation model is suggested here, but it might be subject to the undefined nature of the future organization and operating structures.

Per the nature of the Riverfront development, the full fruition of the plan may take decades. The public art strategy plans for the long-term implementation, which will be a rich collaboration of multiple individuals and teams. Recommendations for the potential art planning timeline and organization model will be covered in this section.

Meanwhile, it is a consensus that bringing people to the water is a moral imperative. For short-term activation, potential methods and art formats are suggested.



GRAFFITI ON THE SITE

A SENSE OF PLACE

The Mon Riverfront becomes the Place where creative activities accumulate, similar to the way the fly ash built up the banks, but as a positive, not detrimental, force. The passages to the water's edge are already there and have been there. Art can be a signal or a guide or the mechanism to draw people to these and to create other pathways of understanding and connection to the River and the nature that is returning to the site. The public art strategies aim to:

- Uncover and recognize the human connections that already exist and have existed for centuries, be a beacon to the site's history from geologic time to the present and into the future.
- Construct paths or passages of knowledge connecting the city to the wild edge, perhaps providing guideposts, trail markers, events to draw people to and from the Riverfront.
- Create a laboratory to research, investigate, engage, examine, connect, unearth, and disclose.
- Create an experience that is unique to Pittsburgh's Riverfront.
- Support the sustainable ethos of the entire site.

ART STRATEGY KEY IDEAS

Incorporate artists into Riverfront design and construction

- Apply overall concepts that can occur in multiple locations of the entire Riverfront.
- Develop concepts for specific locations that are called out in the Master Plan.

Integral Process

- Engage curatorial and administrative expertise to realize public art projects and strategies.
- Evaluate art ideas and align with each section as the roll-out progresses.
- Select artists to participate at the start of the design and work with design teams.
- Oversee and manage artists' projects through completion.

Community Engagement

- Activate the Riverfront for ongoing community engagement to introduce people to the river and its environs, to the history and stories of the neighborhood and place.
- Begin years before ground-breaking to activate the community and support the future integrated art through research and exploration.

**INCORPORATE:
IT'S ALL ABOUT PLACE**

There are many elements in the Hazelwood Riverfront Master Plan that will benefit by involving artists. In reviewing the ideas that have surfaced in the planning process, prioritize projects that:

- Enhance connectivity of river to the entire Hazelwood neighborhood, which includes Hazelwood Green.
- Explore the relationship to the water/land edge.
- Integrate art into the design (and maintenance) rather than creating stand-alone artworks.
- Create a unique experience that is not found elsewhere in Pittsburgh.

Concepts that apply to the entire Riverfront occur in multiple locations

1. Follow the flow of water
 - Identify CSO outlets, storm drains, underground springs, places with regular flooding, and other clues to the water flow through the neighborhood. Link these locations to the river.
 - Express the narrative at the reconfigured stormwater basin with underground storage at the Coal Plaza and the cascading stormwater feature and seat steps in the Linear Plaza.
2. Follow the flow of history from geologic time to present
 - Activate the multiple industrial relics as part of this narrative.
 - Create multiple ways to tell stories.

3. Enhance the experience for people with different abilities throughout the site
 - Consider ADA water access points, walkways, and areas for interpretation.
 - Consider multi-sensory experiences.
4. Engage the community through design, active participation in events and allied programming.

SPECIFIC AREAS FOR ARTIST'S INVOLVEMENT

1. Dolphins, piers, and mooring cells: keeping these the same yellow color is a good option, but if alternate ideas are explored, such as lighting or throwing shadows, engage an artist to collaborate
2. Kinetic Plaza: develop seating to use as street furniture in multiple locations in Hazelwood Green and the neighborhood
3. Linear Plaza: shade structures with solar panels and wind turbines
4. Coal Plaza: Cluster 1, water access and ADA water access

5. Gathering Place: interpret pollinator and rain gardens with a series of physical, touchable objects that are repeated in different locations. Consider Cluster 2 water access
6. Steel and Glass Plaza: glass viewing deck: a good place for a connector tool to interpret the vistas across the river and toward downtown and relate the history and ecology of the site
7. The Wilds Adventure Trail: designate as a location for temporary projects
8. River to Plaza Skywalk: engage artists to develop distinctive overlooks and pedestrian bridges to give visitors a new appreciation of the vista, and special treatments for railings
9. Breakwater floating islands and floating playground
10. Hazelwood Promenade to Hazelwood Wharf: Hazelwood Promenade Railroad trellis

In the following pages, a dozen public art projects are illustrated to provide inspiration for each concept and area.

PLAN LOCATION OF THE SPECIFIC AREAS FOR ARTIST'S INVOLVEMENT



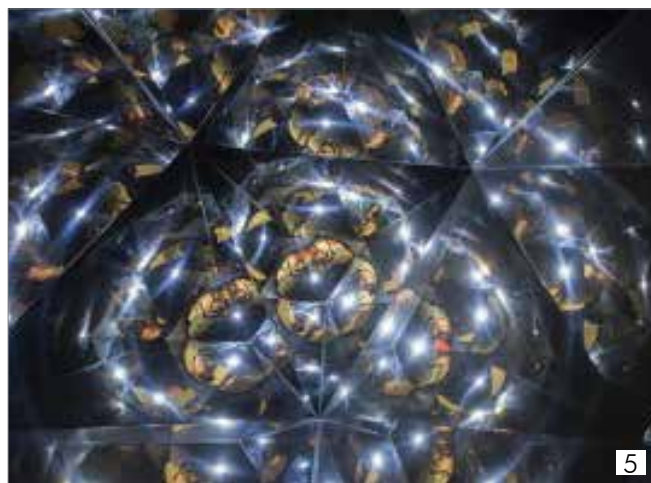


FOLLOW THE FLOW OF WATER

1. Mags Harries and Lajos Heder, *Drawn Water*, 2001 Fresh Pond Reservoir, Cambridge, MA
2. Nancy Blum, *Dogwood Fountain*, Charlotte, NC
3. Ginger Brooks Takahashi, edition of three custom manhole covers and hydropower lighting to create public views of the underground stream; accompanied by downloadable written scores and audio recordings as well as an artist rendered map. Supported by Nine Mile Run Watershed Association and Center for Civic Arts, with Office of Public Art, Pittsburgh.

FOLLOW THE FLOW OF HISTORY

4. 5. Joan Biddle, Hannah Kirkpatrick, Charlotte Potter, Kristi Totoritis, *Glassatorium*, 2015, found & recycled material, Norfolk, VA. Functions as a kaleidoscope.
6. Beatrice Glow, *Manahatta VR*, The experience begins on a palpable digitally reconstructed Broadway block (8th street and Waverly Place) where the street is revealed to be part of a matrix of Indigenous pathways where plants are identified by Lenape names and the turtle, turkey and wolf clans appear as star constellations.



