WATERSHEDS
OF SOUTH PITTSBURGH

CREATING A HEALTHY, VIBRANT AND RESILIENT CORRIDOR



THE SAW MILL RUN VALLEY MASTER SITE DEVELOPMENT PLAN SUMMARY REPORT

ALLEGHENY COUNTY, PA **MAY 2024**

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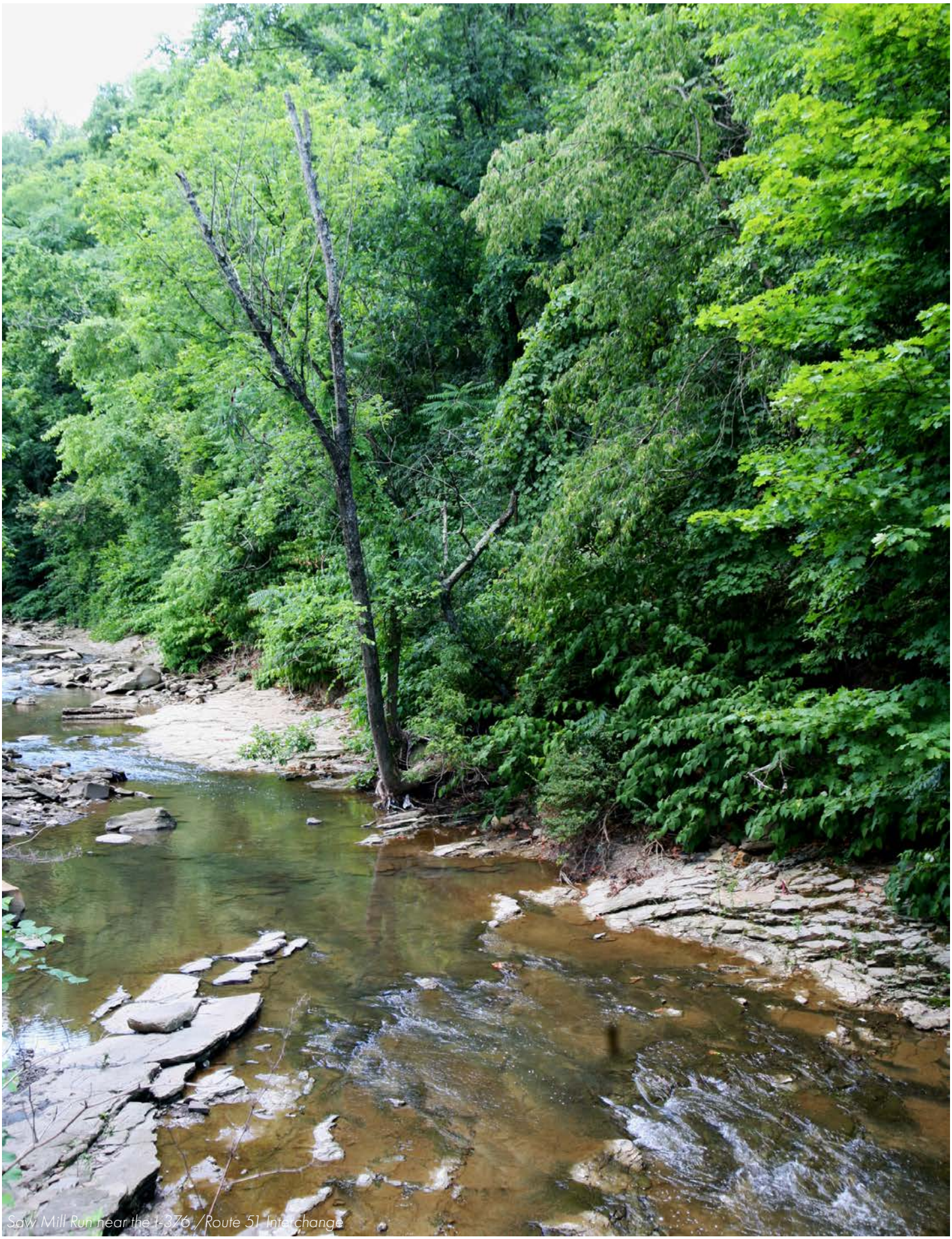
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Saw Mill Run near the I-376 / Route 51 Interchange

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PREFACE



Saw Mill Run behind Red, White, and Blue Thrift

Urban stream syndrome describes the impacts of impervious surfaces and intense land development on streams. It is usually characterized by increased nutrients and contaminants in the water, sudden or "flashy" changes in water level, modified channel shape or structure, and reduced biodiversity (Meyer et al. 2005).



Route 51 near the intersection with Edgebrook Avenue

THE GREEN BOULEVARD VISION

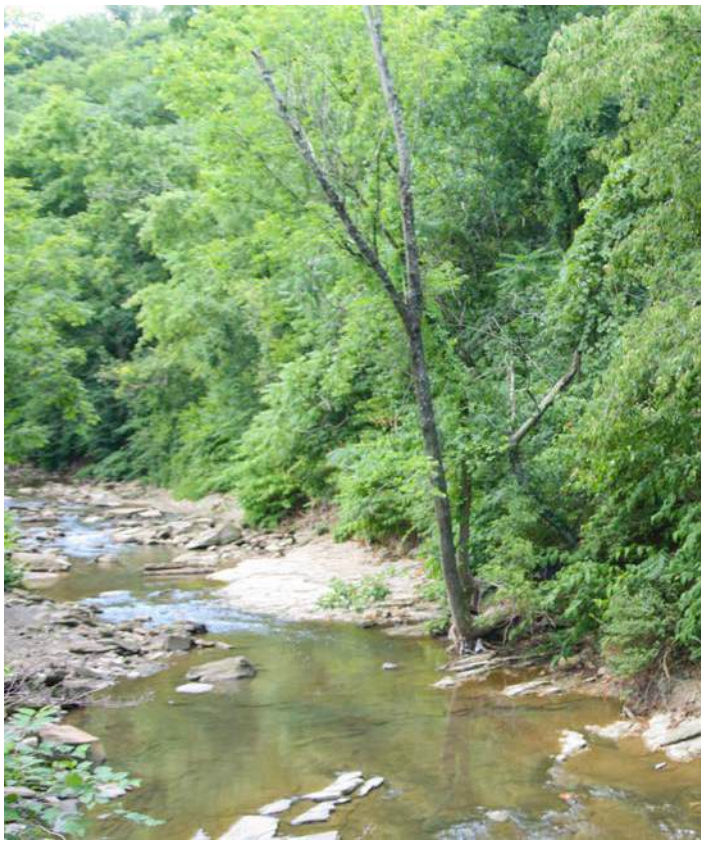
Over one hundred years ago, landscape architect Frederick Law Olmsted Jr. envisioned the Saw Mill Run stream corridor as a "green boulevard" of open space to protect against flooding and to serve as a valuable public asset for the Pittsburgh region. In his vision, the stream corridor could be a lush landscape traversed by Saw Mill Run and enjoyed by the region's residents as an escape from the city life.

However, even before Olmsted Jr.'s plea, streamside development was underway throughout the corridor. Development in this area is limited by the steep side slopes, restricting it to the relatively flat floodplain area at the bottom of the valley. The concerns Olmsted Jr. voiced came true; this once verdant stream corridor is now impacted by frequent flooding, daily traffic congestion, and haphazard development patterns. The development intensity is out of balance with the natural capacity of the corridor. Zoning and development controls allow up to three and four times more building area than land area in some portions of the corridor. Due to the extremely high ratio of impervious surfaces, Saw Mill Run has now become a poster child of urban stream syndrome.

While it is unlikely that Olmsted Jr.'s vision could ever be fully realized at this time, this study aims to reinvigorate the Green Boulevard concept for the Saw Mill Run corridor in the context of today's challenges and opportunities. The Master Site Development Plan for the Saw Mill Run corridor seeks to balance the complex and far-reaching influences within and around the corridor while complementing existing plans and studies in place and under development.

The guiding vision of the Green Boulevard shapes the recommendations to improve the corridor for years to come. To address the scale and complexity of the corridor, this Master Site Development Plan includes recommendations that focus on both Corridor-wide and site-specific conditions. The recommended actions are underpinned by four themes: protection, restoration, correction of detrimental conditions, and revealing hidden opportunities.

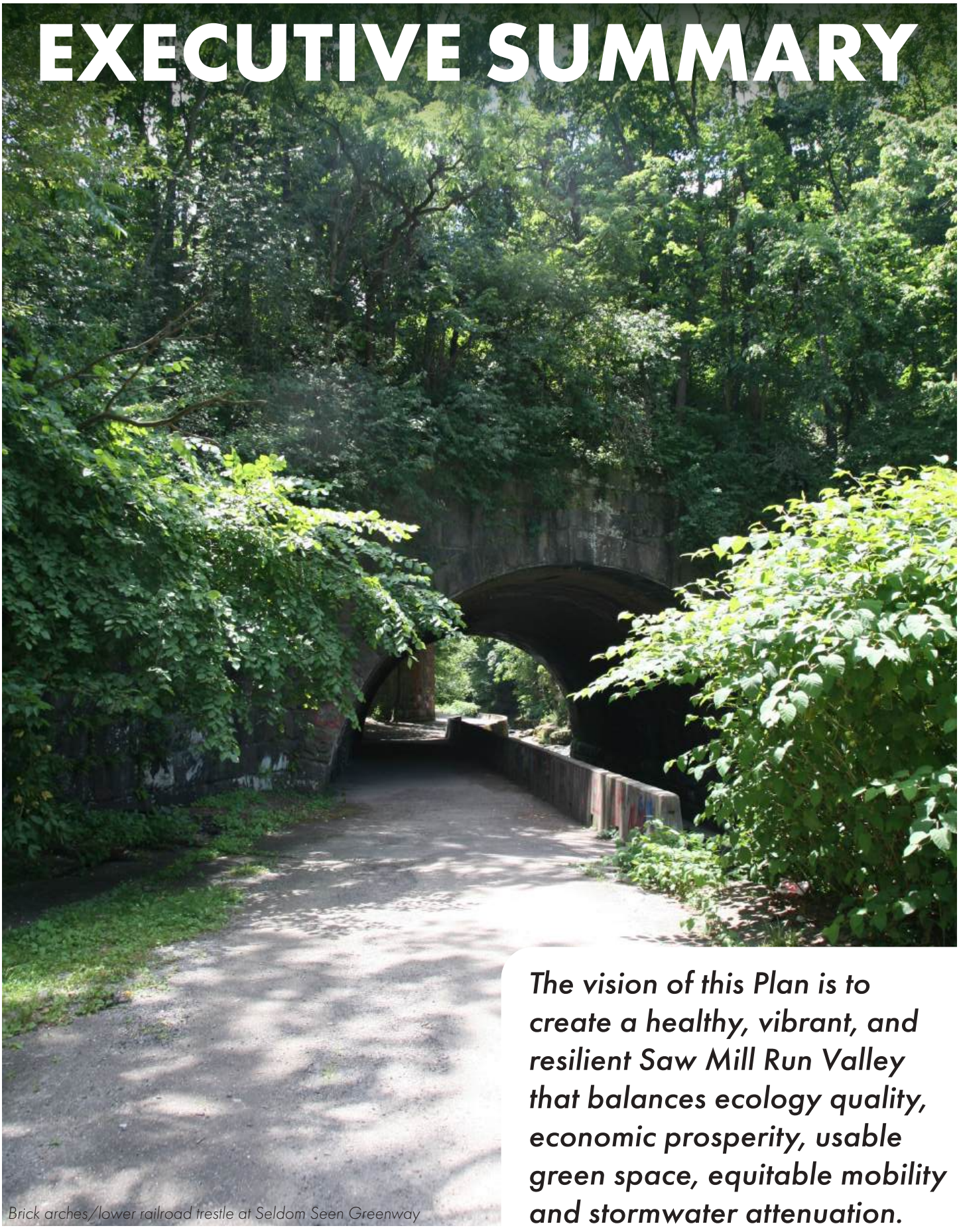
Although the end result of the Plan may be different than Olmsted Jr.'s vision, it will create a vastly improved experience for the residents, transportation, and commerce that depend on this corridor every day. In the context of the recommended improvements and the collaboration needed to pursue them, the Master Site Development Plan may be implemented over a generation or longer. This Plan is the first step to transforming the Green Boulevard concept from a 20th century vision into a 21st century reality for the Saw Mill Run Corridor over the next generation.







EXECUTIVE SUMMARY



Brick arches/lower railroad trestle at Seldom Seen Greenway

The vision of this Plan is to create a healthy, vibrant, and resilient Saw Mill Run Valley that balances ecology quality, economic prosperity, usable green space, equitable mobility and stormwater attenuation.

REPORT OVERVIEW

As it is known today, the Saw Mill Run Valley is an area of intense development with a high traffic volume, that serves as a major transportation thoroughfare from the City of Pittsburgh into the South Hills. However, over a century ago, landscape architect Frederick Law Olmsted Jr. urged for this corridor to become a "green boulevard" of open space to reduce the impacts of flooding and to serve as a public amenity to the residents of surrounding communities. The conditions today are precisely what Olmsted Jr. had warned against; thousands of motorists drive through the corridor with no indication that the stream exists, except when water covers the road during the frequent flood conditions.

VISION

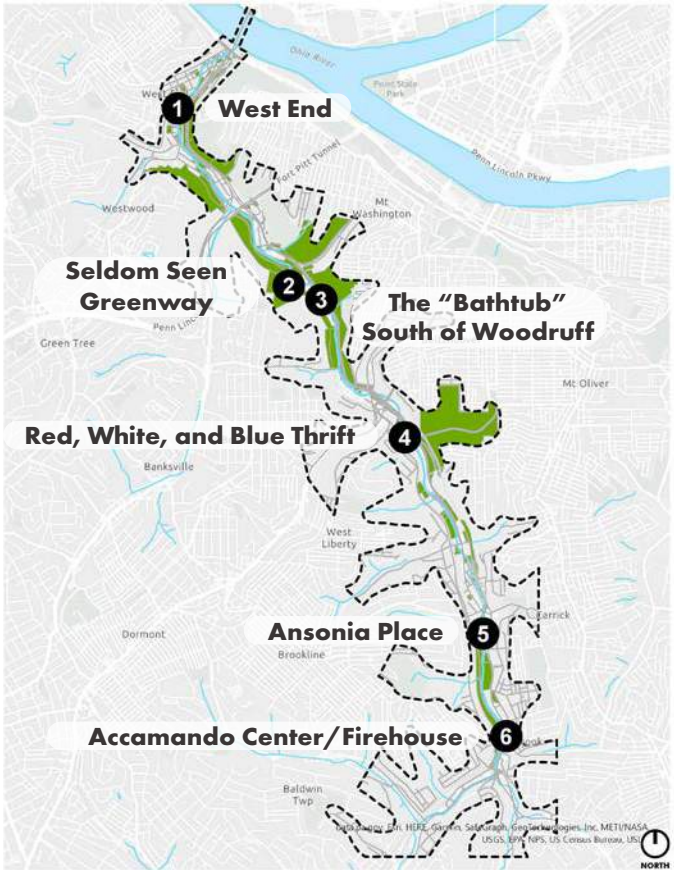
In an effort to resurrect the concept of Olmstead's green boulevard, this Master Site Development Plan (MSDP) provides an updated blueprint for improving the health, vitality and connectivity within the Corridor and the neighborhoods that it passes through. To this end, the vision of this Plan is to create a healthy, vibrant and resilient Saw Mill Run Valley that balances ecology quality, economic prosperity, usable green space, equitable mobility, and stormwater attenuation. Subsequently, many of this Plan's recommendations are grounded in enhancing public safety, mitigating flooding impacts, and improving the visual appearance of the Valley's public and quasi-public realm over the next generation. The Plan has been drafted to complement other studies already completed in the area and may generate additional studies as needed. Finally, this Plan should also serve as a planning basis as the City of Pittsburgh advances the development of its city-wide Comprehensive Plan.

The boundaries of the study area, called the "Study Corridor", have been delineated to maintain a clear focus on Saw Mill Run and Route 51 (also known as Saw Mill Run Boulevard). While the primary focus of the Plan includes the parcels immediately adjacent to the stream and the road, the wider-reaching Study Corridor has been identified to include considerations for uphill and upstream influences surrounding Saw Mill Run. The Study Corridor reaches from the West End Bridge to the intersection of Route 51 with Route 88 (Library Road), from the stream bottom to the nearest ridgetop on either side of its banks.

Analyses of the land within the Study Corridor revealed "situational typologies", which are land areas or parcels that share similar contextual and environmental conditions such as stream constrictions, accessibility, topography, position in the watershed, and ownership type. Each of the typologies is represented by one of the six Design Focus Areas.

From north to south, the Design Focus Areas include Wabash Park, Seldom Seen Greenway, the stream channel nicknamed The "Bathtub" south of Woodruff Street, the area surrounding Red, White, and Blue Thrift store, Ansonia Place, and the area surrounding Accamando Center.

Design Focus Areas



SCOPE OF PROJECT

The Saw Mill Run Valley Master Site Development Plan is funded by the Pennsylvania Department of Conservation and Natural Resources (DCNR) and the Richard King Mellon Foundation. The DCNR grant supports the production of a Master Site Development Plan (MSDP) report. A MSDP report is typically used to create a plan for one or more existing or proposed park sites held by a single owner or in a simple ownership structure. These reports typically include an analysis of existing conditions, a proposed plan for development or improvement of the site, associated recommendations, public outreach, and other components.

Because the Study Corridor is a linear space consisting of many parcels under a variety of different ownership and use conditions, the scope of the project must adapt to the conditions of the grant as well as the conditions and scale of the site. This Plan aims to balance the components of the grant while ensuring the resulting document is workable and implementable over time.

There is an important distinction between this Master Site Development Plan (MSDP) report and an Integrated Watershed Management Plan (IWMP). An Integrated Watershed Management Plan is a long-term planning document used to guide watershed-scale strategies, such as infrastructure improvements, stormwater management facilities, and pollution reduction, across multiple municipalities and agencies. The collaboration embodied in IWMP's provides opportunities to leverage funds. IWMP's aim to outline a cost-effective strategy to pursue improvements that will benefit the watershed and its inhabitants socially, economically, and ecologically. There is an existing IWMP in place for the Saw Mill Run Watershed.

On the other hand, a Master Site Development Plan serves as a guiding document for the acquisition, development, and management of land for parks and recreation facilities, open space and natural areas, habitat, and greenways. The MSDP may result in more detailed studies in the future. Some of the recommendations of the Master Site Development Plan may parallel and reinforce the strategies of the Integrated Watershed Management Plan. However, the MSDP report is not duplicative of the IWMP, and the MSDP report maintains a narrower focus on the Study Corridor and Design Focus Areas, rather than evaluating the watershed in its entirety. While the IWMP focuses on water quantity and quality in the watershed, the MSDP seeks to improve the quality of place in the Study Corridor. These studies work hand-in-hand in long-term planning for both the Corridor and the watershed.

In addition to the IWMP, there are a number of other studies of the Corridor that have been completed or are in progress at the time of Plan development. The Green Boulevard Master Plan aims to complement preexisting reports and should be included for consideration in future studies where relevant. The Plan may also result in additional studies for areas requiring more detailed analyses or assessments. The Plan should serve as a guiding document for the Study Corridor over the next generation.

PUBLIC ENGAGEMENT

The Master Site Development Plan was guided by public input. The Plan's consultants, referred to hereafter as the Collaborative Team, met with the Advisory Committee 10 times to review progress and discuss next steps. The Advisory Committee was made up of representatives from a variety of stakeholder groups, including nonprofit organizations, City departments, and governmental agencies. Key stakeholders and decision makers were invited to a bus tour of the Study Corridor to highlight the challenges and opportunities associated with the Corridor and the six Design Focus Areas. Stakeholders were also engaged in



Key stakeholders walking the Seldom Seen site during the Bus Tour of the Corridor in the Fall of 2022.

one-on-one Stakeholder Interviews. Input from these conversations was grouped into general themes and takeaways, which enabled candid conversations about the challenges observed in the Corridor. Finally, a two-day public workshop was used to spread awareness of the plan and gather feedback from nearby property owners. The takeaways from each of these events helped to shape the final recommendations for the report and validated the analyses of the Corridor.

The key takeaways from the public outreach underscored several common influences and themes. There are many different groups, organizations, and agencies involved in and around the Corridor, but each one has its own mission and focus. However, many of the challenges present do not fall into the mission or responsibility of a single group, which inhibits progress and improvement over time. These groups coordinate in a limited fashion and are rarely united or working towards a common goal. The Corridor lacks a long-term vision, which further restricts coordination and collaboration across these groups. The cyclical and self-perpetuating nature of these conditions can create challenges for managing and maintaining the Corridor on a daily basis, as well as implementing the Green Boulevard Master Plan over time. This understanding of the dynamic nature of the Corridor and its stakeholders underscores the need for a unified vision and a plan for the vision's pursuit.

After conceptualizing a basic set of potential design interventions for the six (6) Design Focus Areas, a two-day public workshop was used to build awareness of the Plan and gather feedback from nearby property owners and residents. The highlights and key takeaways from each of these events helped to further shape the specific design solutions for the Design Focus Areas and framed the final recommendations for the report.

Following the review and refinement of the first draft of this Plan's Summary Report, members of the Advisory Committee held a series of informational meetings with the registered community organizations (RCO) affected or influenced by this Plan as well the Southwestern Pennsylvania Commission. These meetings permitted the organizations to become familiar with the specifics of the Plan and to become advocates for future implementation.

Finally, Pittsburgh is in the early stages of formulating an updated to its Comprehensive Plan. As a means of sharing what has been learned to date and incorporating key aspects of this MSDP into the City's developing Comprehensive Plan, the MSDP draft was presented to the Pittsburgh Planning Commission. The Commission recognized many of the challenges plaguing the Saw Mill Run Valley and see that many of its recommendations fall into the Commission's purview. The Commission unanimously pledged support towards its implementation and expect to inform the Comprehensive Plan by incorporating key recommendations from the MSDP.

KEY FINDINGS

The overarching challenge for the Study Corridor results from the exceedingly complex and interrelated nature of the forces at play. All of the issues identified in the Corridor are intertwined; the presence of one issue worsens another, but a potential resolution would require consistent, long-term collaboration among many entities to see to completion, which currently does not occur. By nature, the existing conditions pose a significant challenge for improving the Corridor.