ENHANCE THE EXPERIENCE FOR PEOPLE WITH DIFFERENT ABILITIES THROUGHOUT THE SITE

1. Stacy Levy, *Meander Walk At Stevens*, Creek Nature Preserve, Mint Hill, NC 2020

ENGAGE THE COMMUNITY THROUGH DESIGN, MAKING OR ALLIED PROGRAMMING

2. Stacy Levy, *Street Lagoon*, Produced in collaboration with with the Southwark neighborhood, Mural Arts Philadelphia and Philadelphia Water Department. 2016



KINETIC PLAZA

3. *La Musidora*, 2017, Denver Museum of Art
4. *Rocking Cradle*, Center of Life with Arts Excursion Unlimited, Pittsburgh PA

LINEAR PLAZA

5. *Lorna Jordan*, Reach, 2009, Edmonds Community College, Lynnwood, WA

COAL PLAZA

6. *George Trakas*, Newtown Creek Nature Walk, Newtown Creek Water Pollution Control Plant, Brooklyn, NY





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GATHERING PLACE

1. Janet Zweig, *Prairie Logic*, 2012, Kansas City, MO. Performance by Casa de Fado
 2,3,4. *The Bee-Line* habitat sculptures and gardens are co-created with artists and community in Kingston, Bee Real Bee Everywhere is a multi-faceted project by Public Art St. Paul that promotes awareness and habitat for pollinating insects in Saint Paul's urban core. Three sculptural pollinator "Sky Rises" near areas of forage and water.

STEEL AND GLASS PLAZA

5. Newtown Creek Nature Walk, George Trakas, Newtown Creek Water Pollution Control Plant

THE WILDS ADVENTURE TRAIL

6. *Celebrate Urban Birds* is a citizen science project focused on better understanding the value of green spaces for birds connecting people of all ages and backgrounds to birds and the natural world.

RIVER TO WATER SKYWALK

1. Martin Puryear, *Pavilion in the Trees*, West Fairmount Park, Philadelphia
 2. Caroline Law, *Rippling Waters Bridge*, 2009

BREAKWATER FLOATING ISLANDS AND FLOATING PLAYGROUND

3. Jackie Brookner, *Veden Taika (The Magic of Water)* consists of three floating islands in Salo, Finland. The islands provide nesting habitat for birds and plant-based filtration for improving water quality in the Salo Bird Pools, lagoons that were formerly used in the sewage treatment processes of the Salo Municipal Sewage Treatment Facility.

HAZELWOOD PROMENADE RAILROAD TRELLIS

4. Sheila Klein, *Shady Liberty Bridge*, 2012, Pittsburgh, PA



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IMPLEMENT AND INNOVATE

The ambition of this recommendation is in keeping with the vision for all of Hazelwood. These innovative ways to prioritize sustainability, natural restoration, and public art move beyond the models found elsewhere in Pittsburgh. Many waterfront sites developed throughout the country provide valuable precedents; however, Pittsburgh can be a national leader with an approach to community engagement and neighborhood connectivity as part of the master planning process that includes the ongoing participation outlined in this Part.

The Master Site Development Plan, with the community's active involvement with sustainability, art, and culture, set forth a mandate of including those elements as part of the built and natural environment. The success of the Hazelwood Riverfront sustainability and public art strategy will require curatorial vision and collaboration with multiple disciplines and entities. The vision for Hazelwood Green as well as the active community organizations offer a range of potential partners to transform the Riverfront.



SITE PHOTO



SITE PHOTO OF THE MOORING CLUSTER



SITE PHOTO FROM THE MOORING CLUSTER LOOKING AT THE RIVER

As implementation begins to advance, the incorporation of artists should be considered from the beginning. The following recommendations indicate a long-term methodology to involve artists and evaluate success and short-term ideas for immediate activation.

ARTISTS INTEGRAL TO PLANNING, DESIGN, AND CONSTRUCTION

- The number of projects, artists' scope of work, funding sources, and budgets for artists' projects should be determined as part of the project planning so that the art scope is part of the overall project.
- Artists collaborate with the design team (landscape architects, building architects, engineers, and ecologists) to incorporate art elements into the design and, ultimately, the construction of the Riverfront.
- Select artists to start with the design team at the beginning of the design process.
- Consider developing specific project(s) for artists who are new to working in the public realm and identify the support they might need to succeed.

ARTIST SELECTION

- The process to select artists should be open, fair, and inclusive. An RFQ should be widely issued and describe the types of projects that will involve artists. It should include the artist's scope and responsibilities, project timeframe, art budget, and pertinent information related to the project. It should indicate artist qualification criteria and any experience required.
- Form an art selection committee that includes people with expertise in public art, Hazelwood residents, experts in project-related subjects (ecology, history, etc.), and representation from the landowner.

- The selection committee should review applications and make recommendations.
- The following methods could be considered for the selection process: Select artists for specific projects or create a pool of artists for the design team's use as the primary source for selection.

EVALUATION

- Evaluate the art and ecology of temporary projects and programs to assess what types of information, engagement, and ideas should be incorporated into the design of the permanent Riverfront.
- Evaluate the level of community engagement and familiarity with the Riverfront and see how this can be increased by art.
- Build on this knowledge to identify ideas that would be helpful to prototype for the constructed site.
- Determine how any of the temporal projects should be integrated in more permanent ways.
- Identify the types of projects and partners that can continue as the Riverfront is built.

EXPERTISE

For long-term art curation on the site, a designated role or individual could be considered. Close integration with the other art/culture-related programs in the Greater Hazelwood neighborhood, the Plaza, and other public spaces in the Hazelwood Green District is recommended so that efforts are synchronized.

- Curate, develop, and manage a vibrant mix of public art projects to support the Riverfront vision.
- Outreach to groups involved with science, technology, ecology, and the arts who want to initiate programs on the site.

- Review and permit projects that are submitted by interested groups.
- Determine the approach for selecting artists and artwork.
- Coordinate the art budget.
- Cultivate and steward relationships with program partners and site developers.
- Lead artist selection, design development, project review, and implementation.
- Create, implement, oversee education and community engagement strategies.

ACTIVATE THROUGH COMMUNITY ENGAGEMENT

Engaging the community through nature exploration, art-making workshops, and roving learning experiences can help build a positive relationship with the River. Local residents expressed significant fears and concerns about the Riverfront due to the lack of access. Creating tangible and lyrical connections from neighborhood to the River could make a substantial difference. The following precedents could be considerations of art formats in the activation phase:

An Art Ecology lab/field station is proposed to establish a presence for art on the site to create river-related experiences for the neighborhood and the region.

- Workspace.
- Storage for artists utilizing the site.
- Meeting place.
- Demonstration /presentation space.
- Mobile components that can be set up in multiple locations on-site and off.
- Crucial to introducing the community to the River.

Invite artists to activate the place, to research and prototype ideas that will contribute to the built Riverfront and the community's perceptions and experiences. Collectively the projects will respond to what makes this a special place. Engage all types of artists (visual, performing, literary, etc.). Types of projects to consider include:

- Create an inventory of current plants.
- Repurpose debris and refuse caught in the mooring cells.
- Observe and experience nature.
- Explore the clues to history, ecology, plants, and water that can be seen on the site.
- Offer guided tours.
- Duration: daylong public events to explore the water.
- Duration: think into the future.
- Sound and spoken word connecting to multiple rivers.
- Celebrate seasonality.
- Activate the River's edge.
- Engage with the River.
- Explore history in the present.
- Employ multiple ways to tell stories.
- Host processions or parades.
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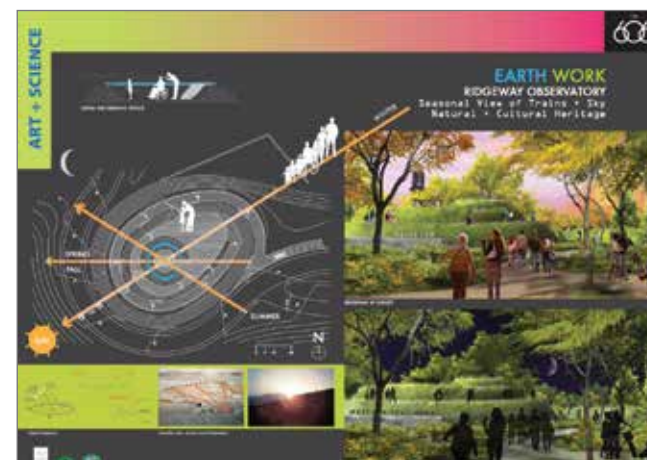
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THE 606, FRANCES WHITEHEAD, CHICAGO, IL

ACTIVATE THROUGH COMMUNITY ENGAGEMENT

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ART-ECOLOGY LAB/FIELD STATION
CREATES RIVER RELATED EXPERIENCES FOR THE
NEIGHBORHOOD

1.2.3. Fastnet plein air landscape drawing classed held at Freshkills, Staten Island, created by James Power, artist.



ART-ECOLOGY LAB/FIELD STATION
COULD BE MOBILE AND VISIT HAZELWOOD GREEN AND
PLACES IN NEIGHBORHOOD

4. MLAB, 2008 – 2018, Marion Wilson, started as a yearlong class of nine students to gut, renovate and then program this used RV into a mobile digital lab, poetry library and community gallery to offer arts education to city schools. MLAB travelled to 12 city schools a year – over the next three years offering art and creative writing programs to elementary, middle and high school students. It was repurposed by the artist as a moss lab.



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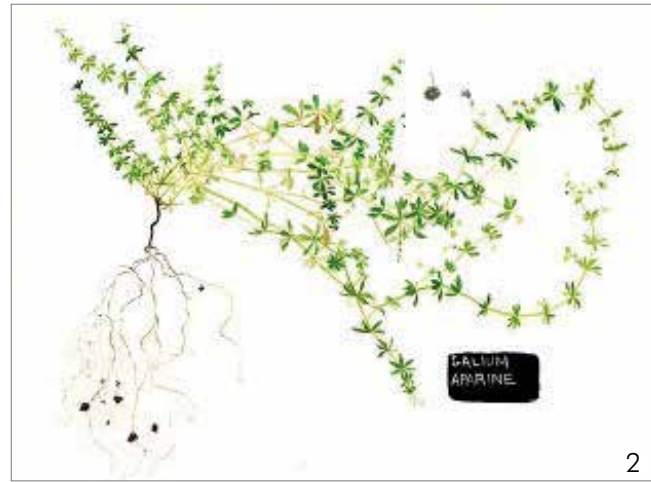
ART-ECOLOGY LAB/FIELD STATION
COULD BE A PREFAB STRUCTURE

3. 4. ArtBuilt Mobile Studios – Matthew Jensen, Queens Museum, 2015

ART-ECOLOGY LAB/FIELD STATION
CRUCIAL TO INTRODUCING THE COMMUNITY TO THE
RIVER

5. 6. Listening School, Katies Bachler at Bartrams Garden, Philadelphia PA. Katie and a team of eight high school students from John Bartram's High School have been moving around this Southwest Philadelphia neighborhood listening and learning about what matters to people.





CREATE AN INVENTORY OF CURRENT PLANTS
 1. 2. 3. Bob Braine & Leslie Reed, Bronx Lot Florilegium, 2005
 4. 5. 6. Katie Holten, Tree Museum, 2009, 100 trees along the Grand Concourse Marked with signs on pavement indicate the tree name in English/Spanish/Latin Phone # to call for audio guide

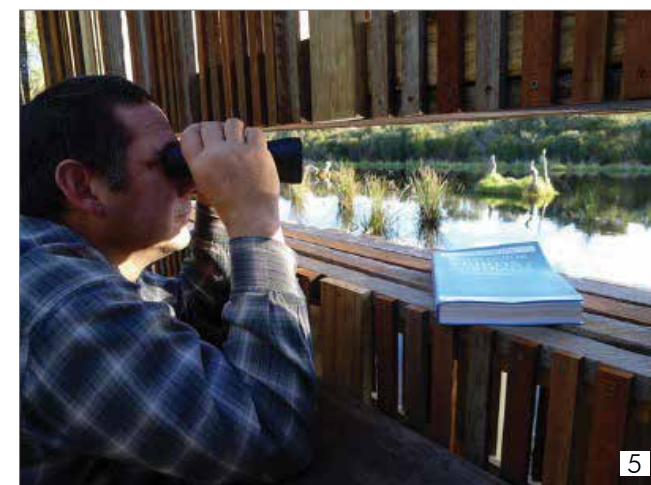


REPURPOSING DEBRIS AND REFUSE CAUGHT IN THE MOORING CELLS
 1. 2. 3. Nicdealm, Rio Almansor 2018

EXPLAIN WHAT'S HAPPENING
 6. Rosten Woo, Los Angeles River Signage Program



OBSERVING AND EXPERIENCING NATURE
 4., 5. M12 Studio, The Ornathorium, 2011, International Biennial, Spaced: Art out of Place. Perth and Denmark Shire, Western Australia. Building materials, social project.





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OFFER GUIDED TOURS

1. 2. 3. 4. Los Angeles Urban Rangers, the Los Angeles Urban Rangers develop guided hikes, campfire talks, field kits, and other interpretive tools to spark creative explorations of everyday habitats, in our home megalopolis and beyond.