Over the years, the Saw Mill Run corridor has been the subject of numerous studies, reports, and policy discussions, including flooding studies, abandoned mine drainage (AMD) assessments, total maximum daily load (TMDL) evaluations, and other reviews of the conditions of ecology and infrastructure in the area. However, little progress towards improvement was ever made. Many of the identified issues do not clearly lie within the mission or responsibility of a single organization, which creates challenges to implementing improvements. This issue is compounded by the inconsistent coordination between the large number of organizations and agencies that are involved in the Corridor. The lack of routine coordination inhibits progress and

implementation of past studies, and results in missed opportunities to leverage improvements through related projects.

As of 2023, the Saw Mill Run corridor has been the subject of 30 studies in the last 23 years.



A flattened car has been embedded in the stream bottom of Saw Mill Run since a flood in 2018.

In addition to the many organizations involved in the Corridor, much of the land along Route 51 and Saw Mill Run consists of small parcels in a challenging configuration. Typically, parcels are deeper than they are wide. However, in the Corridor, parcels are commonly wider and shallower, which limits the size of buildings that can be constructed. As a result, outdoor storage-oriented businesses, such as car sales lots and garden centers, are more likely to be developed, thus distinguishing the Corridor from other commercial corridors in the region and driving the need for expanses of impervious surface.

In the 5 miles of the Corridor, there are 28 used car lots along Route 51.

The location of the Corridor and the configuration of the lots also results in many different landowners throughout the Corridor, including small business owners, developers, quasi-public agencies such as Pittsburgh Regional Transit, railroads, and public right-of-way. Enacting change with a few property owners can be much easier than with hundreds of property owners. Additionally, when small parcels are developed, the use of the space must be maximized in order to see its benefits. However, this practice results in intense development with impacts to the identity and health of the stream corridor.

The existing development conditions are detrimental to the safety, resilience, and appearance of the Corridor. Many aspects of developments in the Corridor were constructed before the application of current regulations, zoning, and permitting, allowing them to be "grandfathered in". Although new construction must comply with today's regulations, legacy improvements are typically allowed to be replaced in-kind if they existed prior to the updated regulations. These policies include long curb cuts and the replacement-in-kind of walls extending into the streambank. The existing curb cuts poorly control ingress and egress to Route 51. Furthermore, Route 51 experiences high traffic volumes, creating dangerous traffic movements and congestion when combined with unpredictable ingress and egress.

- Between the West End Bridge and the I-376 interchange: 27,000 average daily trips
- Between the I-376 interchange and West Liberty Avenue: 19,000 average daily trips
- Between West Liberty Avenue and Route 88 (Library Road): 38,000 average daily trips

The resulting conditions contribute to crashes (ch 2 crash prone areas) of varying levels of severity that span the entire Study Corridor, impacting the safety of both motorists and pedestrians.

Additionally, most of the traffic that passes through the Corridor does not originate or terminate there. Instead, the Corridor functions as a conduit between the South Hills and the City of Pittsburgh. Notable congestion occurs from early to late morning and mid-afternoon to evening on a daily basis. The traffic conditions, congestion, and Route 51's role as a thoroughfare impact the experience for motorists and pedestrians, and in turn affect how property owners use and invest in land along the Corridor.

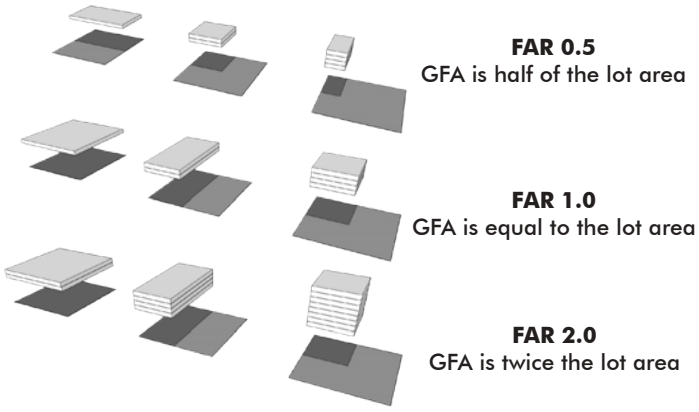
Separately, prior to the application of more stringent regulations, walls were constructed into the streambank to enable development directly up to the stream edge in locations throughout the Corridor. Such conditions place buildings, cars, and pedestrians in harm's way during flood events. The presence of vertical streambanks also increases

water velocity, worsening flooding and erosion downstream.



Walls in the streambank can be replaced in-kind if they existed prior to modern regulations being enacted.

Floor Area Ratio (FAR) is a calculation used to control the intensity of development on a site. It expresses the relationship between the area of a lot to the total square footage of a building. FAR of 1.0 means that the building square footage is equal to the square footage of the lot it occupies. FAR of 4.0 allows up to four times the area of the parcel to be developed as a multi-story building.



In addition to legacy improvements, current policies still allow intense development to occur. The current governing guidelines do not align with the natural capacity of the area. Over 50% of the land area in the Study Corridor is zoned by the City of Pittsburgh as Park or Hillside. Roughly 22% of the land area is zoned residential, ranging from low to high density, and is typically located on the slopes of the Corridor. However, the remaining land area in the Study Corridor is zoned as Urban Industrial, Neighborhood Industrial, Highway Commercial, and Local Neighborhood Commercial. These high-intensity uses are primarily located along Route 51 and the stream. Based on the current ordinance, these commercial and industrial districts do not have limits for impervious surface, require little to no setbacks, and allow a floor-area ratio (FAR) up to 3.0 or 4.0 in some cases. As a result, the land closest to the stream has high rates of impervious surface and a lack of vegetation, generating excess runoff to Saw Mill Run and worsening flooding. When flooding occurs, this development is vulnerable because much of it occurs within the floodplain.

Planning and development regulations do not accommodate Saw Mill Run. They do not address the need for an adequate floodplain, and they allow development patterns that worsen stormwater runoff, which increases the impacts downstream, degrades water quality, and causes erosion. The riparian buffer is insufficient or nonexistent, and the streambanks experience some form of constriction, such as steep slopes, armoring, vertical walls, or culverts for most of their length. The lack of consideration for Saw Mill Run has only worsened the impacts from flooding. Although many studies have been done to remedy the issues in the Corridor, the absence of a coordinated effort inhibits transformational change, thus perpetuating the problem even as climate change threatens to increase Pittsburgh's annual rainfall.

Property owners strive to maximize the use of their parcels, as permitted by the current policies and legacy regulations. However, there is a relationship between the development (or redevelopment of land after a major flood event) and the minimizing of investments due to the known vulnerability in this area. Development in the Corridor has historically occurred as a means of fulfilling a functional need. For many property owners, investments for aesthetics are limited due to the risk of forthcoming floods. Property owners need to maximize the use of their parcels to see the most return on their investment, yet they are limited by the risk of flooding. Moreover, there is a need for balance between enabling the success of business owners while acknowledging the natural capacity and limitations of the Corridor.

The Corridor has experienced 24 flood events in the past 11 years. Frequent flood events are inconvenient for motorists who use Route 51, but flooding is detrimental to businesses throughout the Corridor. While motorists may have to use a detour for several hours or days during a flood event, business owners must close to clean and potentially rebuild after flooding occurs, impacting their livelihoods for days or weeks at a time. Additionally, localized flooding has become a problem during heavy rains, even when Saw Mill Run has not crested its streambanks. In some locations, uphill stormwater runoff is not captured by existing catch basins due to deferred maintenance, roadway repaving, or other factors. As a result, downhill property owners experience localized flooding even when the nearby stream does not show signs of flooding. These smaller, more frequent localized flood events impact property owners in addition to larger floods, further exacerbating the challenges for these residents and businesses.



A property owner located near Maytide Street observed uphill runoff flooding Route 51 during a heavy rain in 2018. (Photo Credit: B. Dees)

Finally, the Corridor lacks legibility and identity as a place to motorists, pedestrians, and residents of the surrounding communities. The maximization of parcel use, lack of required setbacks, and limited development investments result in a disorganized and disjointed appearance. There is no identification of the stream, which often only becomes visible when it impacts travel or safety. The lack of identity for the Corridor creates challenges for gathering public interest in proposed projects, only complicating the process of making major improvements in the Corridor.



A disorganized and disjointed appearance is the result of maximization of parcel use, lack of required setbacks, and limited development investments.

The Study Corridor is a complex area that has strayed far from the vision of a Green Boulevard. As a whole, the system is under stress from development, flooding and other environmental constraints, and a nebulous management system. No single person, group, organization, or event is to blame for the current conditions in the Corridor. The Green Boulevard Master Plan aims to provide clarity and strives to illustrate a path towards improving the Corridor in both the short and long term.

VISION

As noted earlier in this document, the vision of this Plan is to create a healthy, vibrant and resilient Saw Mill Run Valley that balances ecology quality, economic prosperity, usable green space, equitable mobility, and stormwater attenuation. This MSDP embraces many of the planning concepts originally proposed by Frederick Law Olmstead and updates them in a contemporary manner in response to today's most critical issues and circumstances. This vision provides an over-arching framework around which to shape the various recommendations expressed in the following pages.

RECOMMENDATIONS

The recommendations of the MSDP span several scales and topics. The Corridor-wide recommendations guide changes to policy, management, and considerations for implementation of improvements at the corridor-scale. The Corridor-wide recommendations tend to emphasize policy and coordination, with less of a focus on physical

changes. On the other hand, the Design Focus Area recommendations primarily call for physical improvements to the six (6) sites studied along the Corridor.

THE WORKING GROUP

To pursue the vision of the Green Boulevard, the Master Site Development Plan proposes a series of recommendations for the Design Focus Areas and the Study Corridor. However, in the context of the interrelated nature of the Corridor's challenges, it would be advantageous to unify the many groups and agencies involved in the Corridor in order to pursue the recommendations in an organized, strategic, and cohesive manner.



Key stakeholders participating in a group workshop. (Photo Credit: TrailBlaze)

The Plan recommends convening the key stakeholder groups to identify the preferred structure for a Saw Mill Run working group or "task force". Once a structure has been selected, the organizations involved in the working group may provide functions that include serving as a concierge or "one-stop shop" for property owners when issues arise, facilitating coordination on projects occurring throughout the Corridor, advocating for the Corridor in City or higher-level governments, policies, and decision making, developing an identity for the Corridor, and stewarding Saw Mill Run.

Three potential structures for the working group have been developed to reflect varying levels of involvement and investment from the key organizations. In its simplest form, a "Loose Confederation" of the stakeholder groups could be convened once or twice annually to review upcoming projects and progress towards the Plan's goals. This option represents the smallest commitments of time and funding, but does not fulfill all of the desired roles. A more involved option as a "One Stop Shop" could include the creation of a Task Force, with groups to serve as an Action Team for pursuing improvements and a Concierge Team to interface with the public. This method of organization would require additional funding and time commitments to support the Concierge Team. The third option consists of a Community Team that interfaces with the public and organizes the Action Team. The role of the Community Team could be fulfilled by a new organization or by a City Council member. Out of the three options, the Community Team option would likely use the most resources to organize and operate, depending upon how the Community Team is staffed and funded.

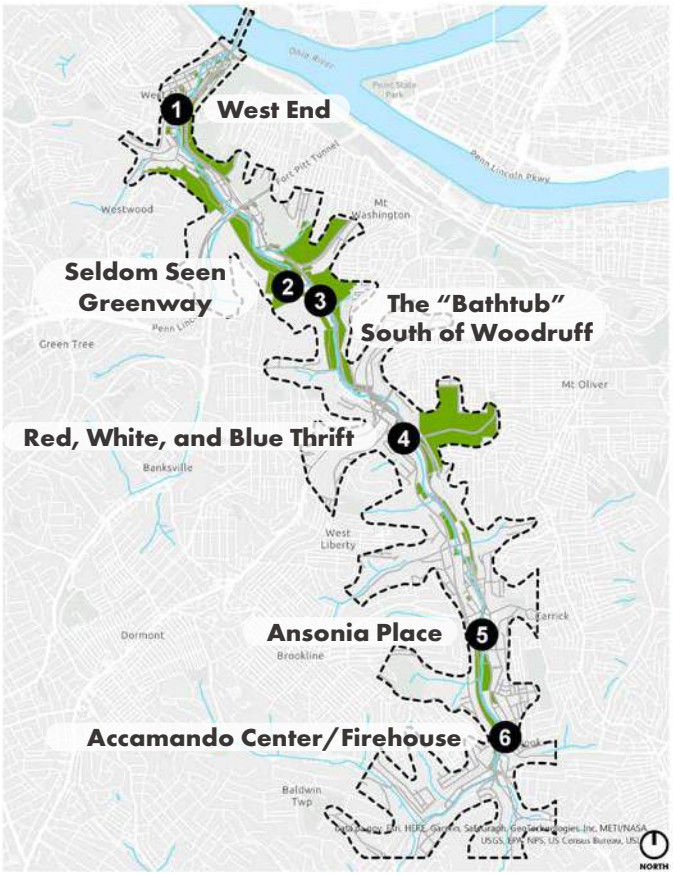
Developing a functional structure for the key organizations in the Corridor is crucial to implementing the Master Site Development Plan. The recommendations should be pursued once a plan for routine coordination and collaboration is in place.

THE DESIGN FOCUS AREAS

Concept plans have been developed for each of the six Design Focus Areas. Although the plans are unique to the sites, they serve as examples of the types of strategies that should be applied to similar spaces throughout the Corridor, including other parcels identified to be within the same typology. The recommended improvements include, but are not limited to, stream channel improvements to reduce water velocity, the planting of additional vegetation within the floodplain and greening wherever possible, improvements to pedestrian access and connectivity, the creation of a visual identity using planting and signage along the Corridor, and the designation of streamside public space where opportunities arise.

Wabash Park and Seldom Seen Greenway include the improvements of existing public green space, while Ansonia Place and the area surrounding Red, White, and Blue Thrift present opportunities for the creation of new public space along Saw Mill Run. On

the other hand, the "Bathtub" south of Woodruff Street and the area around Accamando Center involve recommendations to reduce water velocity, but do not include provisions for public access.



Improvements in the upstream Design Focus Areas will have benefits downstream. For example, slowing the water velocity in the "Bathtub" will help reduce erosion occurring at Seldom Seen Greenway. Additionally, the recommended improvements for the Design Focus Areas range in scale from planting installations to the designation of new public park space. Given the previously identified challenges in the Corridor, small, incremental improvements will be essential to garnering public awareness and support for the changes occurring in the Corridor. As support grows, larger projects will become more attainable. For example, installing areas of Gateway Landscaping is a relatively quick and low-investment improvement that can begin to establish an identity for the Corridor while projects of larger scale and with larger fundraising demands are still being developed. The transformation of the Saw Mill Run Corridor will not happen in one year, or even five. However, consistent progress over time will benefit the six sites, the Corridor, and the experience of pedestrians, motorists, and residents who encounter these spaces on a daily basis.

CORRIDOR-WIDE

While the Design Focus Area recommendations tend to be improvements at the site scale, the Corridor-wide recommendations examine policy and management strategies that should be reconsidered in the long term at the scale of the entire Corridor. To address the need for vehicular access management, impervious surface limitations, and setback controls, a zoning overlay for the Saw Mill Run Corridor is recommended. An overlay would allow for more appropriate levels of development control to be applied in the context of the nearby stream and floodplain.

The future management and planning for the Corridor should also include the Working Group, as previously described. The creation of the Working Group will encourage coordination and maximize efficiency when pursuing related improvements. The Working Group should pursue both the Design Focus Area recommendations and the Corridor-wide recommendations when appropriate opportunities arise.

As part of the implementation of the Plan, it is recommended to seek support from City, State, and Federal agencies, coordinate with related projects occurring in or near the Corridor, and pursue funding opportunities that support the goals of the Green Boulevard Master Plan.

Other Corridor-wide recommendations include, but are not limited to:

- Further scrutinize the zoning and land use permissions in the Corridor in the context of impervious surface impacts resulting from existing land uses
- Support departmental capacity for review and enforcement of the recommended policy changes
- Integrate the Green Boulevard Master Plan into the updated City of Pittsburgh Comprehensive Plan

- Determine how to best conserve parcels intended to be used as public green space now or in the future
- Collect up-to-date flood modeling data/ assessments to inform planning and decision making

Implementing the Corridor-wide improvements is essential for long-term, permanent change in the Corridor. However, because these types of recommendations do not result in immediate or visible change, it is difficult to gain public support and awareness for the project. The Design Focus Areas provide the public with a way to connect to the proposed changes. For this reason, it is recommended to start with the small Design Focus Area improvements and increase to larger improvements to help build the momentum needed to ultimately pursue the proposed policy changes for the Corridor.

IMPLEMENTATION

PRIORITIES

The recommendations of the Master Site Development Plan will likely take a generation or more to fully implement. While any of the recommended actions are important to improving the Corridor, there are a few key considerations for priorities when pursuing implementation.

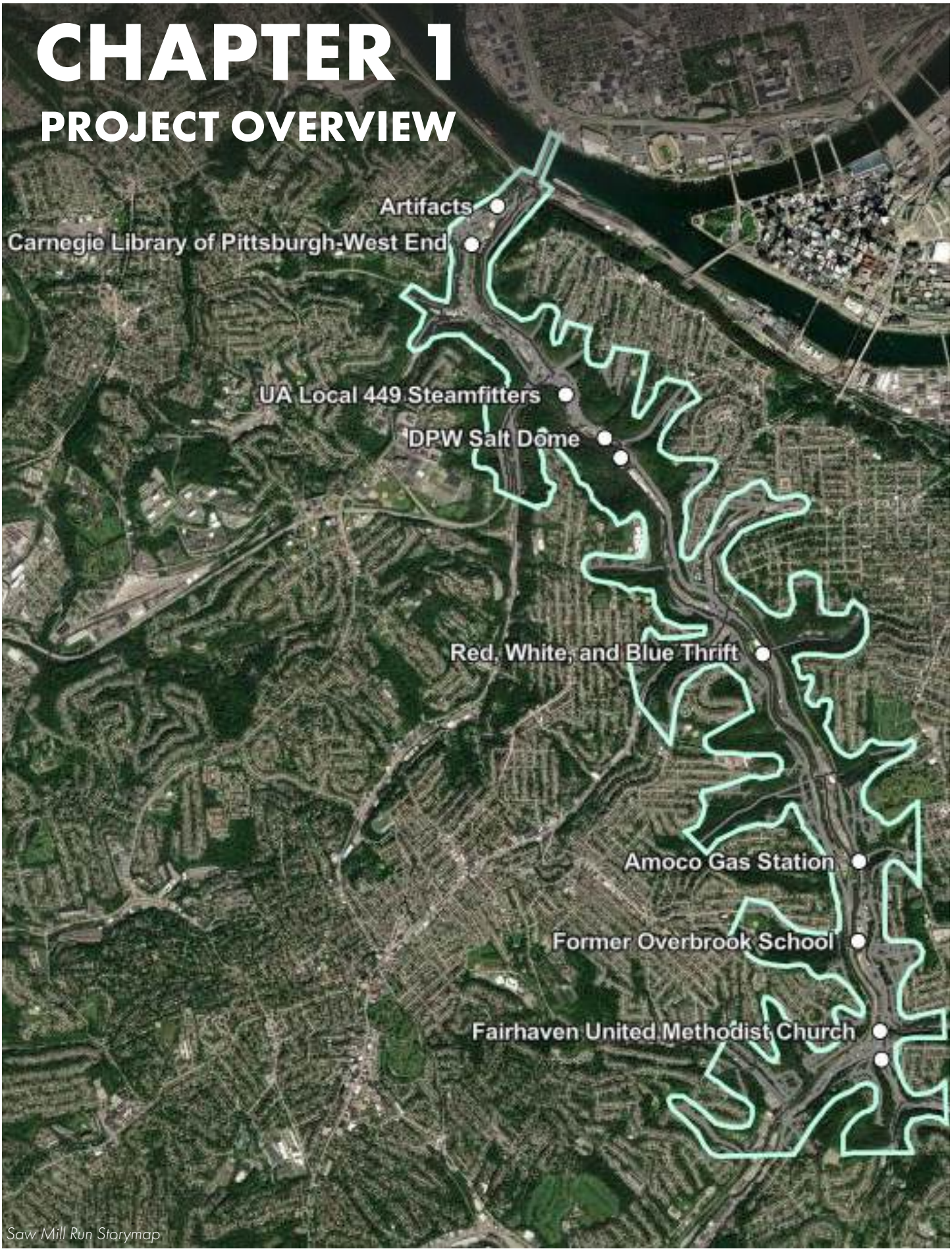
The largest driving force for change will be enacting policy and management updates to control development and land use in the Corridor. However, it will likely be difficult to garner public support for such changes without other visible improvements to highlight the Corridor's potential. For this reason, actions that support the Corridor's identity and that are visible from Route 51 are the priority in the short-term. For example, the Gateway Landscaping treatments recommended for the areas surrounding Red, White, and Blue Thrift and Accamando Center are small actions with the potential to have a large impact on the identity and perception of the Corridor. The development of Ansonia Place as public green space has also been noted as a large-project priority because these parcels are located in an area of identified need for access to public park space by the Department of Conservation and Natural Resources (DCNR) and the Trust for Public Land (TPL).

Other sequencing considerations have also been identified. Velocity reduction measures in the "Bathtub" should be implemented prior to making any improvements at Seldom Seen Greenway due to the erosion occurring on site. The designation of new public space, such as Ansonia Place, is a higher priority than improving existing public space, such as Wabash Park, because existing spaces can continue to serve the community even without the proposed improvements. Some of the concept plans for the Design Focus Areas may be implemented in phases depending upon funding and acquisition opportunities. The pursuit of these improvements will be best facilitated through continued coordination and advocacy for the Corridor by the working group.

CLOSING

The Master Site Development Plan for the Saw Mill Run Corridor envisions short- and long-term changes essential to creating a Green Boulevard within the limits of today's opportunities and challenges. While the most transformational changes will result from updates to policies and regulations affecting the Corridor, these changes will be best supported by visible improvements that benefit the appearance, safety, resilience, and identity of the Corridor for those live near it, work in it, or drive through it on a daily basis. However, improvements in the Corridor are hindered by a lack of coordination between the many agencies and organizations that work within it. Seeking routine collaboration and leveraging related improvements are essential steps to implementing the recommendations of the Master Site Development Plan. Through these changes, the Saw Mill Run Corridor can become a Green Boulevard – a safe and enjoyable space for those who use it to live, work, and commute for generations to come.

CHAPTER 1
PROJECT OVERVIEW



Saw Mill Run Storymap

OVERVIEW AND PURPOSE

MASTER SITE DEVELOPMENT PLANS

Master Site Development Plans are used to guide the short- and long-term vision for a project site. While a Master Site Development Plan typically focuses on a single or several existing or proposed park sites, the Green Boulevard Master Plan presents a unique opportunity. The study area encompasses a five mile-long segment of the Route 51 corridor, as opposed to an individual parcel or series of parcels, such as a park system.

It is important to note that the Green Boulevard Master Plan is not an Integrated Watershed Management Plan (IWMP). While an IWMP examines an entire watershed and creates a plan for addressing water quantity and quality, the Green Boulevard Master Plan maintains a focus on the study area along Route 51 and Saw Mill Run specifically. There is an existing IWMP in place for the Saw Mill Run Watershed, and this Plan aims to complement it and other studies that exist or are under development.

Due to the nature of the study area at project onset, the Collaborative Team worked with the Advisory Committee to clearly define the Study Corridor. The Study Corridor includes the Route 51 corridor from the West End Bridge to the intersection with Route 88, from the stream to the nearest ridgetop on either side of the road. Parcels within the Study Corridor were characterized into six typologies based on the condition of the stream, topography, position within the watershed, accessibility, and land use and ownership. Each typology has been represented by a proposed design solution for a Design Focus Area, or a site that reflects the types of interventions that could be applied to other parcels of the same typology. This approach allows for the development of detailed, site-specific design solutions while accommodating considerations at the scale of the entire Study Corridor. Throughout the course of the project, the Advisory Committee provided the Collaborative Team with input and direction. The Collaborative Team consisted of landscape architects, civil engineers, transportation engineers, and an ecologist. The Advisory Committee involved 20 members, with affiliations including governmental departments, nonprofits, and residents.

The diverse specialties of the Collaborative Team and the Advisory Committee allowed for a multifaceted approach to the challenges and opportunities present in the Study Corridor.

PLANNING-DESIGN PROCESS

Beginning in May 2022, the Planning-Design Process occurred over the course of 12 months. In addition to routine meetings with the Advisory Committee, the Collaborative Team gathered input from residents and business owners within the Corridor during the two-day Public Workshop in November 2022. Comments from the public were used to inform design interventions and further conversations with stakeholders during a series of 10 Key Person Interviews. In sum, the input from residents, business owners, and key stakeholders was used to develop planning, policy, and design recommendations for individual Design Focus Areas as well as the entire Study Corridor. The participation was crucial for creating a plan that addresses the true issues and opportunities as seen by the people who live in, work in, and manage the Corridor on a daily basis.

PLANNING-DESIGN FUNDING

The Watersheds of South Pittsburgh acquired a grant from the Commonwealth of Pennsylvania to develop a Master Site Development Plan for a five mile-long segment of the Route 51 Corridor. The funding from the Commonwealth is part of the Community Conservation Partnerships Program (C2P2), using the Keystone Recreation, Park, and Conservation Fund under the administration of the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation, with matching funds from the Richard King Mellon Foundation and the Heinz Endowments. The Collaborative Team has prepared the Master Site Development Plans and related documents in accordance with the Bureau's grant requirements and planning standards. Although the nature of the Study Corridor differs from a typical site of a Master Site Development Plan, the Collaborative Team has worked with the Grant Manager to identify ways to fulfill the grant requirements while addressing the identified challenges and opportunities of the Corridor.

PLANNING-DESIGN GOALS

Frederick Law Olmsted Jr. once envisioned Saw Mill Run as a Green Boulevard, or a linear park and public open space along the stream through this area south of the City. Since this vision, intense development in the Corridor has resulted in flooding and degradation of Saw Mill Run. The Master Site Development Plan aims to provide a series of recommendations in pursuit of a more holistic and environmentally informed approach to managing the Corridor.:

Goals:	Improvement To:
1. Balance the need for access to individual private properties while improving multimodal traffic safety through the simplification of points of ingress/egress.	Accessibility and Connectivity Vehicular and Pedestrian Safety
2. Improve the safety and convenience of mobility alternatives within the Corridor for individuals who do not have access to a personal vehicle.	Accessibility and Connectivity
3. Expand pedestrian, bicycle, and transit connectivity in the short term through the removal of accessibility barriers.	Accessibility and Connectivity Vehicular and Pedestrian Safety
4. Identify locations to strategize long-term pedestrian and bicycle access improvements.	Accessibility and Connectivity Vehicular and Pedestrian Safety
5. Refine and enforce regulations against illegal encroachments of adjacent uses within the existing sidewalks and right-of-way.	Accessibility and Connectivity Land Use and Development Controls Vehicular and Pedestrian Safety
6. Mitigate the impacts of flooding by addressing floodwater storage and water velocity during high water events.	Flooding Greening

Goals:	Improvement To:
7. Elevate the public's perception of the Corridor and define a distinct identity.	Greening Corridor Management
8. Transform underutilized areas throughout the Corridor into accessible public spaces.	Greening Corridor Management Accessibility and Connectivity
9. Amend land use and development permissions and regulations to more effectively reduce the impacts of stormwater runoff.	Flooding Greening Land Use and Development Controls Corridor Management
10. Adopt an incident reporting, tracking, and follow-up process for addressing resident and property owner issues.	Corridor Management
11. Create and adopt a management framework with which to coordinate agencies and stakeholders relating to major public improvements within the Corridor, including transit and transportation, sewer, public safety, flood mitigation, and stormwater.	Corridor Management

CHAPTER 2
BACKGROUND CONTEXT



Saw Mill Run Corridor Study Area

REGIONAL CONTEXT

Saw Mill Run is an urban stream and a tributary to the Ohio River with a watershed of almost 11 square miles. It is paralleled by Route 51, also known as Saw Mill Run Boulevard, and is located south of Pittsburgh in Allegheny County, Pennsylvania. Route 51 is a major vehicular thoroughfare with connections to Liberty Bridge, Fort Pitt Bridge, and the West End Bridge for commuters heading into and out of the city.

The Green Boulevard Master Plan Study Corridor does not cover the entire Saw Mill Run watershed. The Study Corridor includes 1,983 acres and roughly 5,500 parcels along Saw Mill Run Boulevard, from the Ohio River to the intersection of Route 51 and Route 88. The upper limits of the Study Corridor reach from ridgetop to ridgetop along Saw Mill Run.

The Study Corridor intersects the Pittsburgh neighborhoods of the West End, Ridgemont, Duquesne Heights, Beechview, Mount Washington, Beltzhoover, Bon Air, and Brookline. At the southernmost end, the Corridor also includes Baldwin Township (78 acres), Castle Shannon Borough (31 acres), and Whitehall Borough (34 acres).

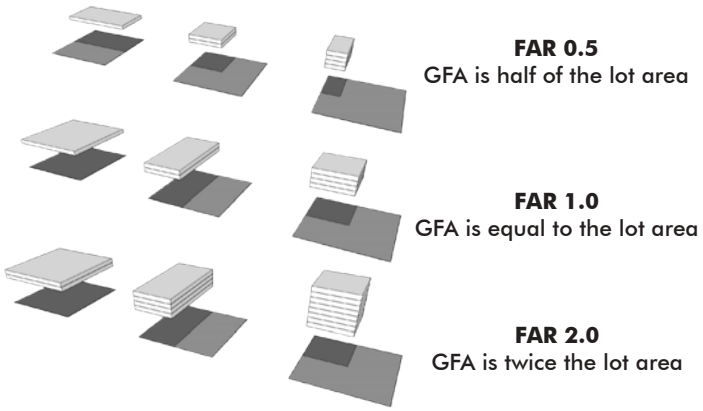
ZONING

Because the majority of the Study Corridor falls within the City of Pittsburgh, the Zoning Analysis primarily focused on the City's zoning ordinance.

Although roughly 50% of the area of the Study Corridor is zoned as Park or Hillside, these zones occur on the slopes above the bottom of the Corridor. The predominant zoning districts adjacent to Route 51 and the stream include Local Neighborhood Commercial, Highway Commercial, Neighborhood Industrial, and Urban Industrial. The ridgetops and the southern end of the Corridor have some residential zoning ranging from single- to multi-unit.

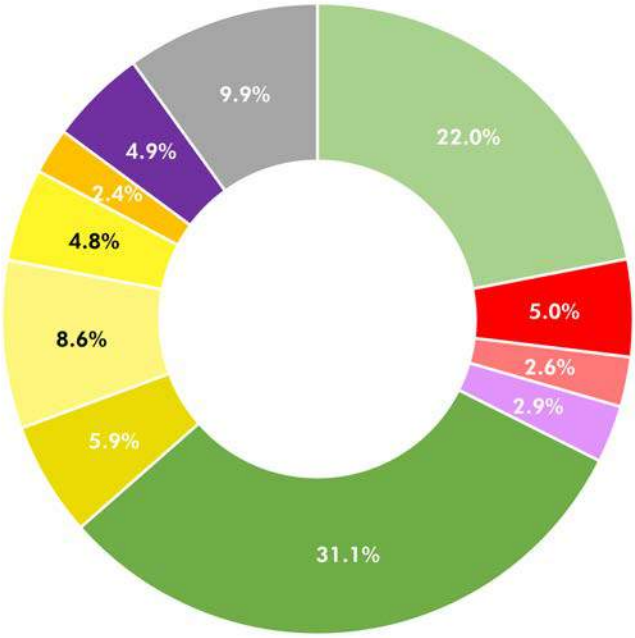
The commercial and industrial zoning districts tend to allow intense development with little to no setback requirements, FAR allowances up to 3.0 and 4.0, and no impervious surface restrictions. As a result, the land closest to the stream and within the floodplain has some of the most intense development within the Corridor and exacerbates flooding and water quality challenges.

Floor Area Ratio (FAR) is a calculation used to regulate development intensity on a site. It describes the relationship between the Gross Floor Area (GFA) of a building relative to the size of the lot that the building occupies. FAR is calculated by dividing the floor area of the building by the total lot area. An FAR of 1.0 means that the floor area of the building is equal to the lot area. The higher the FAR, the more intense the development. See the diagrams below for more examples.



Setbacks are a type of development control used to identify the minimum required distance between the lot line and any development on a site, such as buildings or parking lots. Setbacks can vary from front, side, and rear lot lines and are commonly controlled by the zoning district. A setback of 0 feet means that development can extend to the lot line.

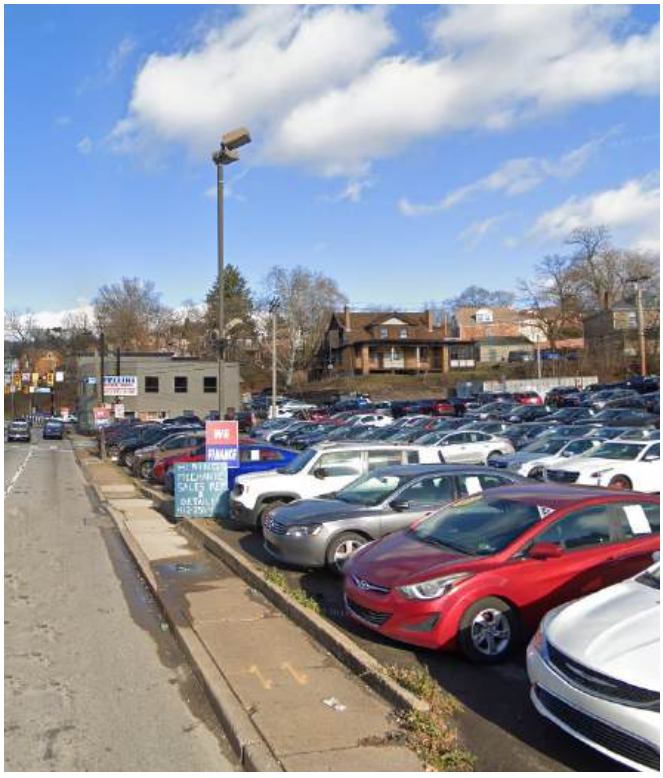
Percent of Land Area in the Corridor by Zoning District



Although intense zoning districts, such as Highway Commercial or Urban Industrial, make up relatively low amounts of the total acreage of the Study Corridor, these conditions are prevalent along Route 51 and Saw Mill Run, particularly in the floodplain.

Single-Unit Detached Residential
- Low Density (R1D-L)
- Moderate Density (R1D-M)
- High Density (R1D-H)

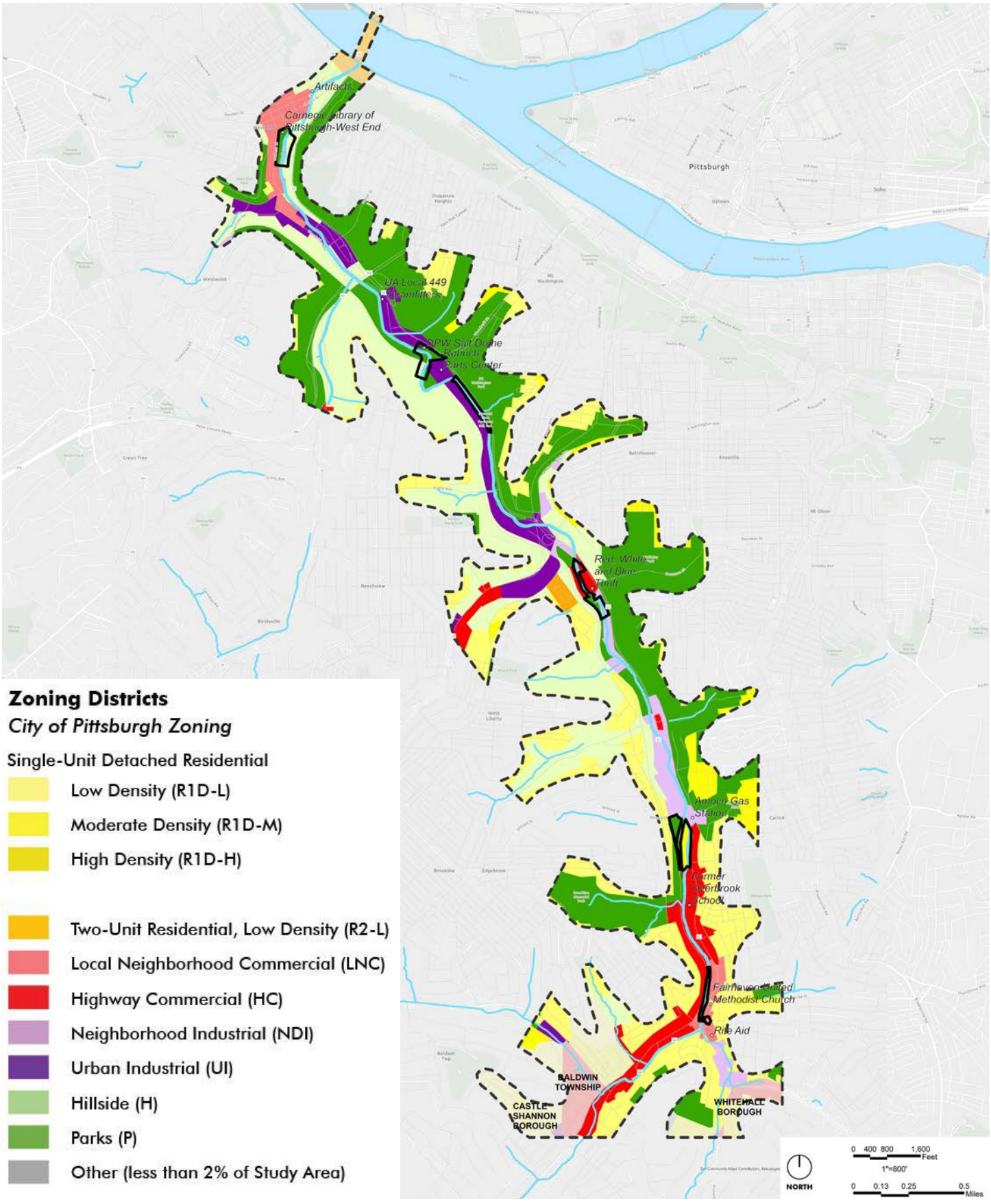
- Two-Unit Residential, Low Density (R2-L)
- Local Neighborhood Commercial (LNC)
- Highway Commercial (HC)
- Neighborhood Industrial (NDI)
- Urban Industrial (UI)
- Hillside (H)
- Parks (P)
- Other (less than 2% of Study Area)





Industrial and Commercial zoning along Route 51 is contrasted by Park and Hillside zoning on the slopes surrounding the Corridor. Left: Route 51 near the intersection with Maytide Street. Right: Hillsides near the intersection of Route 51 and Edgebrook Avenue.

ZONING MAP



Zoning Districts

City of Pittsburgh Zoning

Single-Unit Detached Residential

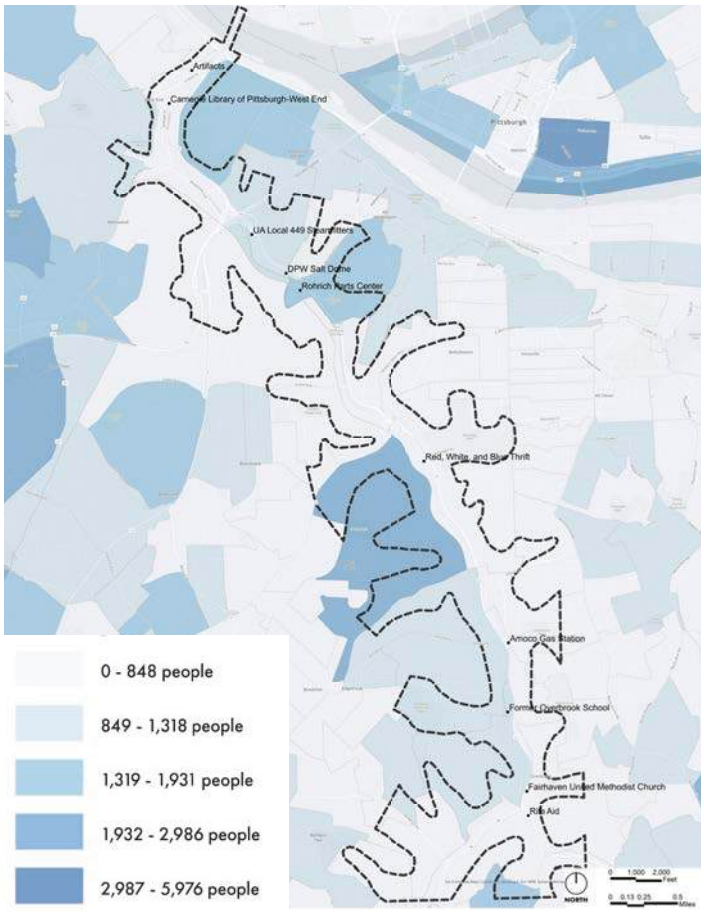
- Low Density (R1D-L)
- Moderate Density (R1D-M)
- High Density (R1D-H)

- Two-Unit Residential, Low Density (R2-L)
- Local Neighborhood Commercial (LNC)
- Highway Commercial (HC)
- Neighborhood Industrial (NDI)
- Urban Industrial (UI)
- Hillside (H)
- Parks (P)
- Other (less than 2% of Study Area)

DEMOGRAPHICS

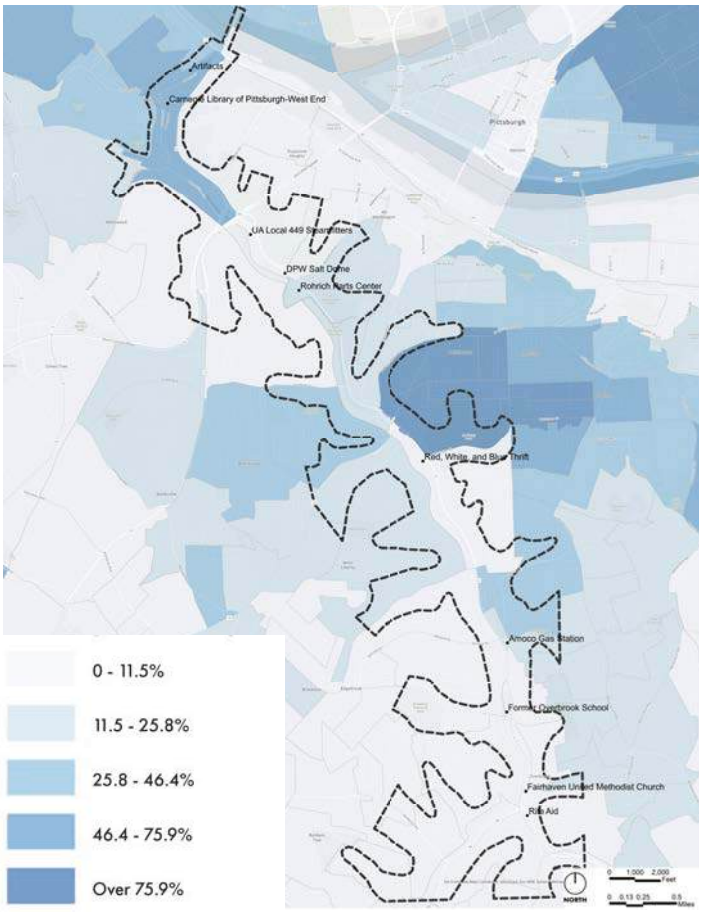
The following demographic analyses provide an understanding of the people that live within and around the Study Corridor. The maps use 2020 Census Data by Block Group.