DURATION: DAYLONG PUBLIC EVENTS EXPLORE WATER

5. 6. Painting the tide by the hour at Bartram's Garden, Philadelphia, 2018. Presented by Mural Arts



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DURATION: THINK INTO THE FUTURE

1. 2. Future Library, 2014-2114, by Katie Patterson, Norway

SOUND AND SPOKEN WORD CONNECTING TO MULTIPLE RIVERS

3. 4. Bahar Behbahani, All water has a perfect memory., 2019 at Wave Hill. Connected the Hudson with seven contested rivers the Rio Grande, the Karun, the Euphrates, the Ganges, Mississippi, Nile and the Wouri. engagement from youth participating in Forest Project and Art Community Environment Stewards



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CELEBRATE SEASONALITY

5. 6. Merián Soto, Branch Dances, 2011 – 2012, an artist residency to create a site responsive dance in every season at Wave Hill



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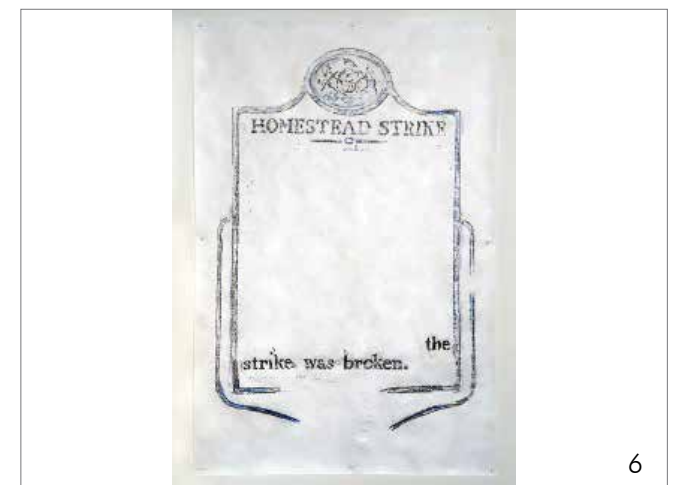


ENGAGING WITH THE RIVER
 1. Paddling scavenger hunts, exploring the industrial and natural worlds, Bartrams Garden, Philadelphia
 2. 3. SZABADONBALATON, 2019, sailboats on Lake Balaton in Hungary, carried visual elements of the essential reed bed habitats of the lake, while on shore the project served Balaton-specific drinks to taste and contemplate processes like algae-bloom, reed die-back or mud formation

HISTORY IN THE PRESENT
 4. Beehive Collective Design, "The Cost of Coal", 2017; traveling community drawings where people gather and make drawing together that explore issues in the site
 5. 6. Shaun Slifer, Redacted Rubbings, these selective rubbings of historical markers are an ongoing, evolving project for understanding the language of state-sanctioned history through an intentional erasure and omission which mirrors that of many "official" narratives. This work interrupts the provisional authority of the historical marker by disrupting static, languid interpretations of the plaque's narrative

ACTIVATE THE RIVER EDGE
 1. 2. 3. Duke Riley, Fly By Night, 2016, Brooklyn Navy Yard, Presented by Creative Time

ACTIVATE RIVER EDGE: BARGES
 4. 5. Mary Mattingly, Swale: Floating Food Forest, 2017 at Concrete Plant Park, Bronx River
 6. Shimon Attie, Night Watch, 2018. Hudson River, New York City, Produced by More Art





HISTORY IN THE PRESENT

1. *Dread Scott, Slave Rebellion Reenactment*, restaged and reinterpreted Deslandes' German Coast Uprising of 1811 as a community engaged performance spanning 24 miles over two days, through the River Parishes outside New Orleans and culminating in the city itself.

MULTIPLE WAYS TO TELL STORIES

2. *Stephanie Dinkins, Secret Garden, 2021*, the power and resilience of black women's stories shared across space and time as an immersive web experience at New Frontiers Sundance Film Festival

PROCESSIONS/PARADES

3. 4. Homewood-based artist Vanessa German led Blue Walk, a ritual of Love, Healing, Grief Grace and Gratitude, May 27, 2021, to pay tribute to George Floyd.
5. THE POINT: Annual Fish Parade, Hunts Point, Bronx

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PART 6

ACTION

OVERVIEW

The Plan's previous parts laid out the riverfront's vision as well as the recommended implementation strategies related to sustainability, culture, and art. In this part, the projected development cost for this vision is enumerated, the priorities for implementation are discussed, potential funding sources and pursuits are highlighted, and the anticipated long-term operations and maintenance costs are summarized.

OPINION OF PROBABLE DEVELOPMENT COST

As part of the planning-design effort, capital costs project the MSDP's specific physical improvements. Capital costs are fixed, one-time expenses incurred on the purchase of land, buildings, equipment or the construction/renovation of a building and the related land and/or water facility/building improvements. The capital cost projections, referred to as an Opinion of Probable Development Cost (OPDC), are important decision-making tools when finalizing the master plan's details. Additionally, they're essential to future fundraising and finance efforts as well as to priority/next step decision making.

The Advisory Committee and the Project Leadership Team used a set of preliminary OPDCs, generated during the planning-design process, to evaluate the various design concepts' financial feasibility and to shape the physical form and building materials the concepts envision. Projects of the scale and complexity as the Hazelwood riverfront more often than not need staged or phased construction spanning multiple years. The Advisory Committee and the Project Leadership Team utilized the OPDC to identify important implementation considerations and priorities guiding the development phases' delineation when funds become available.

Given the Hazelwood Riverfront's scale, its conceptual nature, and the number of innovations or suggested new solutions, the following OPDC is not based on estimated quantities of particular materials and/or construction costs gleaned from recent or comparable construction bids. Rather, the OPDC is based on development or implementation cost research of exemplary riverfront and park/recreation developments from around the United States. More than 20 projects ranging in size, scale, complexity, and materiality were inventoried and analyzed. While the projects' range varies, they were specifically selected because some project element(s) comparably reflect the Hazelwood Riverfront's proposed design.

Each exemplary project's per square development costs were computed. The development costs represented the "all in" figures (which may include land acquisition, infrastructure, amenities and finance costs) to get the project open for public use and enjoyment. More importantly, the development costs reflect the actual timeframe needed to develop the exemplary projects. As a result, they are more inclusive and accurate. Minor adjustments to computed development costs account for inflation and regional cost differences.

The exemplary projects were further assessed based upon their applicability or comparability to the MSDP's different envisioned riverfront sections. The comparables' per square foot development costs were then applied to the similar, associated Hazelwood riverfront area. For instance, the Portland East Side Boardwalk project was determined comparable to the Hazelwood Riverfront's proposed Floating Walkway improvement. Thus, the estimated Floating Walkway square footage incorporates Portland East Side project's per square foot development cost. This computation produces the expected development cost for a similarly constructed improvement along the Mon River.

The OPDC estimating process accounts for all areas of the Hazelwood Riverfront and are based on the actual development costs derived from comparable, exemplary project research. To further account for differences in materials and levels of amenity, the OPDC projects and arrays "conservative" and "robust" development costs. Conservative costs represent use of more common, readily available construction materials, conventional construction systems, and basic design treatments. The robust costs represent use of higher quality construction materials (stone versus concrete) and/or non-conventional design solutions. An example of the non-conventional design is the Skywalk's construction as a "cable stay-style" bridge rather than more straight-forward truss beam construction.

The resulting cost range provides a comparison as well as future funding pursuit insight and guidance. Additionally, the conservative and robust points of reference illustrate what funding is needed to elevate a project from one that is quickly addressing a community need or aspiration to one that is creating a unique or special design emblematic of a world-class place. Neither point of reference is inappropriate. Rather, as time goes on, funding availability emerges, and the direction of

Hazelwood's renaissance becomes more clear, informed and definitive decisions can be made regarding which point of reference is most viable or appropriate for specific portions of the MSDP. The level of detail, complexity, and the richness of materials established as part of any future detailed design effort will reflect the budget targets.