Total Population



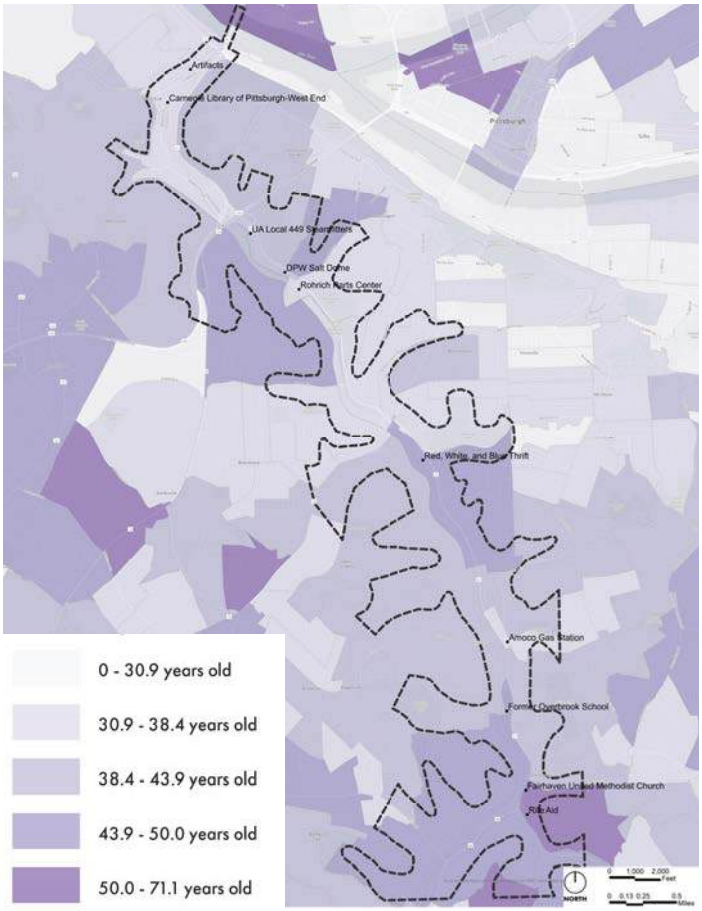
Relative to other areas within the County, the Census Block Groups within Study Corridor have relatively low total population and population density.
The steep slopes surrounding the Corridor inhibit development, while the bottom of the Corridor is primarily zoned for commercial and industrial uses.

Minority Residents



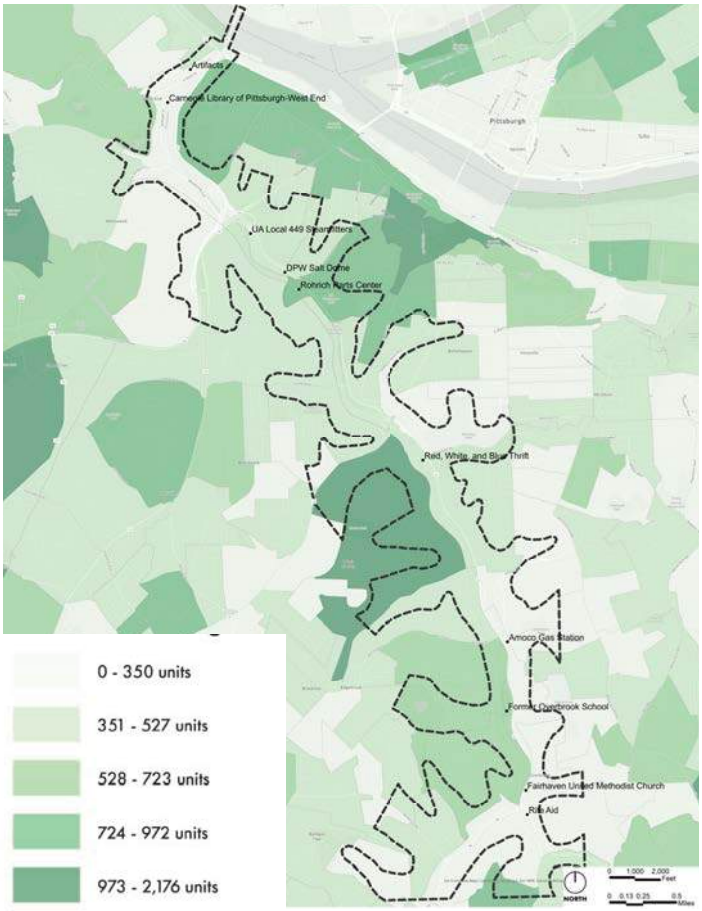
The Minority Residents map shows the percentage of the total population in each Block Group that indicated that their race was Black, Asian American, Hawaiian/Pacific Islander, Other, or Multi-Race on the 2020 Census. Although the Corridor as a whole has relatively low numbers of minority residents, there are a few areas with over 50% of residents identifying as a minority.

Median Age



The Block groups within the Study Corridor tend to fall in the middle of the median age range, roughly between 31 and 44 years old.

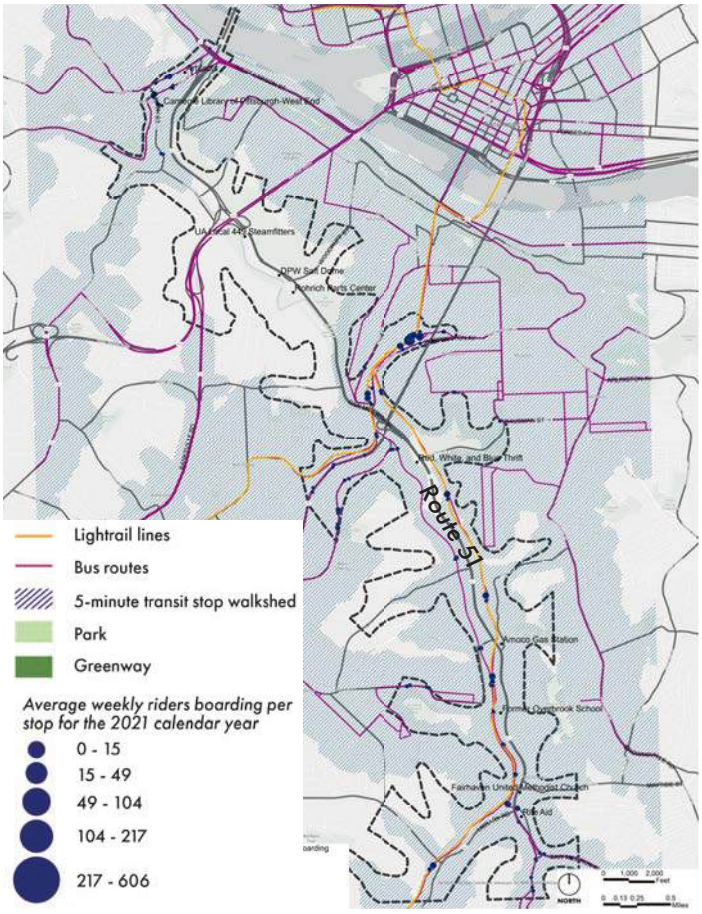
Housing Units



While most of the Corridor has relatively few housing units by Block Group, there are a few ridgetop neighborhoods with higher numbers of housing units. These conditions further emphasize the importance of the Corridor as a conduit to and from Pittsburgh.

EXISTING CONDITIONS

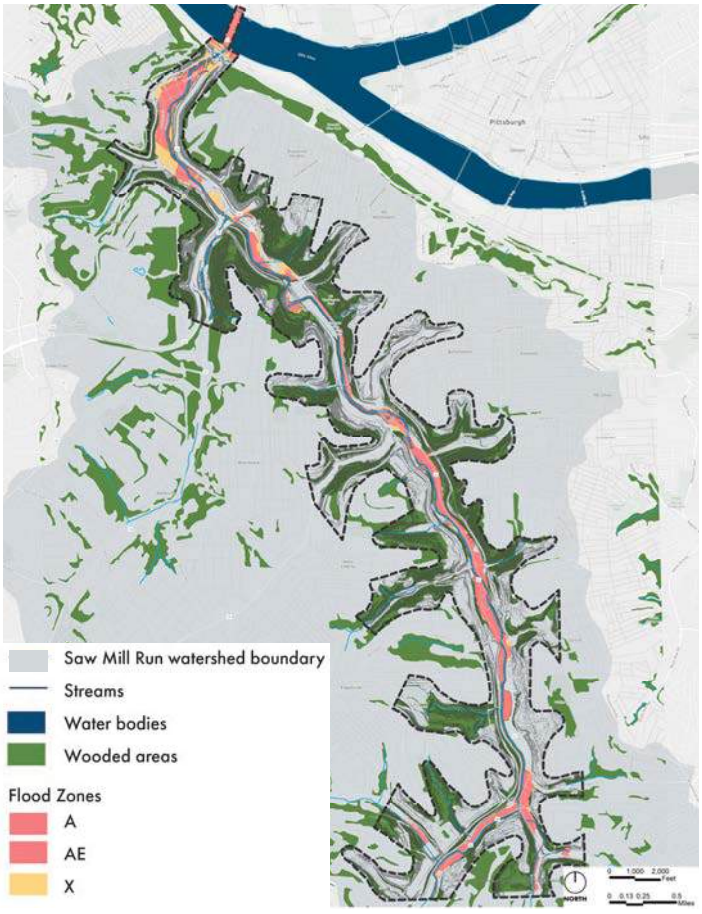
Transportation



Route 51 acts as a spine through the Study Corridor. It provides connections from the South Hills of Pittsburgh into the City via the Liberty Bridge, Fort Pitt Bridge, and West End Bridge, as well as connections to interstate highways including I-376 and I-279. This stretch of Route 51 has average daily trips ranging from 19,000 to 38,000. Many of these trips do not originate within the Corridor, but are instead using it as a connection to and from the City.

In addition to transportation via personal vehicle, the Study Corridor is also served by Pittsburgh Regional Transit (PRT) buses and light rail lines known as the T. The five-minute walkshed was delineated by PRT, but may not account for the availability of sidewalks, crosswalks, or terrain. However, these conditions pose frequent challenges for pedestrians within the Study Corridor.

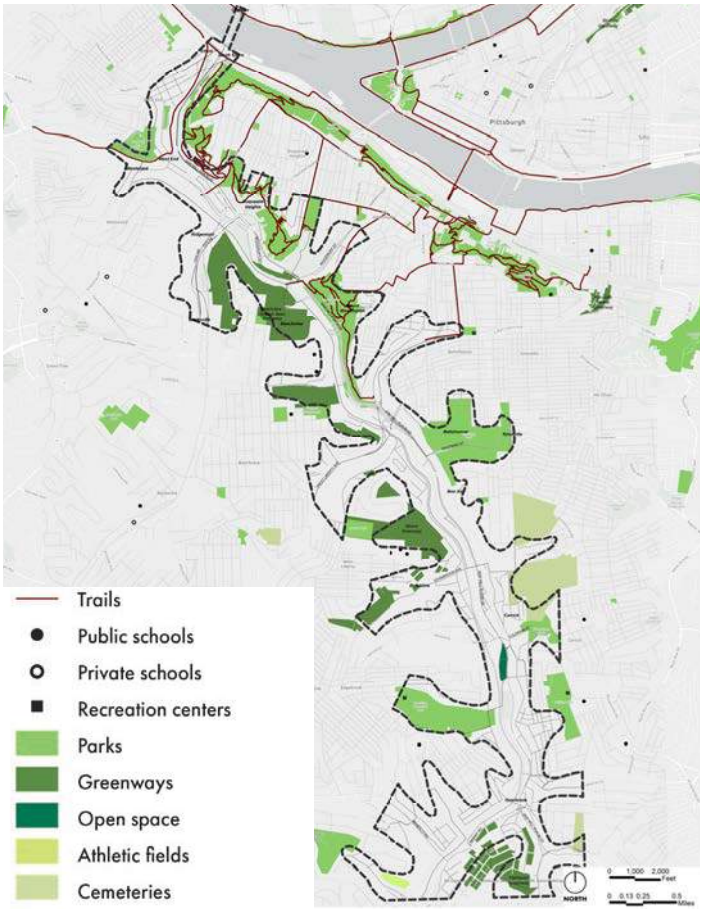
Natural Resources



Generally, the land within the Study Corridor tends to have steep, wooded side slopes with developed land in the bottom of the valley. The 100-year floodplain covers over half the length of Route 51 within the Corridor. The majority of Saw Mill Run in the Corridor is constricted to some degree, ranging from steep, vegetated slopes to vertical walls and culverts.

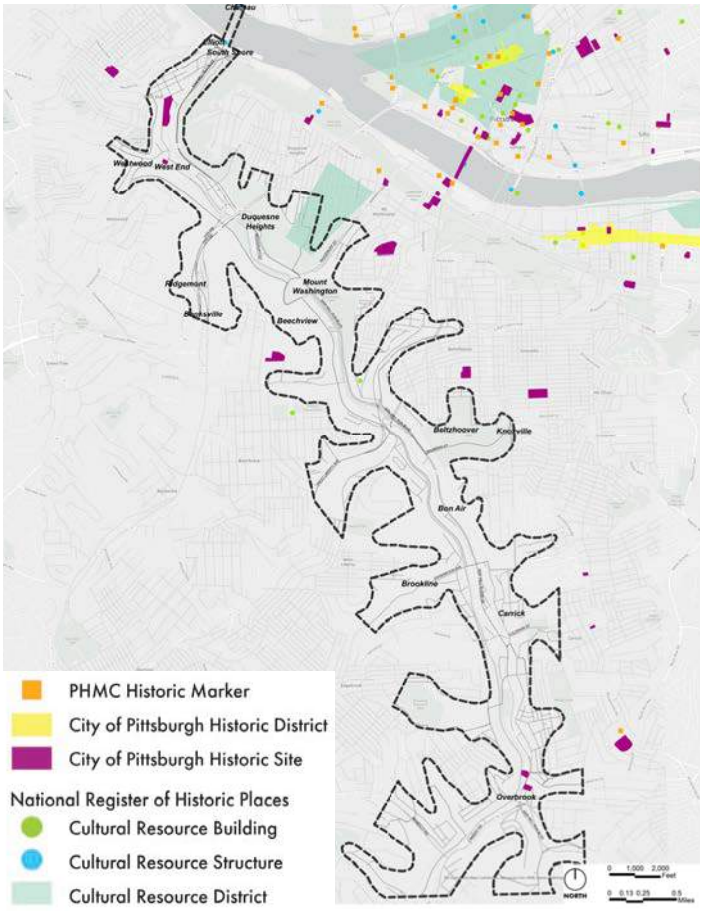
Flood Zones A and AE are areas that experience flood conditions during a 1% chance annual flood event. Zone A is determined using approximate calculations. Flood Zone AE has been delineated using detailed methods. Zone X is the area between the 100-year and 500-year floodplain, which has a 0.2% annual chance of flooding. The Flood Zones were identified and defined using information from FEMA.

Parks, Open Space, and Recreational Assets



There are several types of open space within and immediately surrounding the Study Corridor, including parks, greenways, athletic fields, and cemeteries. The parks and greenways contain small trail systems. Regional trail systems, including the Three Rivers Heritage Trail and the Great Allegheny Passage (GAP) Trail flank Pittsburgh's three rivers with connection opportunities to the Study Corridor at its northernmost end.

Historic and Cultural Assets



Designated historic features within the Study Corridor include the West End-North Side Bridge, the Chatham Village Historic District, and the Boggs Avenue Elementary School. Additionally, the brick railroad trestle at Seldom Seen Greenway is one of only a few remaining in the state that are constructed in this fashion.

AREAS OF VULNERABILITY

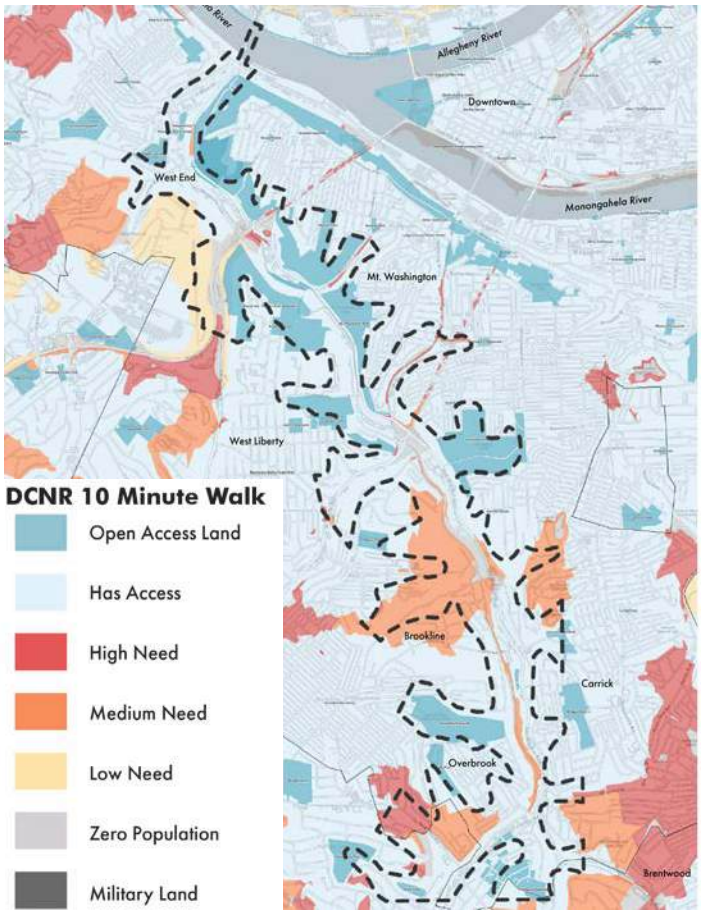
The Saw Mill Run Corridor experiences a variety of challenging conditions, ranging from vehicular and pedestrian safety, to ecological conditions such as stream constrictions, abandoned mine drainage, and flooding, to areas of limited park access. The concept plans and the Corridor-wide recommendations shared in this report aim to address the following issues in strategic and holistic ways.

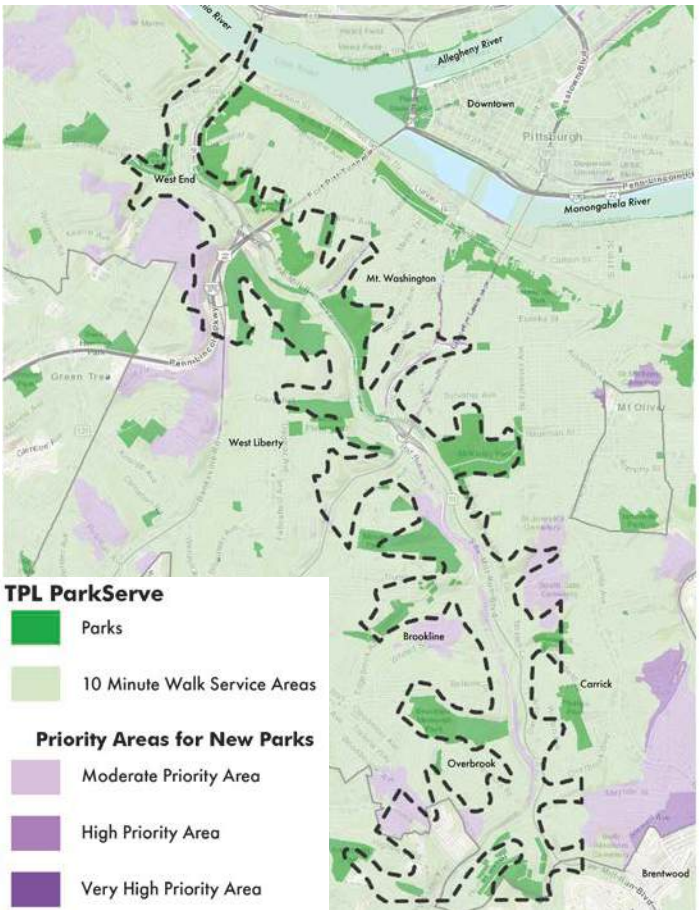


Route 51 near the intersection with Edgebrook Avenue

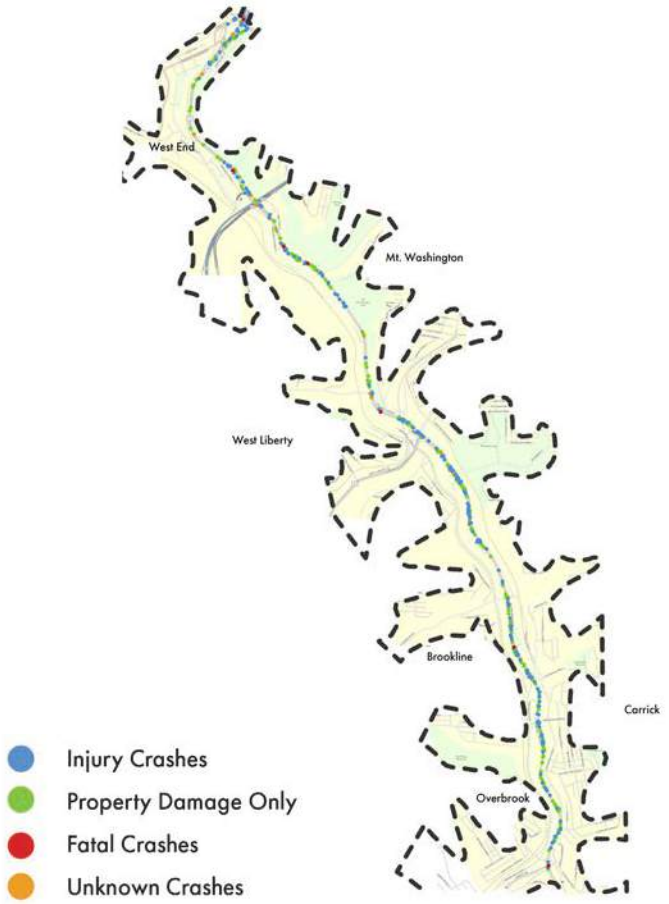
Park Access

The northern end of the Study Corridor has a variety of parks and greenways, which supports access within a 10-minute walk from many areas nearby areas, as indicated in the maps below. However, I-376 acts as a barrier between the communities to the north, limiting pedestrian access to Seldom Seen Greenway to the south. The southern end of the Corridor has some parks, but it exhibits more areas of need compared to the northern section. Limited sidewalk access, high numbers of daily vehicle trips along Route 51, and an absence of pedestrian amenities (such as adequate lighting), make the Corridor challenging, and often unsafe, for pedestrians to navigate.



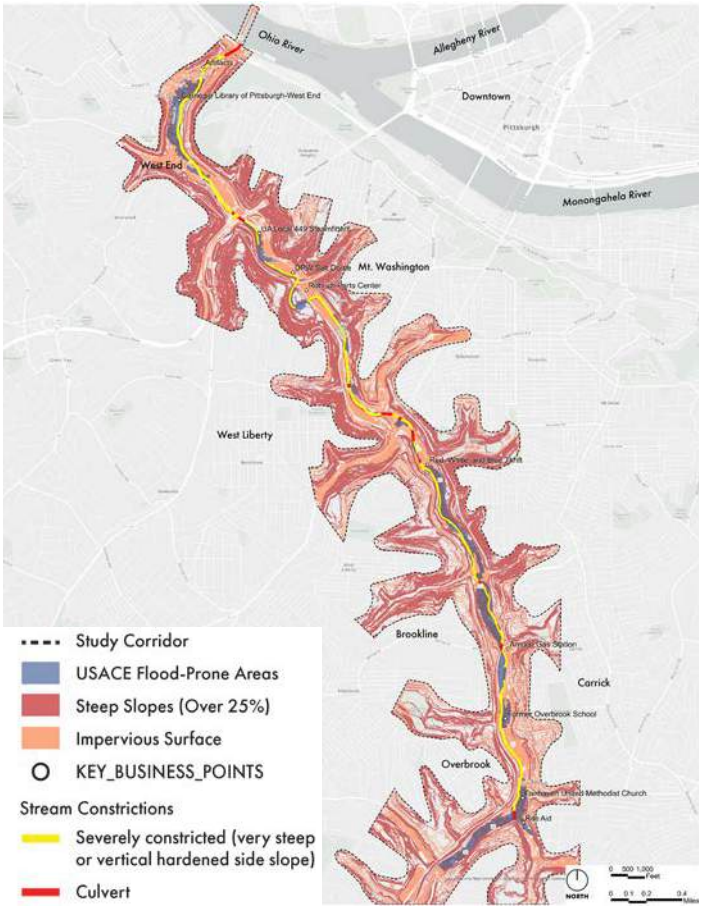


Crash Prone Areas



Through the Study Corridor, segments of Route 51 experience between 19,000 and 38,000 average daily trips (ADT). It serves as a major conduit to connect communities to the southwest to Pittsburgh through the Liberty and Fort Pitt Tunnels. Vehicular crashes span the entire corridor, likely resulting from a combination of high traffic volumes and a lack of uniform access management. The map above shows crashes by type from 2017-2021 according to data from PennDOT. (The point maps for individual segments of Route 51 are available in the Appendix.) Although the crashes occur throughout the Corridor, there are a few areas of heightened vulnerability, including the ramps near the West End Bridge, the segment north of Woodruff Street, at the intersection of Route 51 and Bausman Street, and the segment between Colerain Street and Edgebrook Avenue.

Runoff and Flooding



The Study Corridor is prone to flooding, which is exacerbated by the stream's surrounding context, which largely consists of surfaces that generate increased runoff. These surfaces include slopes over 25% and impervious surfaces; together, these make up 68% of the land area in the Corridor. Furthermore, most of the stream experiences constricted conditions, which can increase velocity

Impervious surface is a term used to refer to surfaces that allow little to no infiltration of rain water. Roofs, pavement such as roadways and parking lots, gravel surfaces, and highly compacted soil prevent water infiltration. Rain water that accumulates on these surfaces must be managed as stormwater runoff. Steep slopes, identified as those over 25%, function similar to impervious surfaces because the grade is so steep that the water runs off before it can soak into the soil, instead of infiltrating as it would on flat or gently sloping ground.

and eliminates connectivity to floodplains. The US Army Corps of Engineers (USACE) conducted a study to determine the flood-prone areas of this watershed. The resulting analysis highlighted the West End, Route 51 between Bausman Street and Edgebrook Avenue, Ansonia Place, and the intersection with Route 88. Frequent flooding contributes to hazardous conditions for residents, business owners, pedestrians, and drivers, and will likely increase in severity as climate change progresses.

At the Public Workshop, residents also discussed how improperly functioning catch basins cause flooding on Route 51 and adjacent properties, even when Saw Mill Run has not yet overtopped its banks. These conditions further contribute to the flood-prone nature and increased vulnerability throughout the Corridor.

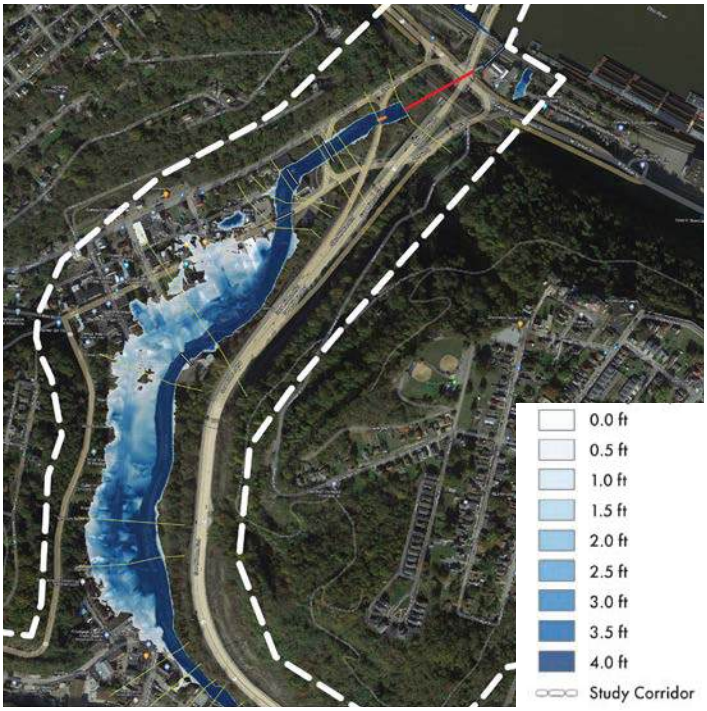




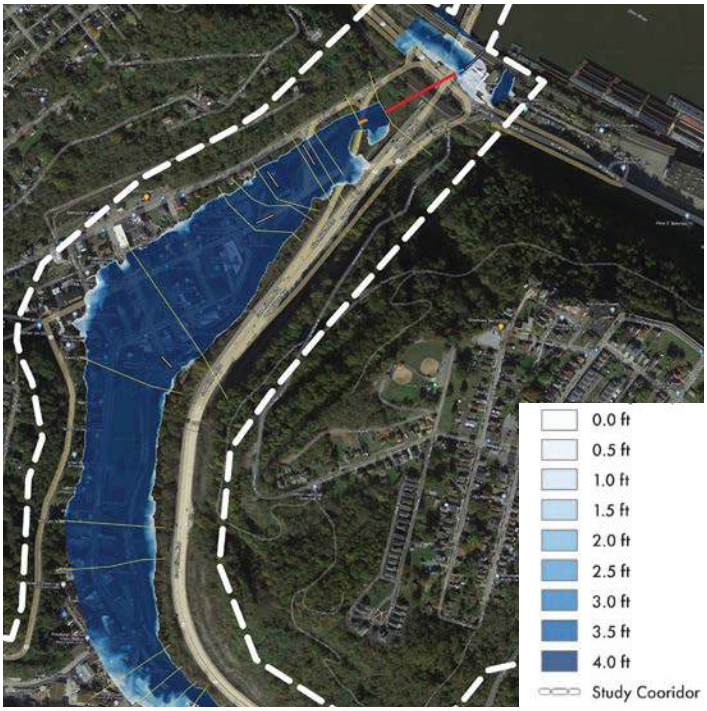
A business owner located near the intersection of Route 51 and Maytide Street captured flooding from uncontrolled uphill runoff during a heavy rain in 2018. (Photo Credit: B. Dees)

The following series of images shows an analysis of flooding conditions at the West End. In a 10-year storm, the community experiences flooding over 4 feet in depth and with velocities over 5 feet/second. By comparison, 6 inches of floodwater is considered dangerous to walk in. In the 100-year storm, the depth spreads to encompass most of the West End, although the velocity drops as the water begins to pool. Similar analyses for Seldom Seen Greenway, Ansonia Place, and the intersection of Route 51 and Route 88 are available in the Appendix.

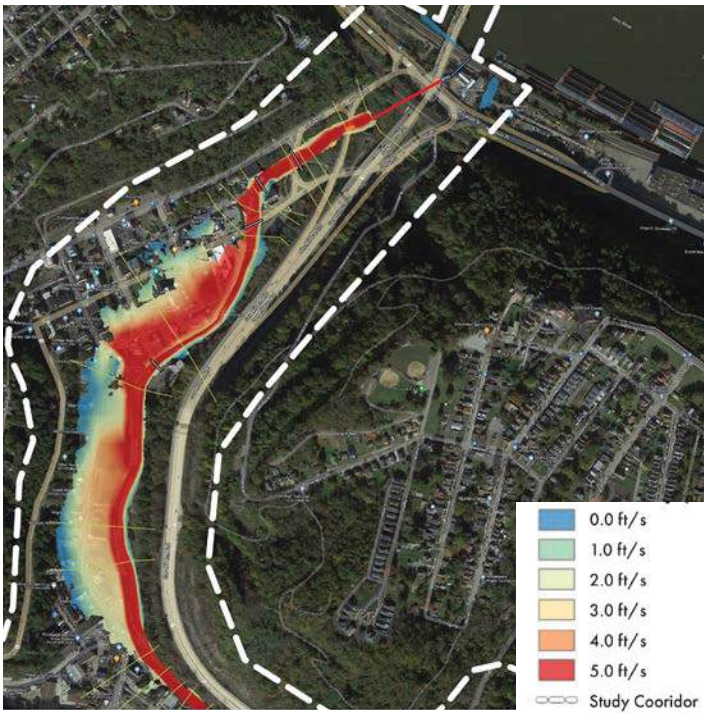
Flood Depth - 10 Years



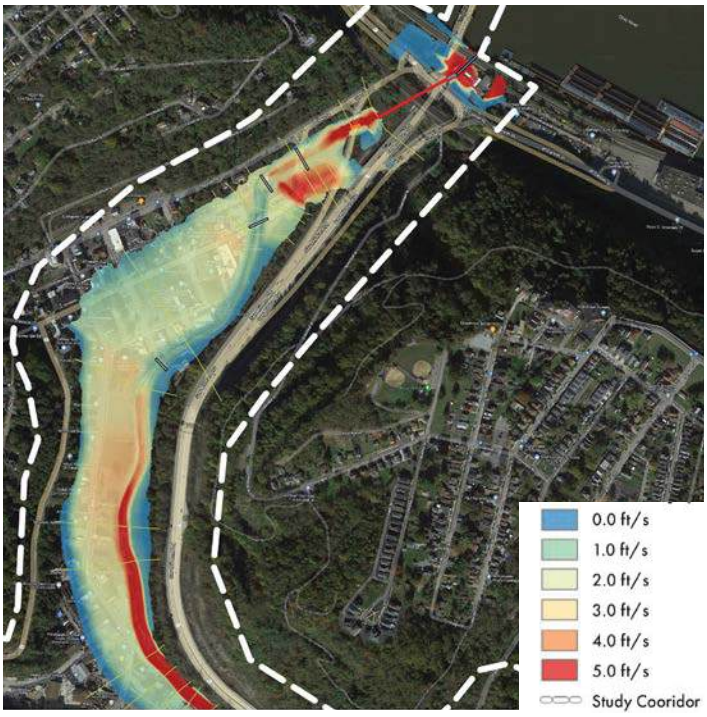
Flood Depth - 100 Years



Flood Velocity - 10 Years



Flood Velocity - 100 Years



Abandoned Mine Drainage

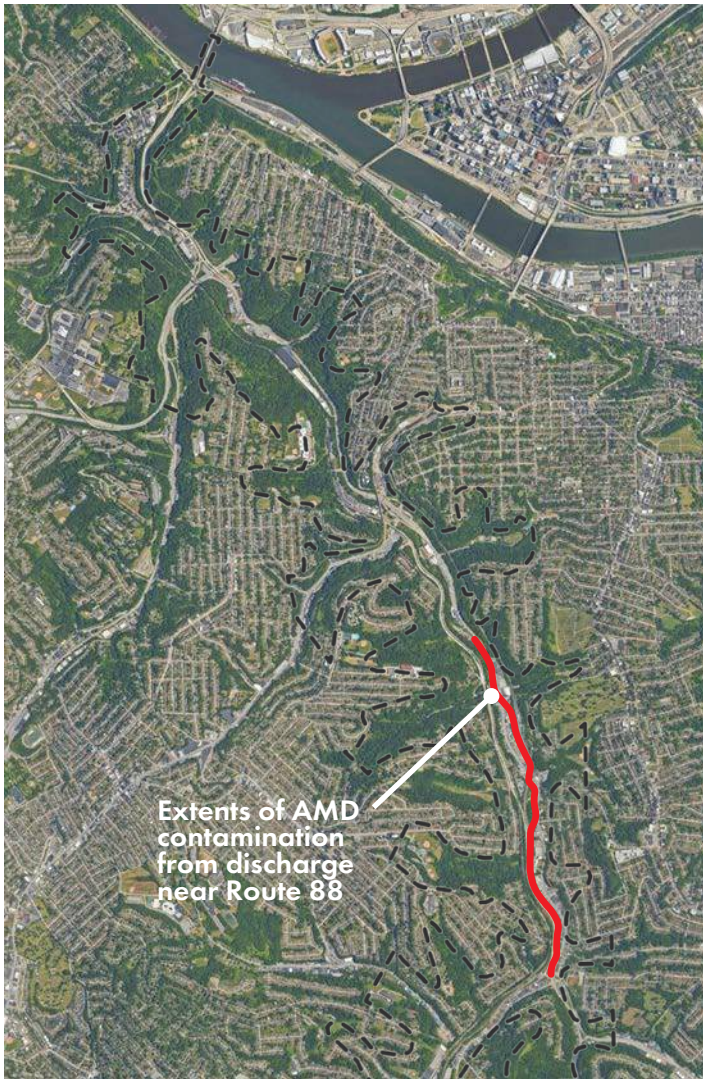
Abandoned mine drainage (AMD) discharges occur at the southern end of the Corridor, where AMD is piped from near St. Norbert Street to an outlet at the intersection of Route 51 and Glenbury Street. According to a study conducted by Hedin Engineering in 2018, this discharge contributes 200 gallons per minute, which is roughly a quarter of the water flowing in the stream channel at this location. Iron contamination persists for over 1.5 miles from this discharge point (delineated in the map below), visually and ecologically degrading the stream for around 20% of its length. The study identified contaminants in Saw Mill Run, including iron, aluminum, and manganese. A full copy of the 2018 Hedin Engineering Report is available in the Appendix.

Abandoned mine drainage, AMD, occurs when water passes through mined areas and reacts with minerals in the subsurface, creating seeps polluted with metallic discharges. AMD is prevalent throughout western Pennsylvania, recognizable by the orange color of affected streams. In addition to the visual impacts, AMD degrades habitat by disrupting the pH of the water and can create conditions that are toxic to flora, fauna, and humans.





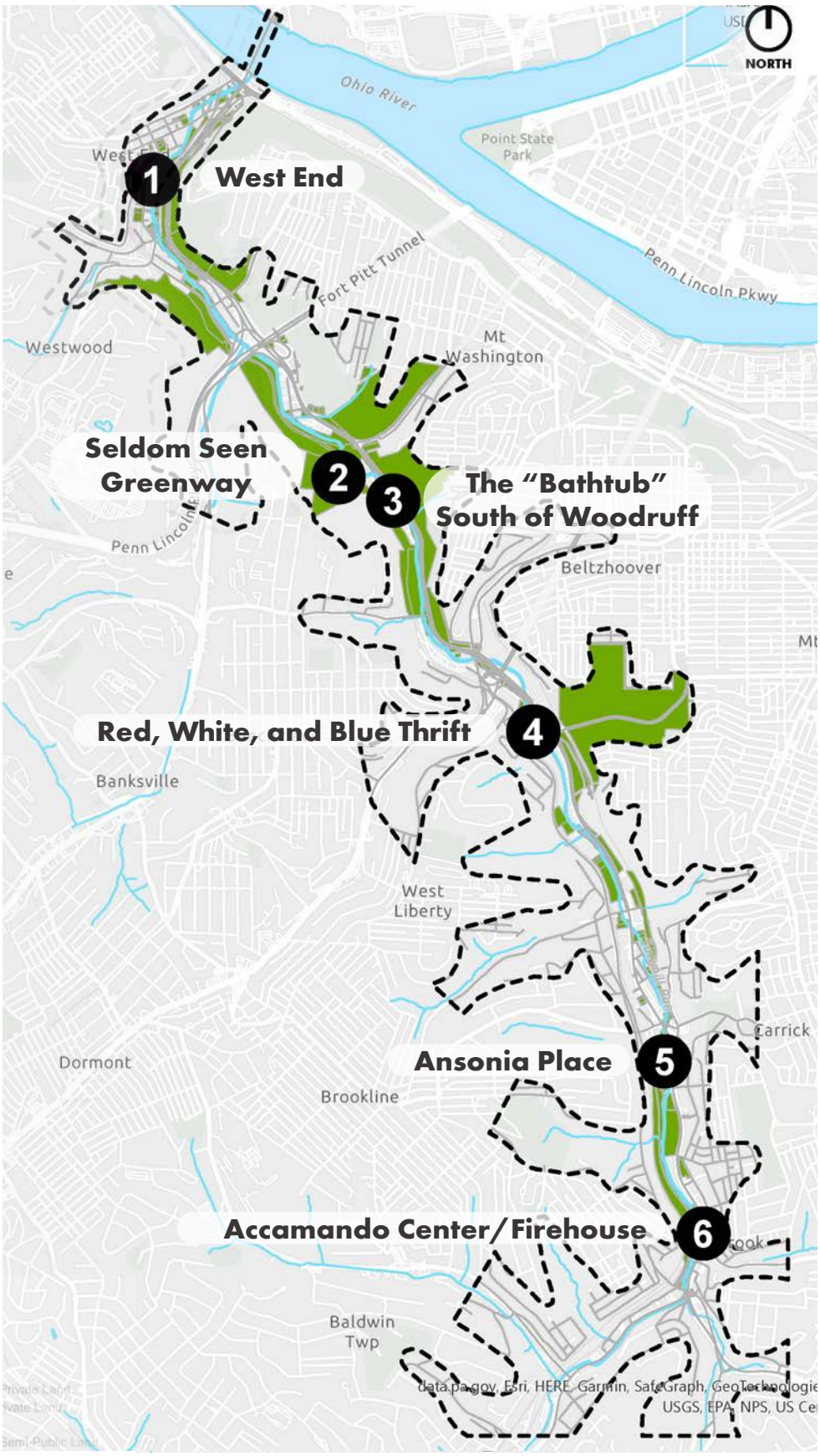
Top and bottom photos: AMD in Saw Mill Run north of the intersection of Route 51 and Route 88. Photo credit to Hedin Engineering



DESIGN FOCUS AREAS

As part of the analysis of the Study Corridor, the parcels immediately adjacent to Saw Mill Run were evaluated to identify common conditions, such as topography, ownership, and stream constrictions. The analysis resulted in the creation of six categories, or "typologies" that can generally be used to describe site conditions in the Corridor.

To study these conditions in more detail, six sites were selected as Design Focus Areas, identified at right. The Design Focus Areas represent each typology and serve as examples of the types of interventions that could be considered for similar areas. They are dispersed along the Corridor and may span several parcels. The following section moves along the six areas from north to south and describes each typology in more detail. Please refer to Chapter 6 for the concept plans for the Design Focus Areas.



WABASH PARK

The first Design Focus Area in the Study Corridor includes Wabash Park and the former railroad corridor at the back of the site. This existing park adjoins the Carnegie Library of Pittsburgh West End Branch and contains a flat field used for spontaneous play, two basketball courts, a children's play area, and an off-street parking area. On-street parking is available on the southbound side of Wabash Street. Saw Mill Run flows along the back of the park and its channel is lined with concrete mattresses. Rocky alluvial deposits accumulate in this section of the stream. Most of this Design Focus Area falls within the 100-year floodplain.

The streambank along and upstream from the park is lined with concrete mattresses, which reduce erosion of the streambank but can increase water velocity and cause negative visual impacts for park visitors compared to other erosion control measures or a natural green streambank. A study conducted by the US Army Corps of Engineers in 1974 reviewed flood control measures including reservoirs, diversion tunnels, channel improvements, floodwalls, dikes, and nonstructural alternatives in the West End area. Channel improvements were identified as the only feasible solution that was supported by the Federal government in this location at this time. These improvements included vertical concrete walls, vegetated slopes, gabions, graded stones, or paved concrete. The design drawing for the concrete mattresses shows a 2H:1V side slope. However, a HEC-RAS model of the area, which appears to reflect the most recent survey data, suggests that the concrete mattresses were installed at a steeper 1H:1V side slope, potentially increasing the velocity of the channel.

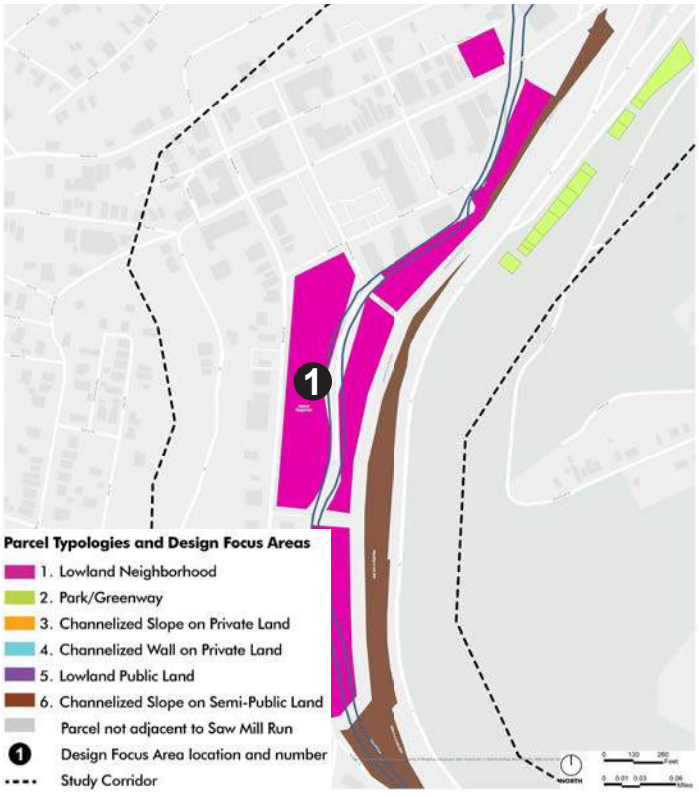
The Design Focus Area is zoned Park and Hillside. The surrounding zoning includes Local Neighborhood Commercial, Hillside, and Park.