The following summary table outlines anticipated development costs for the entire riverfront area as well as connections to Greater Hazelwood, the Hot Metal Bridge, and the Eliza Furnace Trail. So a reader is able to best tie cost projections to the Master Site Development Plan's specifics, projected costs are grouped into geographic areas (e.g. The Wilds Adventure Trail, The Gathering Place, Kinetic Plaza, etc.) rather than by material or construction component (e.g. asphalt paving, concrete paving, wood decking, etc.).



EXAMPLE OF A TRUSS BRIDGE



EXAMPLE OF A CABLE STAY BRIDGE

HAZELWOOD RIVERFRONT MASTER PLAN OPINION OF PROBABLE DEVELOPMENT COST AS OF MARCH 2021

IMPLEMENTATION PRIORITIES

Similarly scaled and complex projects to the proposed Hazelwood Riverfront are often implemented or constructed over time. It is not that construction activities necessarily need more time, but, typically, more time is needed to raise or appropriate funds that finance construction or to obtain necessary permits and approvals. In finalizing the MSDP and projected development costs, the Advisory Committee and the Project Leadership Team evaluated what, if any, phases could be logically delineated as subdivisions in the project’s overall implementation effort.

Both groups concluded that, despite successfully forging the riverfront’s long-term vision, numerous unresolved issues or hurdles to achieving that vision remain. Some hurdles act independently with no influence on another hurdle; others are inter-related with dependence on others for successful resolution. Until the most influential issues are resolved or a workaround is crafted, delineation of discrete implementation phases is premature. Rather, the two groups developed a list of priority considerations should be evaluated when funding is secured and there is opportunity to advance on some portion of implementation – whether it represents a specific construction project (such as renovating the Pump House) or a development phase (consisting of multiple projects that occur in a contiguous area).

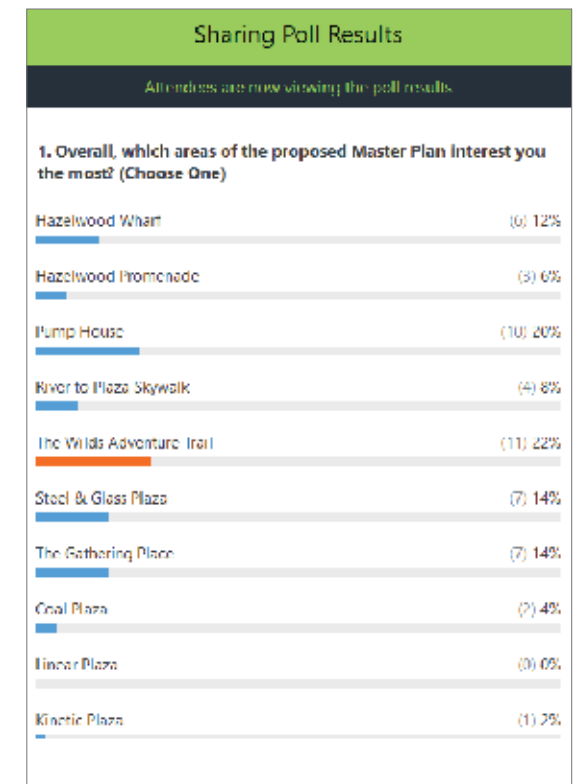
Each project’s or phase’s importance or priority, based on a set of Advisory Committee-formulated principles or considerations, should be publicly vetted as part of the public review process. These considerations focus on the project’s or phase’s ability to achieve the planning-design effort’s over-arching principles and the following:

- **Catalytic Effect** - : launch or stimulate other implementation efforts and interest in the riverfront itself.
- **Access/Connections** – connect nearby neighborhoods to the river.
- **Infrastructure Improvements** – feasibly extend utility services in support future recreational and social activities.
- **Safety/Security** - get people legally and safely to the water’s edge.
- **Activation** - draw neighborhood and city residents to the Hazelwood Riverfront with unique and place-specific cultural, ecological, artistic and educational wellness and leisure activities and programs; and
- **Development Cost** - accurately project the total expenditures related to final engineering, permitting, and construction.

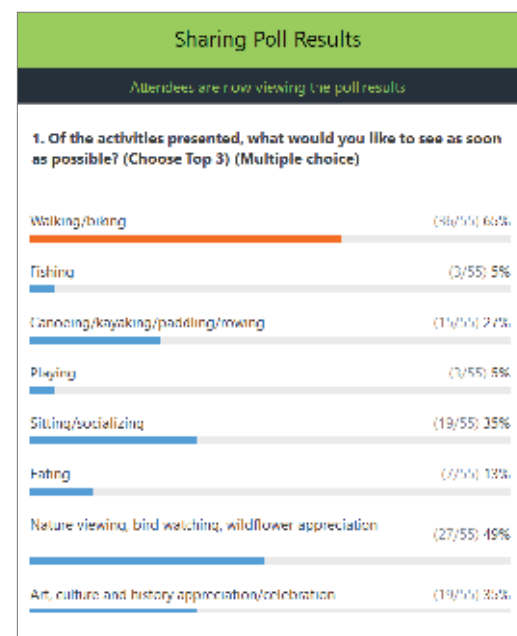
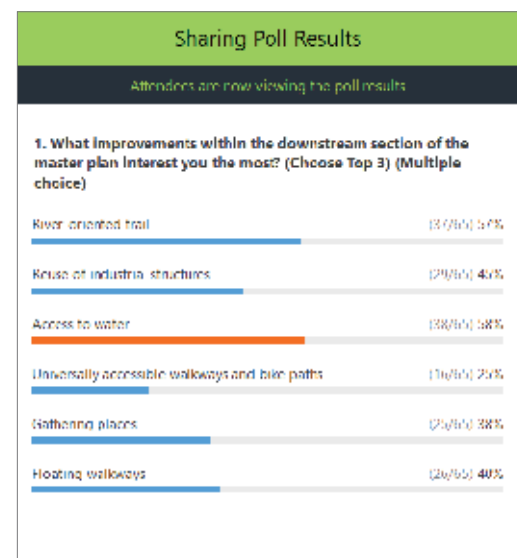
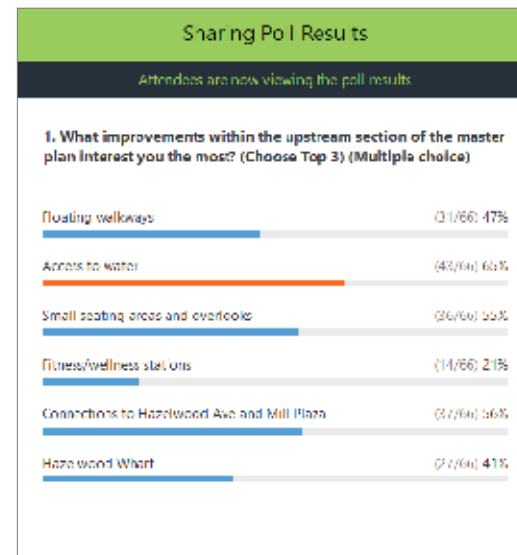
IMPROVEMENT AREA	Conservative	Robust
Land Elements		
1 Kinetic Plaza	\$560,000	\$740,000
2 Linear Plaza		
<i>The Passage</i>	\$2,600,400	\$4,300,000
<i>The Lounge</i>	\$1,622,000	\$2,200,000
<i>The Harbor</i>	\$1,400,000	\$1,532,000
3 Coal Plaza (@ Coal Loader #1)	\$3,311,500	\$6,712,500
4 The Gathering Place	\$2,273,400	\$3,368,000
5 The Wilds Adventure Trail	\$1,083,000	\$1,425,000
6 Steel and Glass Plaza (@ Coal Loader #2)		
<i>Coal Loader Deck</i>	\$4,345,000	\$6,145,000
<i>Coal Loader Interior</i>	\$1,045,000	\$1,505,000
<i>River Swings Plaza</i>	\$3,300,000	\$4,200,000
7 River to Plaza Skywalk (@ Pump House)	\$2,837,785	\$3,447,500
8 Pump House	\$5,500,000	\$7,000,000
9 Hazelwood Wharf		
<i>Floating Playground and Splash Pad</i>	\$1,500,000	\$2,000,000
<i>Bulkhead Wall and Plaza</i>	\$3,000,000	\$4,000,000
10 Hazelwood Promenade	\$1,976,000	\$3,848,000
Subtotal	\$36,354,085	\$52,423,000