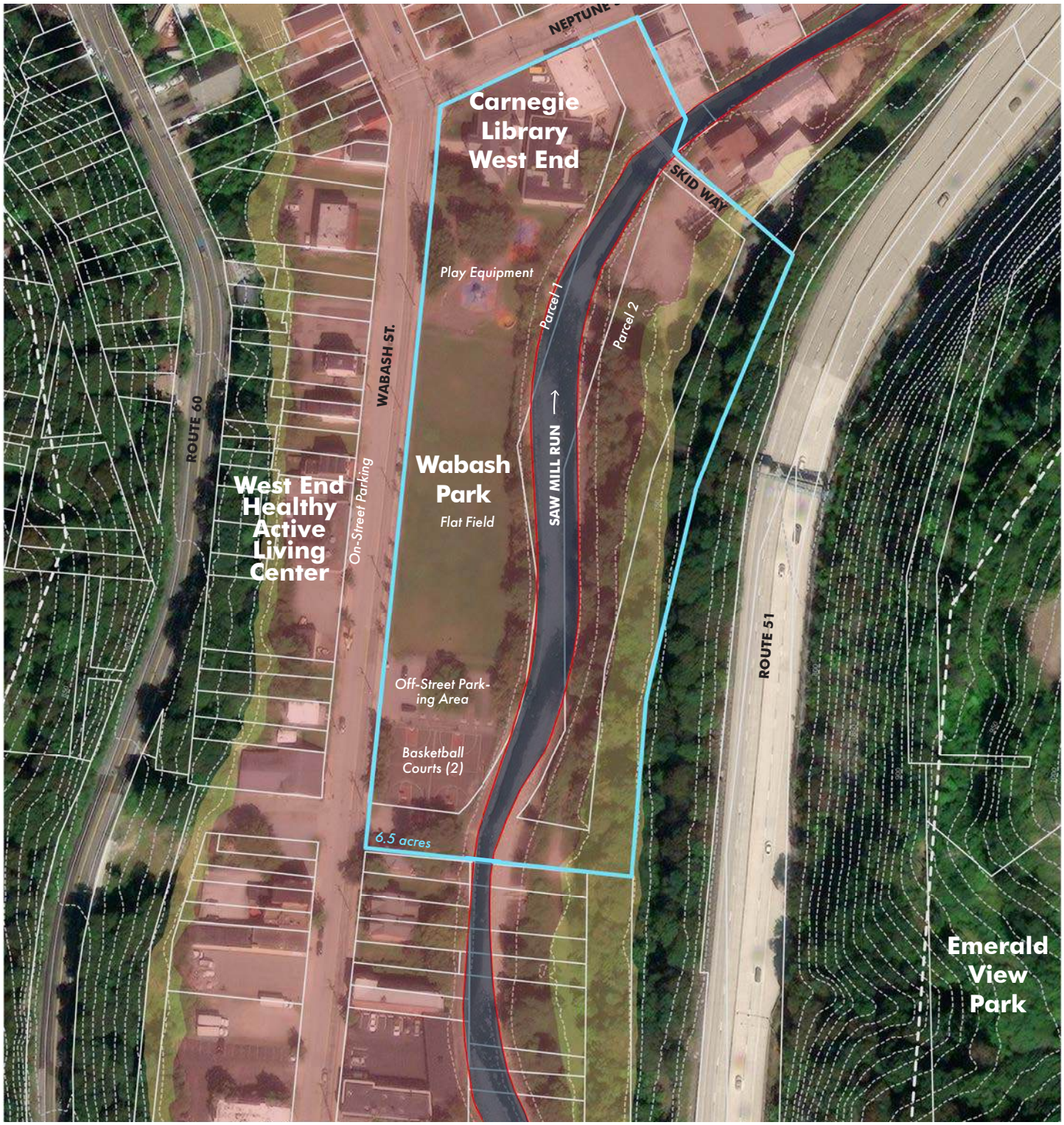


Basketball courts at Wabash Park. Photo credit to TrailBlaze Creative.

TYPOLOGY 1 represents the "lowland neighborhood" condition, which is characterized by flat, intensely developed land located almost entirely within the floodplain. The uses and ownership conditions are varied and the stream is severely constricted through most of this area. The selected Design Focus Area for Typology 1 is Wabash Park.



EXISTING CONDITIONS MAP



Study Areas
Parcels
Design Focus Area

Flood Zones
A - 100-year Floodplain
AE - 100-year Floodplain
X - 500-year Floodplain

Stream Consideration
Little to no constriction
Moderate constriction
Severe constriction
Culvert

Parcel Ownership
Parcel 1: City of Pittsburgh
Parcel 2: City of Pittsburgh

Source: Allegheny County Real Estate Portal, March 2023

NORTH
0 20 40 80 Feet
1"=40'

SELDOM SEEN GREENWAY

Seldom Seen Greenway is an existing green space within the Corridor. At the time of plan development, it had recently been redesignated as a park. The trailhead for the greenway occupies the corner of a lot owned by Pittsburgh's Department of Public Works for the storage of road salt. The site includes walking trails and a dramatic brick arch that supports a now-inactive railroad line. The base of the brick arch is exhibiting signs of significant scour resulting from high water velocities in the stream channel. Once visitors pass beneath the arch, the sounds of Route 51 fade away and the greenway feels immersive, creating an experience unlike anything else in the Corridor. The trails and the parking lot at Seldom Seen Greenway are within the 100-year floodplain, but the steep slopes on the site keep the floodplain contained close to the stream.

During the initial outreach and analysis efforts, a unique opportunity relating to Seldom Seen Greenway and Wabash Park was brought to the attention of the Advisory Committee and the Collaborative Team. At the time of report completion, PennDOT was developing a construction project for the I-376 Banksville Road interchange. The project plan proposes the removal of the lower inactive railroad trestle that crosses over the Interstate. Through conversations with PennDOT representatives, it was identified that the trestle removal is not essential for the implementation of the Banksville Road Interchange Project. PennDOT also indicated that it owns the inactive railroad right-of-way from the West End almost to West Liberty Avenue, passing directly through Seldom Seen Greenway. Together, the railroad right-of-way and the inactive trestle present an opportunity to create a trail connection over I-376, which currently creates a significant barrier to connectivity in this area. Further, important regional trail connections exist or are planned near the West End, including the Trolley Trail, the Ohio River Trail, and the Three Rivers Heritage Trail.

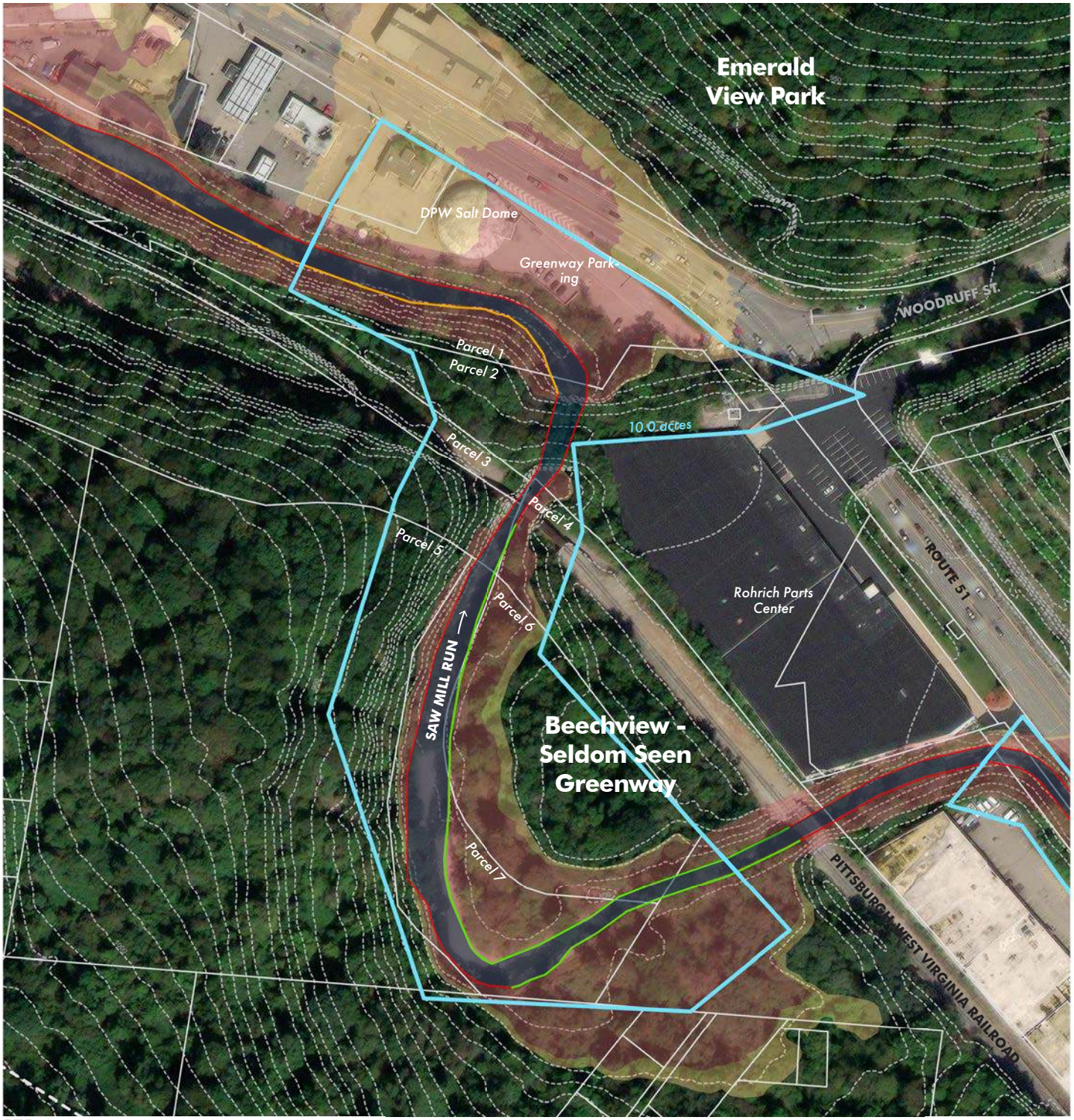
TYPOLOGY 2 is used to address existing greenways and parks within the Corridor. These areas are fairly natural in character and occur on publicly-held land that is used as public space and has existing amenities. Although this typology is less common than some others throughout the Corridor, it presents unique opportunities for demonstration projects. Typology 2 is represented by Seldom Seen Greenway.



Seldom Seen Greenway is zoned Park and Hillside. The Route 51 Corridor immediately north and south of the greenway is zoned Urban Industrial.



EXISTING CONDITIONS MAP



Study Areas
Parcels
Design Focus Area

Flood Zones
A - 100-year Floodplain
AE - 100-year Floodplain
X - 500-year Floodplain

Stream Consideration
Little to no constriction
Moderate constriction
Severe constriction
Culvert

Parcel Ownership
Parcel 1: City of Pittsburgh
Parcel 2: Wabash Properties, LLC
Parcel 3: Pittsburgh-West Virginia Railroad
Parcel 4: Pittsburgh-West Virginia Railroad
Parcel 5: City of Pittsburgh
Parcel 6: City of Pittsburgh
Parcel 7: City of Pittsburgh

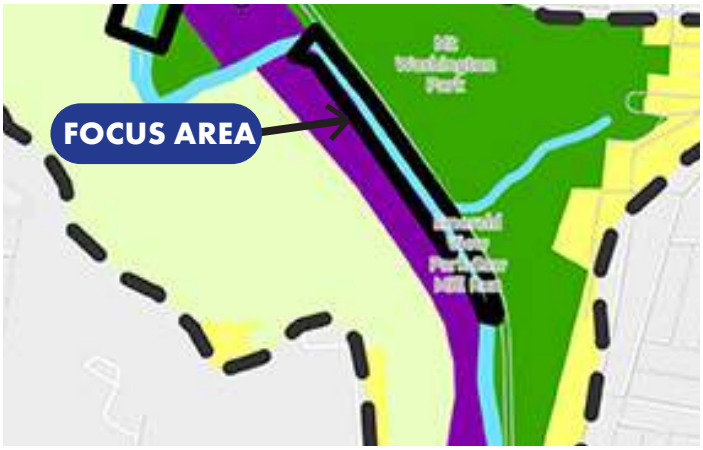
NORTH
0 25 50 100 Feet
1"=50'

Source: Allegheny County Real Estate Portal, March 2023

THE "BATHTUB"

The "Bathtub" is a narrow stretch of the Saw Mill Run stream channel between Route 51 and a series of warehouses and stores. The stream has been straightened through this section, creating high velocity flows that cause erosion problems downstream, including in Seldom Seen Greenway. Although the side slopes of the stream are steep, they are vegetated with trees, shrubs, and herbaceous cover. Some of the vegetation appears to be native, while other areas have invasive species such as Japanese Knotweed. Approximately 1,700 of the 2,000 feet of stream channel in this section falls on property that is owned by the City and is considered part of Mt. Washington Park. The remaining 300 feet are located on two parcels held by a single private owner. This Design Focus Area is located entirely within the 100-year floodplain, which extends across Route 51 in this area.

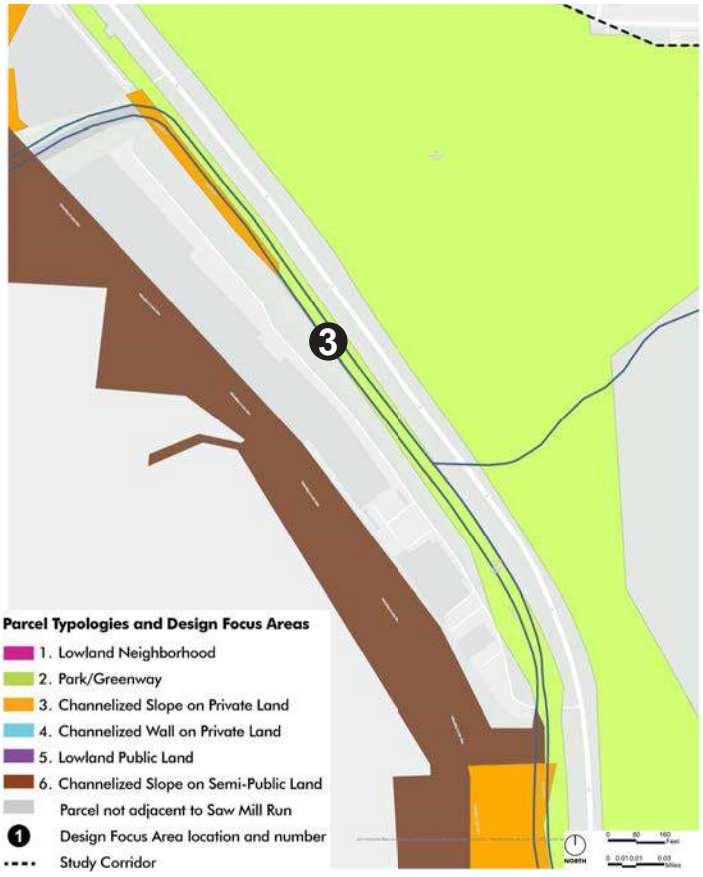
Although a part of the stream in this section is considered part of Mt Washington Park, this area is zoned Urban Industrial. The adjacent land is zoned Hillside and Park.



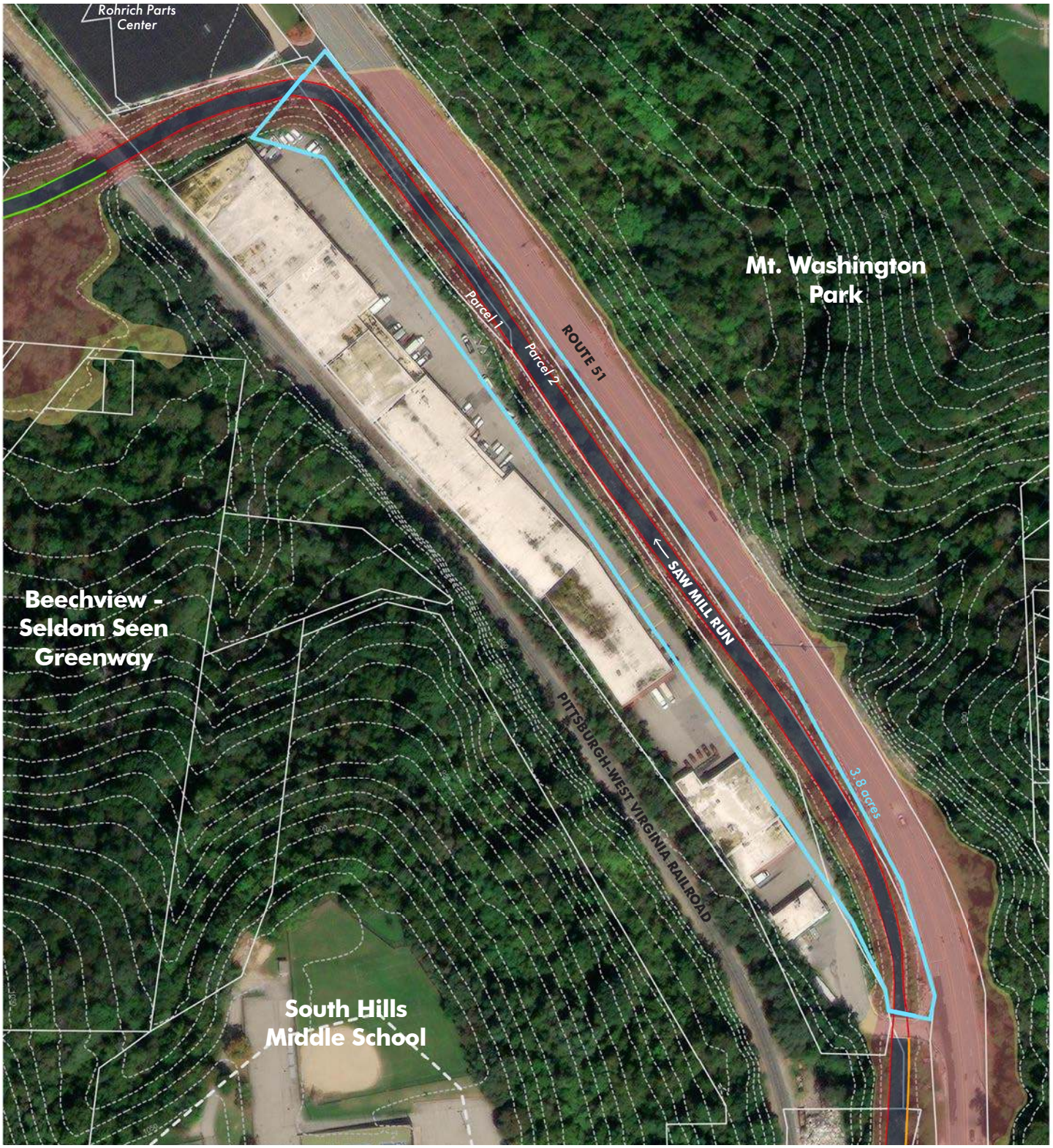


The Bathtub from the bridge crossing at Route 51. Photo credit to Wilson Ecological Consulting.

TYPOLOGY 3 represents locations where the stream is highly constricted with sloping streambanks and flowing across private land. (A separate typology has been developed for areas with vertical streambanks.) Noting the ownership status of parcels is important because in many places throughout the Corridor, the stream flows across private property as opposed to being contained within a right-of-way or easement. Interventions on private land must be cost effective and easy to implement and maintain. The Design Focus Area for Typology 3 is the "Bathtub" named for the steep, deep stream channel in this section.



EXISTING CONDITIONS MAP



Study Areas
Parcels
Design Focus Area

Flood Zones
A - 100-year Floodplain
AE - 100-year Floodplain
X - 500-year Floodplain

Stream Consideration
Little to no constriction
Moderate constriction
Severe constriction
Culvert

Parcel Ownership
Parcel 1: Raybin Industrial Park, Inc.
Parcel 2: City of Pittsburgh

Source: Allegheny County Real Estate Portal, March 2023

NORTH
0 25 50 100 Feet
1"=50'

RED, WHITE, AND BLUE THRIFT STORE

Red, White, and Blue Thrift is a busy thrift store located at the intersection of Bausman Street and Route 51. A new storage facility has recently been constructed to the north of the thrift store, and an old warehouse stands in the store's parking lot to the south. Saw Mill Run flows behind all of these facilities. In some cases, the back walls of these buildings extend to the stream, creating vertical streambanks that exacerbate velocity issues. This condition is present in several areas throughout the Corridor. An inactive right-of-way named Timberland Avenue crosses the thrift store parking lot. A bridge, which is now decommissioned, used to provide access to a few houses behind the store, but these properties have since been vacated and are now held by the City of Pittsburgh. The Pittsburgh Regional Transit South Busway passes behind the vacant properties, and the T-Line runs on the opposite hillside. The entire Design Focus Area, from the new self-storage facility at the northern end, to the warehouses at the southern end, falls within the 100-year floodplain.