Water Elements		
1 Floating Walkway		
<i>The Lounge</i>	\$2,830,000	\$3,200,000
<i>The Harbor</i>	\$3,410,000	\$4,800,000
2 Water Access Ramps	\$250,000	\$400,000
3 Floating Islands (concrete/fiberglass)	\$292,500	\$292,500
4 Floating Islands (jute)	\$497,250	\$497,250
5 Elevated River Stage	\$1,560,000	\$2,500,000
6 Deck Stage	\$780,000	\$1,100,000
7 Rowing Docks	\$138,900	\$138,900
8 Kayak Launch	\$200,000	\$200,000
Subtotal	\$9,958,650	\$13,128,650
SUBTOTAL HARD COSTS	\$46,312,735	\$65,551,650

Other		
1 Detailed Design, Engineering (assumes 10% of hard costs)	\$4,631,274	\$6,555,165
2 Contingency (assumes 20% of hard costs)	\$9,262,547	\$13,110,330
3 Permitting (assumes 1% of hard costs)	\$463,127	\$655,517
Subtotal	\$5,094,401	\$20,321,012
TOTAL COSTS (Land Elements, Water Areas and Other)	\$51,407,136	\$85,872,662



PRIORITY POLL RESULTS FROM APRIL 7TH PUBLIC MEETING



PRIORITY POLL RESULTS FROM APRIL 7TH PUBLIC MEETING

Additionally, the Advisory Committee and the general public identified a set of priority actions. These actions represent the critical ‘next steps’ to the master plan moving forward and becoming a reality. The actions are listed in a loose sequential order in which they most likely need addressed. As each action varies in length and complexity, it’s expected that, at any given time, multiple actions will be underway. The MSDP’s key actions include:

- Update City-related policies and plans to reflect the vision for the Riverfront
- Resolve the ‘legacy’ issues that impact legal public access and use of the Riverfront
- Work with the railroads to safeguard public safety and security
- Collaborate with adjoining property owners and public officials to improve regional connections to the Riverfront area
- Build public awareness and appreciation of the Riverfront and enable residents to explore safely
- Begin to define Riverfront development projects and implementation phases
- Identify and pursue funding opportunities to capitalize on development projects

FUNDING

In total, public sources have funded nearly 60 to 70 percent of the total capital cost outlays for public riverfront projects developed in the Pittsburgh region over the past 20 years. Such projects include the renovation of Point State Park, North Shore Riverfront Park, South Shore Riverfront Park, Millvale Riverfront Park, and the Etna Riverfront Trail and Park. These projects’ specific capital outlays vary but may have included land acquisition, site preparation, and facility/amenity construction. A combination of federal and state grant programs and commonly utilized multiple sources provided the most significant funding. In most cases, implementation timeframes spanned nearly 10 years and were largely driven by necessary funding cycles.

Conversely, the use of municipal general funds, bond obligations or philanthropic grants have funded 30 to 40 percent of recent public riverfront projects’ development costs. Because of longer implementation timeframes, these costs have been spread or absorbed over numerous budget years and had no to minimal relative taxpayer impact.

The high rate of public funding for past Pittsburgh region riverfront projects is a remarkable statistic. In today’s economic and political climate that pattern, in whole, may be difficult to replicate. While the approach may have some challenges, this type of percent allocation modeling (public vs private) could be the most realistic and appropriate funding strategy for a riverfront like Hazelwood’s. Much of Almono’s and its development partners’ early investments need to be placed on expanding additional job and resident opportunities within Greater Hazelwood and Hazelwood Green. These needs will divert capital away from the Riverfront. Additionally, the need to remedy long-term, site-specific issues (e.g. the

presence of the fly ash, improving neighborhood connectivity and access with the Skywalk, or rehabilitating significant structures such as the Pump House) are best accomplished with significant public involvement and capitalization.

The strategy’s most significant trade-off is that the MSDP ‘full development or build-out’ implementation timeframe could take longer than past Pittsburgh region riverfront projects. A realistic timeframe may span between 10 and 15 years. In early implementation stages, it is recommended that Almono (and development partners) pursue federal and state grant opportunities, with a goal of public sources funding 65 to 80 percent of the riverfront development. This benchmark is aggressive but achievable. The remaining 20 to 35 percent of funding could be made up of commitments or sources borne from Almono and/or development charges gleaned from the new development.

Finally, if, in the future, Almono grants the City of Pittsburgh or another well-established entity such the Friends of the Riverfront (or the like) a right-of-passage (refer to Part 5), Almono could then partner with the City to potentially leverage general funds, general obligation bonds, or the proceeds from a special tax district for funding capital improvements.

¹The Scioto Mile, a 6-mile-long public Riverfront trail and green space in Columbus, OH was constructed in part using Downtown Development District funds raised through special tax exactions. Pittsburgh’s Riverlife has similarly explored the concept and feasibility of using a special tax district to fund on-going maintenance of the City’s Riverfront trails. This same concept could also serve as a vehicle to finance capital improvements.

The following page presents a summary of Pennsylvania-based grant programs applicable to the Hazelwood Riverfront. An important aspect of grant-writing is the actual strategic sequence or order of grant requests, the permissibility of coupling or ‘matching’ funds from different grant programs, and the appropriate means of using public monies versus private donations/grants to avoid cost escalations or overly restrictive bidding processes/requirements. So the project’s overall funding strategy can be fully optimized, Almono, with its various development partners and neighborhood stakeholders, should review relevant grant programs to stay abreast of the specific conditions and requirements.