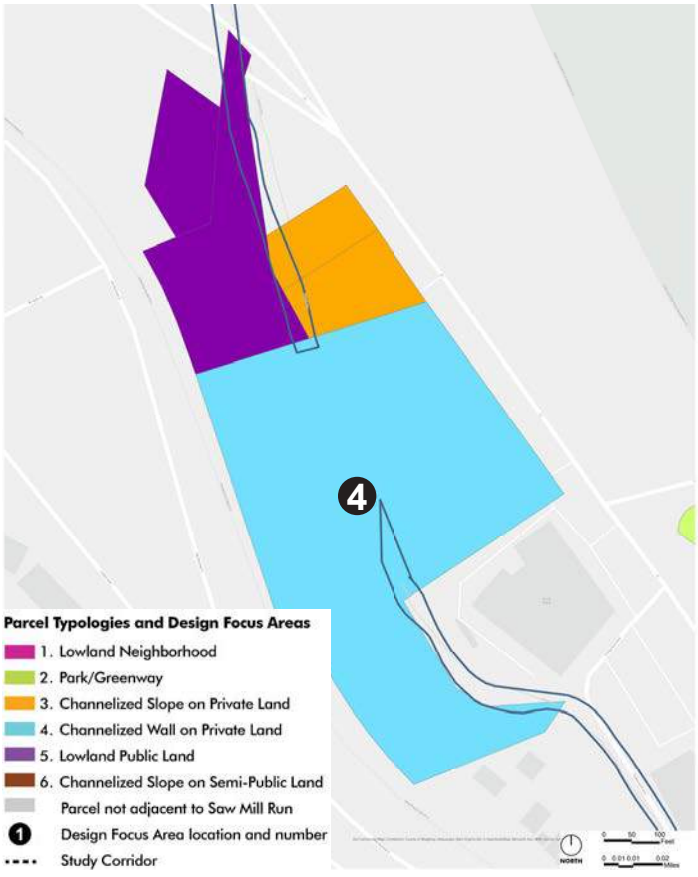
The thrift store and new self-storage facility are within the Highway Commercial zoning district. The parking lot and warehouses to the south are zoned Neighborhood Industrial. The vacant properties behind the stream and the opposite hillside are zoned Parks and Open Space. Surrounding districts include Hillside and Single-Unit Residential.



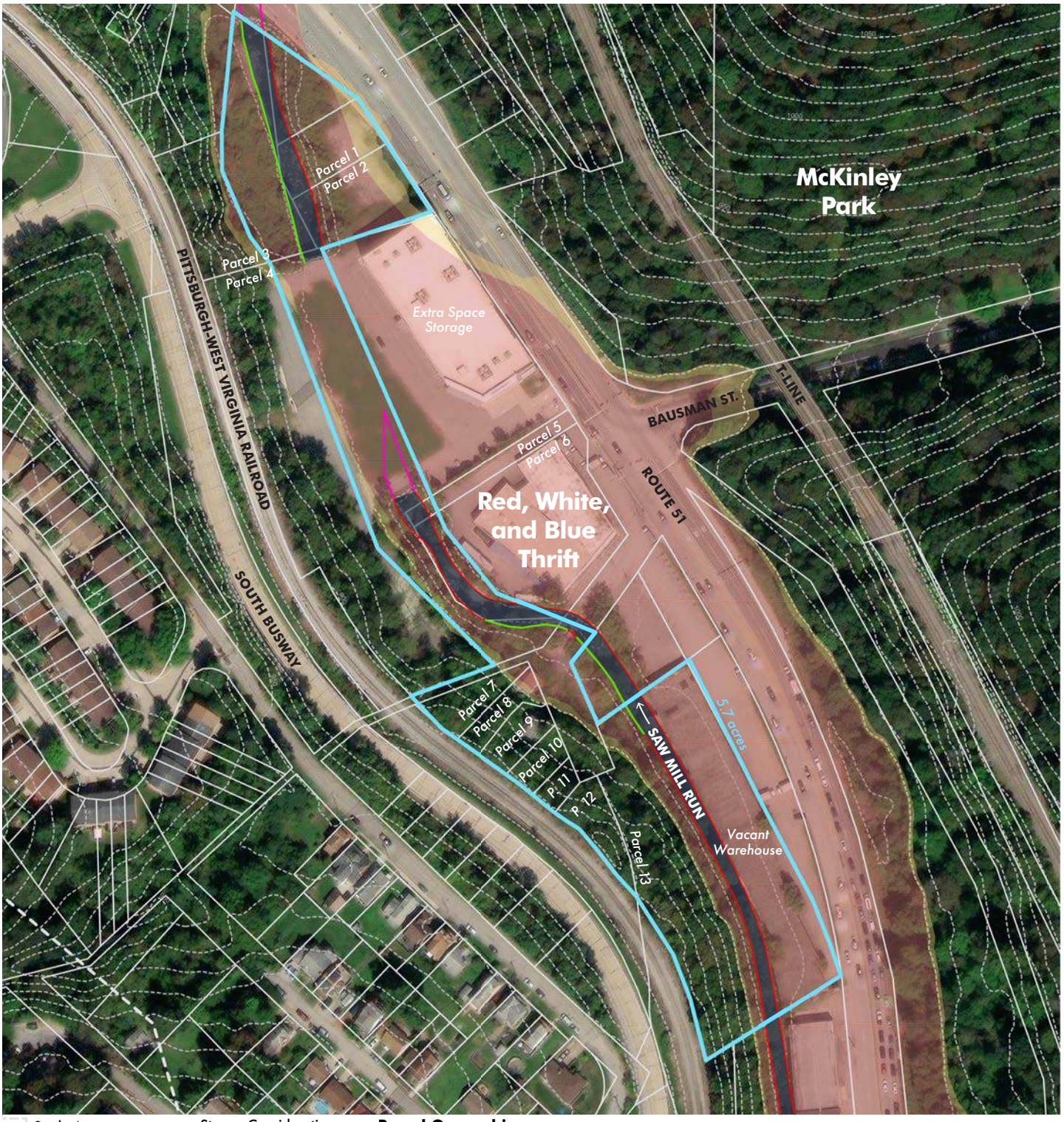


Saw Mill Run behind Red, White, and Blue Thrift

TYPOLOGY 4 is characterized by vertical streambanks or walls where the stream channel crosses private land. The steeper streambanks in these locations pose additional challenges relating to velocity and related issues. In some cases, walls that abut the stream channel are part of a building that was constructed up to the stream. These conditions are particularly vulnerable to flood damage. The area surrounding Red, White, and Blue Thrift was selected as the Design Focus Area for Typology 4.



EXISTING CONDITIONS MAP



Study Areas
Parcels
Design Focus Area

Flood Zones
A - 100-year Floodplain
AE - 100-year Floodplain
X - 500-year Floodplain

Stream Consideration
Little to no constriction
Moderate constriction
Severe constriction
Culvert

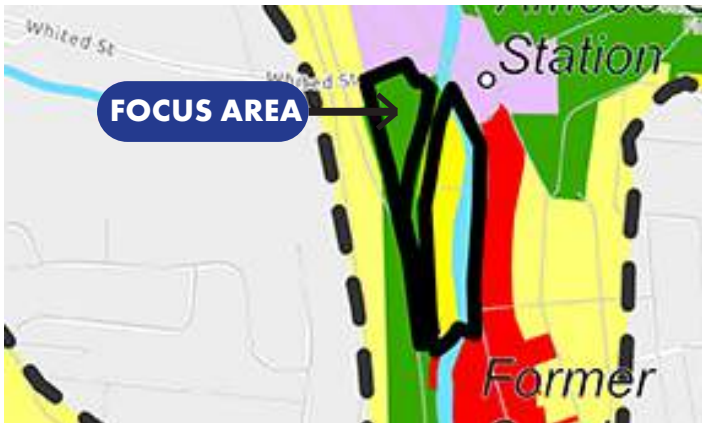
Parcel Ownership
Parcels 1-2: Mac Property Holdings, LLC
Parcel 3: PennDOT
Parcel 4: JSF Saw Mill Ex, LLC
Parcels 5-6: MEAE Holdings, LLC
Parcel 7-11: City of Pittsburgh
Parcel 12: Pittsburgh-West Virginia Railroad
Parcel 13: MEAE Holdings, LLC

NORTH
0 25 50 100 Feet
1"=50'

Source: Allegheny County Real Estate Portal, March 2023

ANSONIA PLACE

Ansonia Place, named for the access road that extends into the former neighborhood, is a collection of parcels that was purchased by the City of Pittsburgh through a FEMA buyout program. The homes that once stood on this site have been demolished. The 100-year floodplain covers the whole Design Focus Area and portions of Route 51. This results from the area's low-lying topography and is compounded by a culvert used to direct Saw Mill Run beneath Route 51 just upstream. Wetland vegetation, such as cattails, is beginning to grow in a low area at the northern end of the site. In this part of the Corridor, Saw Mill Run is contaminated with Abandoned Mine Drainage (AMD) from an upstream discharge point. Most of Ansonia Place is wooded and has relatively low levels of invasive species compared to other parts of the Corridor. The South Bank T-Station is located at the southern end of the site, across from the intersection of Route 51 and Midwood Avenue. The South Bank station has been the focus of recent accessibility improvements; however, the site lacks an accessible route from the street to the station.

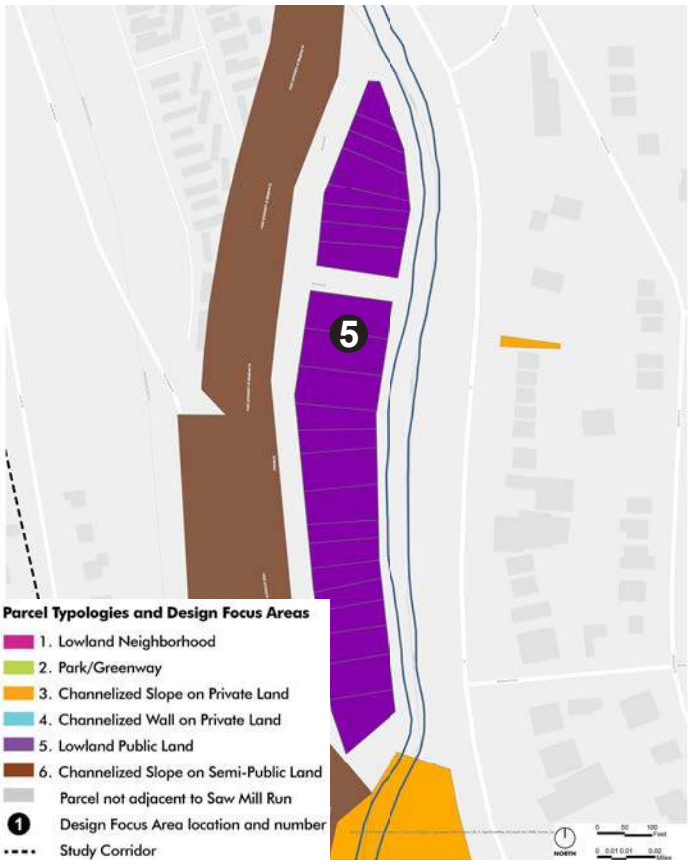


Ansonia Place is zoned as Two-Unit Residential. Surrounding districts include Park, Highway Commercial, Single-Unit Detached Residential, High Density, and Neighborhood Industrial.



Saw Mill Run at Ansonia Place

TYPOLOGY 5 captures parcels that are held by a public entity, such as the City of Pittsburgh, and have relatively less extreme topography and channelization compared to other parts of the Study Corridor. A series of parcels acquired through FEMA buyouts comprise the Design Focus Area for Typology 5.



EXISTING CONDITIONS MAP



Study Areas
Parcels
Design Focus Area

Flood Zones
A - 100-year Floodplain
AE - 100-year Floodplain
X - 500-year Floodplain

Stream Consideration
Little to no constriction
Moderate constriction
Severe constriction
Culvert

Parcel Ownership
Parcels 1-23: City of Pittsburgh
Parcel 24: Port Authority of Allegheny County
Parcel 25: Cloverleaf Park, LLC
Parcel 25 Units: Various private owners

Source: Allegheny County Real Estate Portal, March 2023

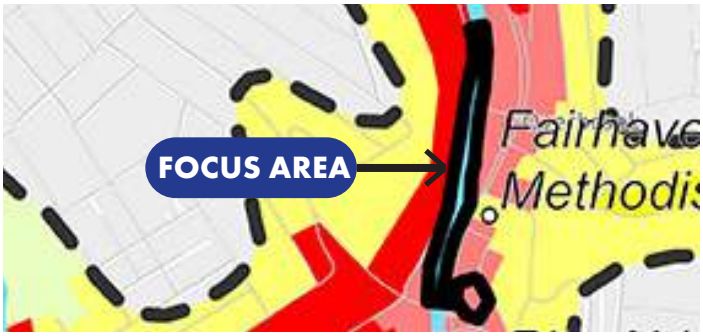
NORTH
0 25 50 100 Feet
1"=50'

ACCAMANDO CENTER

The final Design Focus Area is located near Accamando Center, a community center housed in a historic fire station near the intersection of Route 51 and Maytide Street. In addition to Accamando Center, the Design Focus Area includes the stream channel between Route 51 and the South Busway, as well as Route 51 and a series of parcels held by a utility company at the intersection of Route 51 and Route 88. This intersection experiences frequent flooding and severe traffic backups. Most of the Design Focus Area is located in the 100-year floodplain. Residents at the Public Workshop indicated that flooding often occurs when stormwater fails to be captured by catch basins and instead flows down Maytide, Overbrook, and other uphill streets and then pools on Route 51. In addition to flooding, Saw Mill Run faces other challenges in this area. Its banks are lined with invasive species, tightly constricted by steep banks and a vertical wall for the South Busway corridor, and is contaminated by AMD.

Public Workshop attendees also described challenges to pedestrian mobility resulting from a lack of sidewalk connectivity, lighting, and high traffic speeds. Destinations that are only a few blocks away are difficult and unsafe to reach by foot.

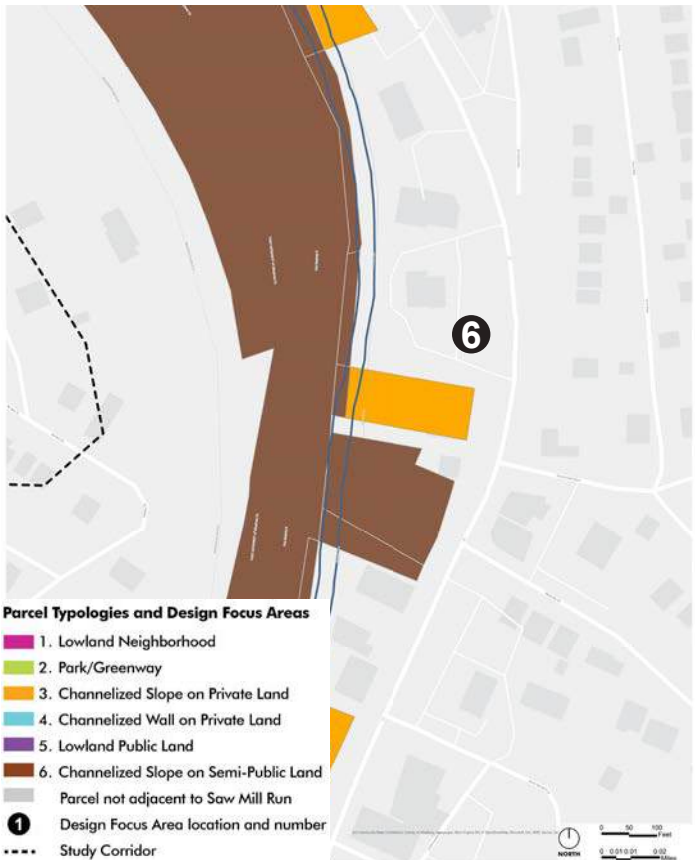
The stream channel behind Accamando Center follows along the Highway Commercial district in this area. Other nearby districts include Local Neighborhood Commercial, Single-Unit Detached Residential, and Neighborhood Industrial.



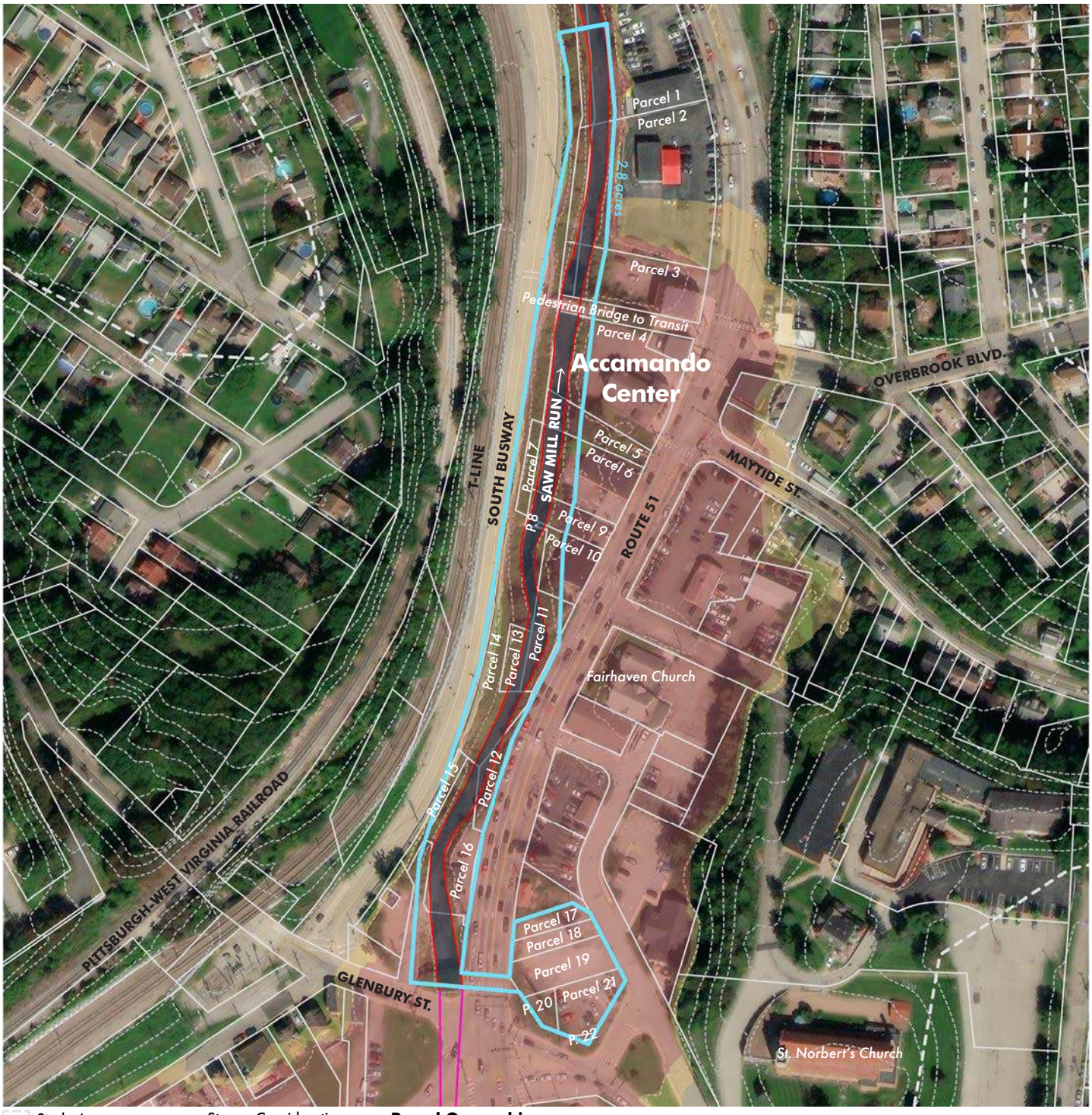


Saw Mill Run along the South Busway

TYPOLOGY 6 the final typology, is characterized by locations where Saw Mill Run flows through narrow, steep, publicly inaccessible parcels, such as right-of-way, railroad, or near the T-Line. The streambanks may be sloping or vertical. This typology is represented by the parcels located near Accamando Center at the southern end of the Corridor.



EXISTING CONDITIONS MAP



Study Areas
Parcels
Design Focus Area

Flood Zones
A - 100-year Floodplain
AE - 100-year Floodplain
X - 500-year Floodplain

Stream Consideration
Little to no constriction
Moderate constriction
Severe constriction
Culvert

Parcel Ownership
Parcels 1-3: Private owners
Parcels 4-5: City of Pittsburgh
Parcel 6: Private owner
Parcels 7-8: Port Authority of Allegheny County
Parcels 9-10: Private owners
Parcels 11-12: Martin Media
Parcels 13-15: Port Authority of Allegheny County
Parcel 16: Glenbury LP
Parcels 17-18: Columbia Gas of Pennsylvania, Inc.
Parcels 19-21: Private owner
Parcel 22: Deutscher Sportvereinvon 1924 PGH

Source: Allegheny County Real Estate Portal, March 2023

NORTH
0 25 50 100 Feet
1"=50'

ECOLOGICAL ASSESSMENT

In addition to the analyses of the previous sections, an Ecological Assessment was developed to evaluate the existing conditions of the stream channel throughout the Corridor. Because Saw Mill Run is an urban stream, the analysis intended to provide an understanding of the quality of habitat and the recommended actions to improve ecological health throughout the stream corridor. The full report is available in the Appendix.

METHODOLOGY

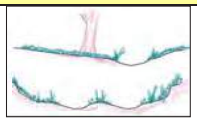
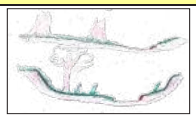
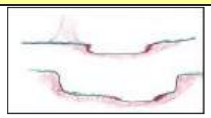
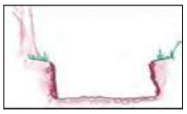
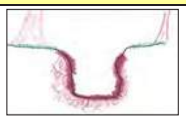
The Ecological Assessment examined the corridor as a whole, and it provided a more detailed examination of the six Design Focus Areas. Information from on-site observations, GIS data, and past reports was used to develop the assessment. The Study Corridor was evaluated with qualitative criteria only, while the Design Focus Areas were assessed using quasi-qualitative methods as part of a defined scoring system.

The Design Focus Areas were evaluated using the Pennsylvania Riverine Condition Level 2 Rapid Assessment, which generates a Riverine Condition Index (RCI) score for each area. This assessment method was selected because it scores site conditions based on data and observations, thus creating a quasi-quantitative score for each Design Focus Area. The scores can be compared to one another and over time. The assessment can be repeated by surveyors when site changes, such as improvements, take place.