DCED Greenways, Trails And Recreation Program

DCED Multimodal Transportation Fund

DCNR Community Conservation Partnership Program (C2P2)

DCNR Riparian Forest Buffer Program

DCNR All-Terrain Vehicle (ATV) Management Program

DEP Growing Greener Environmental Stewardship Fund

PennDot Safe Routes To School Fund

Pennvest Drinking Water State Revolving Fund

USDA/ NRCS Environmental Quality Incentives Program

Paul Bruhn Historic Revitalization Grants

Community Development Block Grant (CDBG)

Transportation Alternatives Program (TAP)

Surface Transportation Program (STP)

Land And Water Conservation Fund (LWCF)

Recreational Trails Program (RTP)

Local Business Community Program

National Fish And Wildlife Foundation Grant

People For Bikes Community Grant

The North Face Grant

KEEN’s Kids Grant

REI

Rails-to-Trails Conservancy

2021 AARP Community Challenge Grant

The Asphalt Art Initiative Grant

OPERATION AND MAINTENANCE

WHY IS OPERATIONAL ANALYSIS IMPORTANT?

Operations and maintenance (O&M) costs represent routine, re-occurring cost outlays related to general facility or outdoor space upkeep. They are different from ‘one-time’ development costs necessary for acquiring and/or constructing a public park or public riverfront space. These two types of costs, often unfamiliar terms to many, are analogous to a common circumstance to which many people may easily relate:

Development Costs = The Original Cost to Purchase a Car

Operations and Maintenance Costs = The Annual Cost Related to Oil Changes, Gas Purchases, Tire Purchases, and Annual Insurance Coverage for the Car

These costs are important inputs or points of reference when evaluating the long-term financial sustainability of a MSDP. Long-term maintenance of public spaces is a growing concern in the Pittsburgh region; when limited resources are available for maintenance, it can lead to newer riverfront investments diverting, or even cannibalizing, older riverfront investments. Riverlife recently completed a study with the specific purpose of evaluating how much is actually spent on the City’s river trails’ everyday operations versus what actually should be spent. Additionally, an analysis of operations and maintenance, referred to herein as the Operational Analysis, is helpful in ‘right-sizing’ or refining a conceptual design so proposed amenities and improvements don’t exceed to an operator’s ability to stay on top of everyday upkeep.

O&M costs typically address tasks related to cleaning, painting, supplies, labor and management, marketing/promotions, programming, etc. In some instances, an operational analysis may anticipate costs for minor repair or deconstruction/rehabilitation of improvements that may be damaged through the course of everyday ‘wear and tear’ and/or expected weather/climate induced deterioration. In the case of a Pittsburgh riverfront setting, this would also include clean-up related to seasonal flooding and/or sedimentation.

WHAT ASPECTS OF HAZELWOOD RIVERFRONT’S O&M WILL NEED TO BE ADDRESSED?

In developing the following Hazelwood Riverfront Operational Analysis, the specific design necessitates four operational areas: Management, Maintenance, Capital Repairs/Replacement and Programming/Public Art.

Operational areas are broad, topical categories that can be broken into further tasks or subdivisions of repeated/on-going activities. The Operational Analysis utilizes a more fine-grain breakdown of operational items to project the amount of time and budgetary resources necessary for maintaining the proposed MSDP’s activity and upkeep at a standard acceptable for a river-oriented public space. The more fine-grain breakdown of the operational items considers:

Management

- Vendors/tenants
- Funding pursuits

- Security
- City/neighborhood coordination

Maintenance

- Building cleaning/housekeeping (e.g. restrooms)
- Litter/refuse
- Landscaping/mowing
- General inspection
- Flood clean-up
- Minor repairs (e.g. faucet in a restroom, painting)

Capital Repairs/Replacement

- Major repairs (e.g. roof replacement, hardscape renovation)
- Site structures and furniture
- Appliances and equipment

Programming/Public Art

- Curation activities and events
- Temporary installation coordination
- Permanent installation coordination
- Maintenance/repair

OPERATIONAL ANALYSIS

The Hazelwood Riverfront Operational Analysis is organized into groupings of operational and maintenance activities. These groupings are organized by their character zones: the Passage, the Lounge, the Harbor, the Porch, as well as the two extension areas - the Skywalk to the Plaza and the Hazelwood Promenade. This Analysis outlines specific tasks for maintaining both the proposed MSDP's land and water

improvements. Each specific task accounts for its proportionate share of the operational areas and items enumerated above. The Analysis does this by projecting the total number of hours for each specific task, describes a cost range for completing the task, and the frequency of task completion. Personnel hour estimates and hourly or material cost projections relating specific tasks utilize 2021 dollar values. The Analysis' organization and format enables readers to quickly ascertain each specific areas' expected O&M costs.

Time and cost projections are based on actual 'real-world' public applications in similar settings and do incorporate labor efficiencies and cost structures of a public operator. The public operator model typically produces higher/greater labor cost projections because of union structure, benefits and pension contributions. Thus, this approach represents a conservative estimate of long-term costs. As an aside, Almono owns the property, is a private entity, and is not bound to the same requirements of a public operator. Several alternatives exist where long-term O&M costs could be reduced using non-public operator models such as private contractors. The Operational Analysis does not evaluate these alternatives because they would most likely produce greater long-term financial sustainability than the base calculations.

In sum, the cumulative effect of the specific tasks' projected time assumptions estimate that a total of five full-time staff persons will be needed to support the MSDP's full buildout. One of the five staff persons is in the leadership role making critical programming, capital improvement, and budget management decisions. Another person is the manager coordinating day-to-day specific tasks and tracking progress. Remaining staff persons will be responsible for ground maintenance efforts, Pavilion and Pump House maintenance, on-going housekeeping tasks, and minor repairs.

Item	Quantity (Annually)	Unit	Unit Cost Low*	Unit Cost High*	Frequency of Maintenance		Annual Total Low	Annual Total High
					Apr to Oct (25 weeks)*	Nov to Mar (27 weeks)*		
Zone: The Passage	900						\$33,300	\$55,800
General Inspection and Repair	270	Hours	\$37	\$62			\$9,990	\$16,740
Linear Plaza hardscape					Month	Seasonal		
Seating and furniture					Seasonal	NA		
Lighting fixture					Seasonal	NA		
Renewable energy fixtures/PVs						Seasonal		
Landscape Maintenance	350	Hours	\$37	\$62			\$12,950	\$21,700
Field grass/wildflower mowing/cutting						Seasonal		
Shade tree/planter weeding and pruning					Month	NA		
Invasive species removal						Seasonal		
Spring/Fall cleanup						Biannual		
Litter Control	180	Hours	\$37	\$62			\$6,660	\$11,160
Litter pick-up						Once a week		
Trash and recycling pick-up						Twice a week		
River debris cleanup						Seasonal		
Other	100	Unit Price	\$37	\$62			\$3,700	\$6,200
Snow removal						NA		
Vandalism and graffiti removal						Average of 15 times/season**		
						Biannual		
Zone: The Lounge	1550						\$57,350	\$96,100
General Inspection and Repair	530	Hours	\$37	\$62			\$19,610	\$32,860
Gathering Place hardscape					Month	Seasonal		
Seating and furniture					Seasonal	NA		
Lighting fixture					Seasonal	NA		
Renewable energy fixtures/PVs						Seasonal		
Floating walkway and floating stage						Week		
Mooring cells/dolphins						Annual		
Accessible ramps						Month		
Kayak launch						Seasonal		
Floating islands						Seasonal		
The Gathering Place Restrooms						Twice a day	\$12,000	\$20,000
Stormwater Cistern Maintenance	200	Hours	\$37	\$62			\$7,400	\$12,400
Filter area cleanup/replacement						Annual		
Cistern inspection and cleanup						Annual		
Landscape Maintenance	480	Hours	\$37	\$62			\$17,760	\$29,760
Gathering Place lawn mowing					Week	NA		
Shade tree pruning and trimming						Biannual		
Periphery field grass mowing						Seasonal		
Planter weeding and pruning					Month	NA		
Reseeding						Annual		
Replenish mulch						Annual		
Invasive species removal						Seasonal		
Spring/Fall cleanup						Biannual		
Floating island vegetation upkeep						Annual		
Litter Control	220	Hours	\$37	\$62			\$8,140	\$13,640
Litter pick-up						Twice a week		
Trash and recycling pick-up						Twice a week		
River debris cleanup						Biannual		
Other	120	Unit Price	\$37	\$62			\$4,440	\$7,440
Snow plowing and removal						NA		
Vandalism and graffiti removal						Average of 15 times/season**		
						Biannual		
Zone: The Harbor	2150						\$79,550	\$133,300
General Inspection and Repair	780	Hours	\$37	\$62			\$28,860	\$48,360
Wilds Adventure Trail hardscape					Month	Seasonal		
Wilds Adventure Trail boardwalk					Month	Seasonal		
Seating and furniture					Seasonal	NA		
Lighting fixture					Seasonal	NA		
Renewable energy fixtures/PVs						Seasonal		
Fitness stations						Week		
Floating walkway						Week		
Mooring cells/dolphins						Every 5 Years		
Accessible ramps						Month		
Kayak launch						Seasonal		
Floating islands						Seasonal		
Pump House Restrooms						Twice a day	\$3,000	\$4,500
Pump House Play Space	120	Hours	\$37	\$62			\$4,440	\$7,440
Mulch replacement and replenish						Annual		
Surrounding landscaping maintenance						Month		
Fence or furniture repair						Week		
Landscape Maintenance	850	Hours	\$37	\$62			\$31,450	\$52,700
Rain garden maintenance						Month		
Vegetation pruning and trimming						Annual		
Invasive species removal						Seasonal		
Spring/Fall cleanup						Biannual		
Floating island vegetation upkeep						Annual		
Litter Control	250	Hours	\$37	\$62			\$9,250	\$15,500
Litter pick-up						Twice a week		
Trash and recycling pick-up						Twice a week		
River debris cleanup						Biannual		
Other	150	Unit Price	\$37	\$62			\$5,550	\$9,300
Snow plowing and removal						NA		
Vandalism and graffiti removal						Average of 15 times/season**		
						Biannual		

Item	Quantity (Annually)	Unit	Unit Cost Low*	Unit Cost High*	Frequency of Maintenance		Annual Total Low	Annual Total High	
					Apr to Oct (25 weeks)*	Nov to Mar (27 weeks)*			
Zone: The Porch	920						\$34,040	\$57,040	
General Inspection and Repair	350	Hours	\$37	\$62			\$12,950	\$21,700	
Floating play space					Month	Seasonal			
Hardscape					Month	Seasonal			
Seating and furniture					Seasonal	NA			
Lighting fixture					Seasonal	NA			
Accessible ramps						Month			
Kayak launch						Seasonal			
Floating islands						Seasonal			
Flood Restoration	150	Hours	\$37	\$62			\$5,550	\$9,300	
Sediment cleanup						Average of 10 times/year***			
River debris cleanup/removal						Month			
Damage repair						Annual			
Landscape Maintenance	220	Hours	\$37	\$62			\$8,140	\$13,640	
Vegetation pruning and trimming						Seasonal			
Invasive species removal						Seasonal			
Spring/Fall cleanup						Biannual			
Floating island vegetation upkeep						Annual			
Litter Control	120	Hours	\$37	\$62			\$4,440	\$7,440	
Litter pick-up						Twice a week			
Trash and recycling pick-up						Twice a week			
Other	80	Unit Price	\$37	\$62			\$2,960	\$4,960	
Snow plowing and removal					NA	Average of 15 times/season**			
Vandalism and graffiti removal						Biannual			
The Skywalk	110						\$4,070	\$6,820	
Structural Inspection and Repair	20	Hours	\$37	\$62		Every 5 Years	\$740	\$1,240	
Litter Pick-up	45	Hours	\$37	\$62		Weekly	\$1,665	\$2,790	
Snow Removal	15	Unit Price	\$37	\$62		Average of 15 times/season**	\$555	\$930	
Vandalism and Graffiti Removal	30	Unit Price	\$37	\$62		Biannually	\$1,110	\$1,860	
Hazelwood Promenade	505						\$18,685	\$31,310	
Street Fixtures and Furniture Inspection and Repair	75	Hours	\$37	\$62		Annually	\$2,775	\$4,650	
Landscape Maintenance	100	Hours	\$37	\$62			\$3,700	\$6,200	
Shade tree pruning and trimming						Biannually			
Spring/Fall cleanup						Biannually			
Litter Control	180	Hours	\$37	\$62			\$6,660	\$11,160	
Litter pick-up						Twice a week			
Trash and recycling pick-up						Twice a week			
Other	150	Unit Price	\$37	\$62			\$5,550	\$9,300	
Snow plowing and removal						Average of 15 times/season**			
Vandalism and graffiti removal						Biannual			
Materials							\$10,000	\$15,000	
							Labor Total	\$226,995	\$380,370
							Materials and Contracts Total	\$25,000	\$39,500
							Total Cost	\$251,995	\$419,870

* With a number of different options for landscape maintenance in the market, two hourly rates were included based on regional industry averages, adjusted with July 2021 CPI. Outliers exist below the low end and above the high end. This estimate does not include any volunteer efforts or donated time. Identified tasks are calculated based on hourly rates and based on a 25-week spring/summer/fall season.

Material costs are shown as separate line items.

** Typically in Pittsburgh between 13 and 15 times per year the daily accumulation of snow exceeds 1". A minimum 1" snowfall represents the industry standard for a snow removal event.

*** On average, the Monongahela River floods (rises above the 716.6' elevation) between 10 and 15 times per year.