A higher score indicates a higher quality of existing habitat in the assessment area. The total scores are composites of scores for the following five categories:

1. Channel/floodplain condition (cross-section of the stream)
2. Riparian vegetation condition (vegetation within the floodplain)
3. Riparian zone of influence condition (land cover 100' from the floodplain)
4. In-stream habitat condition (substrate, debris, shade, bank condition, vegetation, and other in-stream qualities)
5. Channel alteration condition (stream crossings, riprap, channelization, and other manmade features)

The five categories are scored into four conditions, including Poor, Marginal, Suboptimal, and Optimal. The criteria for each of the conditions was developed from streams throughout the state.

Optimal	Suboptimal	Marginal	Poor	Severe
				
Channel Geometry: These channels show very little incision or widening and little or no evidence of active erosion. Anastomosing channels may be present. Channel Stability: Visual indicators include: 1) the banks are not eroding along greater than 5% of the reach; 2) natural vegetative or rock stability features are present along greater than 80% of the banks; 2) stable point bars and bankfull benches may be present; 3) mid-channel bars and transverse bars are rare and if transient channel sediment deposition is present, it covers less than or equal to 10% of the stream bottom; 4) baseflow is connected to the rooting depths of vegetation in the active floodplain. Active Floodplain Connection: The bankfull stream flows have frequent access to the active floodplain and fully developed point bars or bankfull benches that are accessed at most flows greater than baseflow.	Channel Geometry: These channels are slightly incised or overwidened and contain a few areas of active erosion. Channel Stability: Visual indicators include: 1) the banks are actively eroding along less than 25% of the reach; 2) depositional features such as point bars and bankfull benches are present and stable during high flows and occur along greater than 50% of the reach; 3) natural bank protection like vegetation or rock is providing stability along greater than 50% of the reach; 4) baseflow is connected to vegetated point bars and bankfull benches. Active Floodplain Connection: The bankfull stream flows frequently access bankfull benches, or point bars along portions of the reach and may frequently inundate the active floodplain.	Channel Geometry: These channels are over-widened or incised, but to a lesser degree than the Severe and Poor channel conditions. Channel Stability: Visual indicators include: 1) the banks are eroding or severely undercut along greater than 25% and less than or equal to 50% of the reach; 2) depositional features like point bars or bankfull benches occur along greater than 25% and less than or equal to 50% of the reach; 3) the stream banks may consist of some vertical or undercut banks or nick points associated with head cuts; Active Floodplain Connection: The bankfull stream flows have infrequent connection to the active floodplain.	Channel Geometry: These channels are over-widened or incised and eroding vertically and/or laterally. Channel Stability: Visual indicators include: 1) the banks are eroding or severely undercut along greater than 50% of the reach; 2) active or recent bank sloughing is present along greater than 50% of the reach; 3) natural bank protection like vegetation is not preventing bank erosion along the reach; 4) depositional features, such as point bars and bank full benches, are absent from the reach or newly developing along less than 25% of the reach; 5) bank full benches and point bars frequently scour during high flows; 6) baseflow is disconnected from plant rooting depths and the active floodplain. Active Floodplain Connection: The bankfull stream flows are not connected to the active floodplain.	Channel Geometry: These channels are deeply incised and actively eroding vertically and/or laterally. Over widened channels may contain sections of unstable braided channels from aggradation. Channel Stability: Visual indicators include: 1) the banks are actively eroding or being undercut along greater than 80% of the reach; 2) active or recent bank sloughing is occurring along greater than 80% of the reach; 3) natural bank protection like vegetation is not preventing bank erosion or sloughing; 4) depositional features such as point bars and bankfull benches are absent; 5) flood flows are disconnected from the active floodplain. Active Floodplain Connection: The bankfull stream flows are never connected to the active floodplain.

The Riverine Assessment Form illustrates the various channel and floodplain conditions and the recommended scoring for each.

RESULTS

STUDY CORRIDOR

The study found that natural habitats are limited in the Study Corridor and tend to occur on steep slopes, which are prohibitive to development and are often zoned as such. The steep slopes are typically forested with native deciduous species, including oaks and similar hardwoods.

Despite the forested hillsides, most of the visible vegetation while traveling through the Corridor is characterized by non-native, invasive species. The most common invasive species include Tree-of-Heaven and Japanese Knotweed.

The assessment also identified that, despite the presence of trash in the stream in locations throughout the Corridor, the stream bottom substrate exhibits qualities that could support aquatic life. Although the stream bottom is adequate, the stream lacks organic debris, such as leaf litter or woody material, which is vital to supporting macroinvertebrate species. Organic debris likely gets swept away during frequent high-water conditions.

Please refer to Chapter 5 for information about the ecological recommendations for the Corridor.



Saw Mill Run behind the Steamfitters Building near the interchange of I-376 and Route 51

DESIGN FOCUS AREAS

The Ecological Assessment produced RCI scores for each of the six Design Focus Areas, broken down in the table below. None of the Design Focus Areas exhibited optimal conditions. However, Seldom Seen Greenway (DFA 2) had the healthiest stream channel conditions of the six areas. In contrast, Accamando Center (DFA 6) showed the most severe impacts of urban stream syndrome, which is characterized by the negative impacts of

Rating	RCI Range	RCI Score	Design Focus Area
Optimal	0.75-1.00		
Sub-Optimal	0.50-0.74	0.73	**Seldom Seen**
		0.60	**Ansonia Place**
Marginal	0.25-0.49	0.46	**Red, White, and Blue Thrift**
		0.40	**Bathtub**
Poor	0.00-0.24	0.21	**Wabash Park**
		0.17	**Accamando Center**

stormwater runoff on the chemical, physical, and biological health of a stream.

In the assessments, the Channel/Floodplain Connectivity category likely could have been scored lower, but because the streambank is armored in so many locations, the armoring prevents erosion that would typically result in a lower score.

The largest drivers of the scores for the six Design Focus Areas are the poor conditions of the riparian vegetation and the riparian zone of influence. In many places, the riparian buffer does not extend to the limits of the floodplain, and impervious surface is often present in these areas, contributing to excess stormwater runoff to Saw Mill Run.

Please see Chapter 6 for recommendations for improving the ecological conditions at the six Design Focus Areas.

FLOODPLAIN CONNECTIVITY

The term "floodplain connectivity" describes the lateral and/or vertical movement of resources between the flowing water channel and adjacent riparian habitats (Ward 1989). Lateral movements include the active or passive biotic movement of animals and the abiotic transport of nutrients and sediments (Ward et al. 2002). Vertical floodplain connectivity is the exchange of surface water and groundwater through either infiltration of flood waters into the groundwater aquifer or exfiltration of groundwater into the stream resource (Amarose and Bornette 2002).

Ideally, a connected floodplain provides several ecological functions and human use values, including fish and wildlife habitat, floodwater and erosion control, water quality improvements, groundwater recharge, productivity, and recreational opportunities (FEMA 2022). However, in urban streams like Saw Mill Run, floodplain connectivity is typically flashy and episodic because of the high amount of impervious surface cover within the watershed (Paul and Meyer 2001). Thus, the functions and values provided by a connected floodplain are lacking in most urban stream settings.

Urban stream restoration efforts typically focus on channel form and stability as opposed to restoration of the biological and ecological functions of a connected stream and floodplain ecosystem (Bernhardt and Palmer 2007). Often, urban stream restoration efforts create shallow, low elevation floodplains above the bank full elevation (Doll et al. 2003). Recent studies suggest that the creation of lower elevation floodplains that are frequently flooded have a greater potential for increased trapping of sediments, nutrients, and pollutants in urban stream settings (McMillan and Noe 2017). This can be challenging because of space limitations associated with the built-up lands of the urban environment. However, Chapter 6 identifies potential locations for improving floodplain connectivity at the Design Focus Areas throughout the Study Corridor.



Floodplains are visible as the flat land flanking the sides of a waterway. Photo credit to PA DCNR.

CHAPTER 3
OUTREACH



Corridor Tour with Stakeholders (Photo Credit: TrailBlaze Creative)

PUBLIC ENGAGEMENT AND OUTREACH

ADVISORY COMMITTEE

Watersheds of South Pittsburgh identified representatives with diverse backgrounds for the Green Boulevard Master Plan's Advisory Committee. Advisory Committee members had affiliations with governmental agencies including City of Pittsburgh Planning, PennDOT, and Allegheny County; engineering firms with relevant experience; and nonprofits such as Riverlife. The varied experience of the Advisory Committee members spurred dynamic conversations from multiple viewpoints, ranging from challenges relating to the implementation of zoning changes, to responsibilities for corridor management tasks, and ideas for potential trail opportunities in adjacent parts of the City.

In addition to these insightful discussions, the Advisory Committee provided regular oversight of the project and reviewed the development of analyses, conceptual designs, cost estimates, and implementation strategies. The Advisory Committee guided the vision for the plan and its proposed recommendations.

CORRIDOR TOUR

As part of the outreach efforts, the Collaborative Team hosted a bus tour of the Study Corridor. The tour was used to engage key stakeholders from the City of Pittsburgh, including the mayor's office, the office of a State Representative, nonprofits, and governmental departments. A local news outlet also covered the tour. The tour stopped at four of the six Design Focus Areas, including Wabash Park, Seldom-Seen Greenway, Red, White, and Blue Thrift, and Ansonia Place. These stops highlighted the challenges, opportunities, and complexities present in the Corridor. In between stops, members of the Collaborative Team shared background information and points to consider for the upcoming stop.

KEY TAKEAWAYS

The Bus Tour drew attention to the complex and interrelated nature of the conditions in the Study Corridor. Attendees identified the need for coordination between the many agencies and entities that are involved in project within or near the Corridor, such as ALCOSAN, PennDOT, Friends of the Riverfront, and others.

Attendees also discussed how efforts to incite changes in the Corridor in the next 30 to 50 years must begin now. Coordination among organizations, planning, funding, and enacting any proposed recommendations will require a commitment over the next generation in order to see significant changes in this area.





Corridor Tour (Left and Right photos credit to TrailBlaze Creative)

PUBLIC WORKSHOP

The Public Workshop was a two-day event used to gather input and begin forming recommendations and preliminary concept plans for the six Design Focus Areas. On Day 1, the Collaborative Team met with residents, business owners, and key stakeholder to discuss the project progress to-date and to gather anecdotal input from people who experience the Corridor on a day-to-day basis. This input was used to develop initial lists of key issues and plan recommendations to be further developed for the report. On Day 2, the Collaborative Team used insight from prior analyses and community input to develop the first concept plans for the Design Focus Areas. Day 2 culminated in a public presentation of the concept plans and a discussion of the issues and recommendations. Presentation attendees provided important comments on the Design Focus Area plans, such as considerations for related stakeholder organizations or desired connection opportunities to community destinations.

KEY TAKEAWAYS

Safety, walkability, and access along Route 51 need improvement and should be a consideration for the Green Boulevard Master Plan concepts and recommendations.

Saw Mill Run is not the only source of flooding. Problems with uphill catch basins and excess runoff can cause flooding of businesses and the roadway, even when the stream itself is not exceeding its banks.

The unclear nature of responsibilities, ownership, and management of the stream and infrastructure in the Corridor creates challenges when problems arise. Residents and business owners are likely among the first people to notice when issues occur, but it is unclear who they should contact when intervention is needed, particularly when the stream itself is impacted.

A lack of uniformity is pervasive throughout the Corridor, ranging from building setbacks, to maintenance procedures and vehicular access management. These conditions contribute to the chaotic experience of navigating the Corridor as a pedestrian or motorist, and it prohibits the Corridor from having a positive identity as a “place” or “destination”.



Saw Mill Run Corridor Public Workshop Final Presentation



Saw Mill Run Corridor Public Workshop Open House

STAKEHOLDER INTERVIEWS

The Collaborative Team conducted a total of 10, one-on-one stakeholder interviews over a period of two months. The interviews provided an opportunity to dive deeper into specific questions about the Corridor and the organization's plans, responsibilities, and roles that could impact the project.

Organizations Interviewed

Allegheny Cleanways

Allegheny County Conservation District (ACCD)

Allegheny County Sanitary Authority (ALCOSAN)

City of Pittsburgh Department of City Planning (DCP)

City of Pittsburgh Department of Mobility and Infrastructure (DOMI)

City of Pittsburgh Department of Public Works (DPW)

Hilltop Alliance

PA Department of Environmental Protection (PA DEP)

Pittsburgh Water and Sewer Authority (PWSA)

Riverlife

Overarching Influences and Common Themes

Many of the challenges present in the Corridor are not the sole responsibility of one group. The lack of coordination between responsible entities results in little to no improvement over time.

Many different people and groups are involved in and around the Corridor and it is difficult to unify them under one common goal. Each group has different needs, desires, and plans, and missions.

The Corridor lacks a long-term vision or collective goal and has no one to serve as its champion to work towards such a goal.

KEY TAKEAWAYS

The following list of Key Takeaways highlight the recurring themes and critical input received during the Stakeholder Interviews. These points guided the development of Corridor-wide recommendations, and they are all shaped by a few overarching influences.

The overarching influences impact one another in a self-perpetuating nature. Each one affects the others and can be found contributing to the challenges and opportunities noted throughout the report, including the following Key Takeaways. The Key Takeaways can be sorted into two groups to highlight how they relate to other parts of the Green Boulevard Master Plan. Takeaways that relate specifically to the development of the Plan's recommendations are grouped under Plan Recommendations and Implementation. Those that reflect on the everyday, long-term upkeep and management of the Corridor are noted under Corridor Management, Regulation, and Maintenance.

NEIGHBORHOOD AND REGIONAL PLANNING ORGANIZATIONS

As the details of the MSDP began to be developed and refined, members of the Advisory Committee held a series of informational meetings with the registered community organizations (RCO) affected or influenced by this Plan as well as the Southwestern Pennsylvania Commission (SPC).

In the City of Pittsburgh, RCO's are important "foundation stones" to neighborhood planning and development. Many are very influential to long-term political support and the implementation of projects within or directly affecting the neighborhood. There are fourteen (14) RCO's operating within the boundaries of this Study. Some of the organizations are minimally touched. Others are physically separated from the Corridor because of topography or transportation corridors. A handful of the RCO's can be greatly affected by the recommendations of this Plan.

Consequently, the following RCO's were presented with the specifics of the MSDP and their input was directly sought.

- Knoxville Community Council
- Brookline Community Council
- Beltzhoover Consensus Group

All of the RCO's that the Advisory Committee were in support of the proposed recommendations and saw the opportunity to align or piggy-back on the MSDP in effort to address issues in the neighborhood including connectivity, green space, neighborhood branding and identity and localized flooding.

SPC is the Pittsburgh region's designated metropolitan planning organization and is an essential partner in planning and implementing transportation projects throughout their ten (10) county service area. Over the past decade, SPC has also become active in addressing regional land use issues and has emerged as a strong advocate for improved bicycle and pedestrian infrastructure. It will be important for the implementers of this MSDP to continue collaboration with SPC given their knowledge and skill sets.]

PLANNING COMMISSION

Pittsburgh is in the early stages of formulating an updated to its Comprehensive Plan. The staff of the Department of City Planning and the members of Planning Commission are instrumental in its development. As a means of sharing what has been learned to date about the Saw Mil Run Valley, the draft MSDP was presented to the Pittsburgh Planning Commission. The Commission recognized many of the challenges plaguing the Saw Mill Run Valley and see that many of its recommendations fall into the Commission's purview. The Commission unanimously pledged support towards its implementation and expect to incorporate the relevant aspects of the MSDP into the merging Comprehensive Plan.

PLAN RECOMMENDATIONS AND IMPLEMENTATION

The conditions in the Corridor are the result of many interrelated factors working within and around Study Area. Concurrently, there are several other plans and studies being developed. As such, the recommendations of the Green Boulevard Master Plan must holistically consider challenges and opportunities in planning, policy, design, and related social influences.

Many groups work within and around the Study Corridor, but Saw Mill Run lacks a designated organization for the sole purpose of managing the watershed. There is no common management throughout the Corridor. Because the Green Boulevard Master Plan may take a generation to implement, a singular champion for maintaining the stream, advocating for its protection, and pursuing projects relating to its improvement may be necessary to see the Plan's recommendations successfully implemented.

Another challenge to implementing changes in the Corridor over time is the mix of people and groups involved in the Corridor. The needs and desires of business owners, residents, transportation agencies, environmental agencies, recreation organizations, and other groups are all very different and, in some cases, may actually conflict. One group could propose an improvement, while other groups see it as detrimental to the way the Corridor is or should be used. Change is not always welcome, and it can be difficult to get all stakeholders to agree on the most important solutions for the Corridor.

Political leadership is also crucial to implement the scale of changes needed to improve the Corridor in the long-term. However, the length of political terms creates an added challenge, because support of the proposed solutions could change every few years. To resolve some of the more complex issues, it may be more effective to work directly with State or Federal agencies instead of the City when possible.

It is critical to protect the trestle over I-376 until it could become a trail. If it gets demolished, that potential pedestrian/bike connection is gone forever. The trestle from Woodruff Street is also an important connection, but the I-376 trestle should be the priority.

CORRIDOR MANAGEMENT, REGULATION, AND MAINTENANCE

Studies, decisions, and actions taken in the Corridor tend to be reactive to a current condition or challenge, rather than strategically working towards a long-term goal. Much of the routine work is focused on maintaining, not improving, the function of the area. Problems are addressed when they arise, instead of working to prevent the problems from arising in the first place.

Although there are many agencies and organizations involved in the Corridor, each group only focuses on their clearly defined mission and responsibilities. If a task does not clearly fit within a group's responsibility, they will not take it on. Issues in the Corridor often do not have a clearly responsible party or may require coordination several groups, which prevents the problem from being resolved in a timely manner, if at all.

Systems exist for ensuring the proper maintenance of the stream and infrastructure in the Corridor, but a lack of clarity and understanding of responsibilities inhibits the successful use of these services. If a task does not clearly fall within a group's purview, the responsibility can easily be passed from one entity to another, which creates confusion and delays for those trying to solve a problem.

The lack of clarity in responsibilities and the reactive nature of management in the Corridor are worsened because agencies and organizations rarely coordinate on related activities or impacts. The structure of these relationships is fractured.

Although the initial project plan anticipated two public events, the first public workshop was fulfilled by the input received during the Corridor Tour, additional Stakeholder Interviews, and Day 1 of the Public Workshop. Together, these events provided the Collaborative Team with a wealth of information about the existing conditions and current issues, opportunities, and challenges in the Study Area.

In addition to the many influences acting throughout the Study Area, the Corridor could be described as "a corridor of corridors". In a span of 800' or less, there are up to five major corridors running parallel to each other, including the South Busway, an active railroad, the stream, Route 51, and the T-Line. The steep slopes on either side create pressure for development in the relatively flat valley bottom, compounded by the presence of several major transportation thoroughfares. The resulting conditions leave little room for the floodplain and create very small developable parcels, causing property owners to need to maximize the development on each parcel. These conditions work together to further exacerbate the impacts on Saw Mill Run.

CHAPTER 4
KEY ISSUES, CHALLENGES, AND DRIVERS



Lower, inactive railroad line at Seldom Seen Greenway

KEY ISSUES, CHALLENGES, AND DRIVERS

Throughout the process of analysis and outreach, a list of the top 9 issues in the Saw Mill Run Corridor was developed. Although several of these challenges were evident through mapping and site analyses, all of the issues were underscored by input received from residents, business owners, and stakeholders. The following list was used to inform the design solutions and policy and management recommendations identified in Chapters 5 and 6.

Key Issues in the Saw Mill Run Corridor

DISJOINTEDNESS

DISJOINTED... IN OWNERSHIP

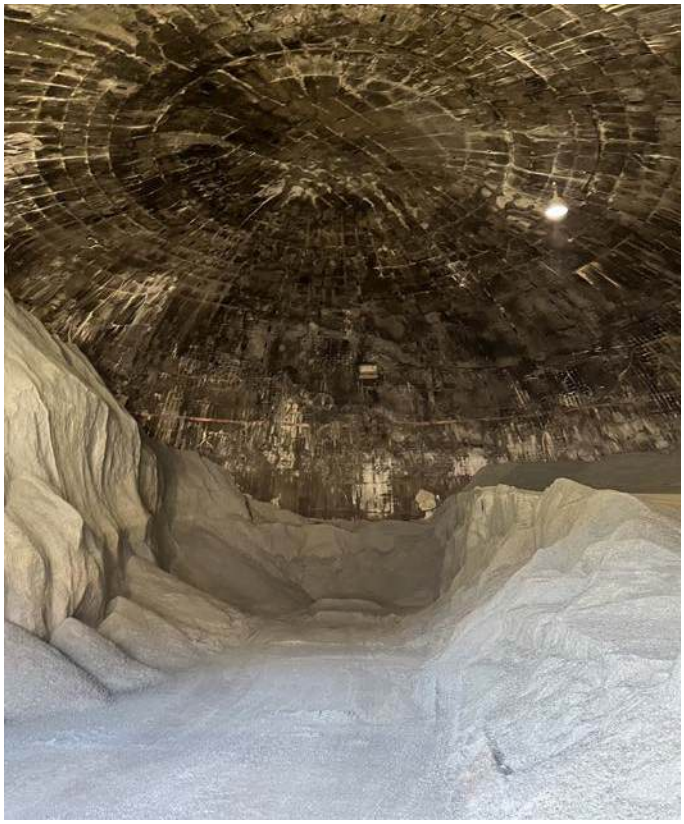
Route 51 is lined with many small parcels of land. This means that there is a large number of property owners, including many who use this land for their businesses/livelihoods. Because they are spatially constrained, it also means that they must maximize the use of every part of their property, resulting in high rates of impervious surface and overall development in the Corridor.

DISJOINTED... IN MANAGEMENT

In addition to the property owners, there are many agencies, departments, and organizations involved in and around the Corridor (Public Works, Planning, PWSA, USACE, DEP, ACCD, Riverlife, WoSPgh, PennDOT, upstream municipalities, emergency management groups, and others), which creates two challenges for managing the Corridor. First, each organization likely has plans aligned with its own mission. There is not much coordination between all the different entities involved in the Corridor, which inhibits the pursuit of a common goal. Second, the presence of so many groups can lead to a lack of clarity and accountability when concerns arise. It is difficult to know who is responsible for maintaining, managing, and responding to issues in the Corridor.



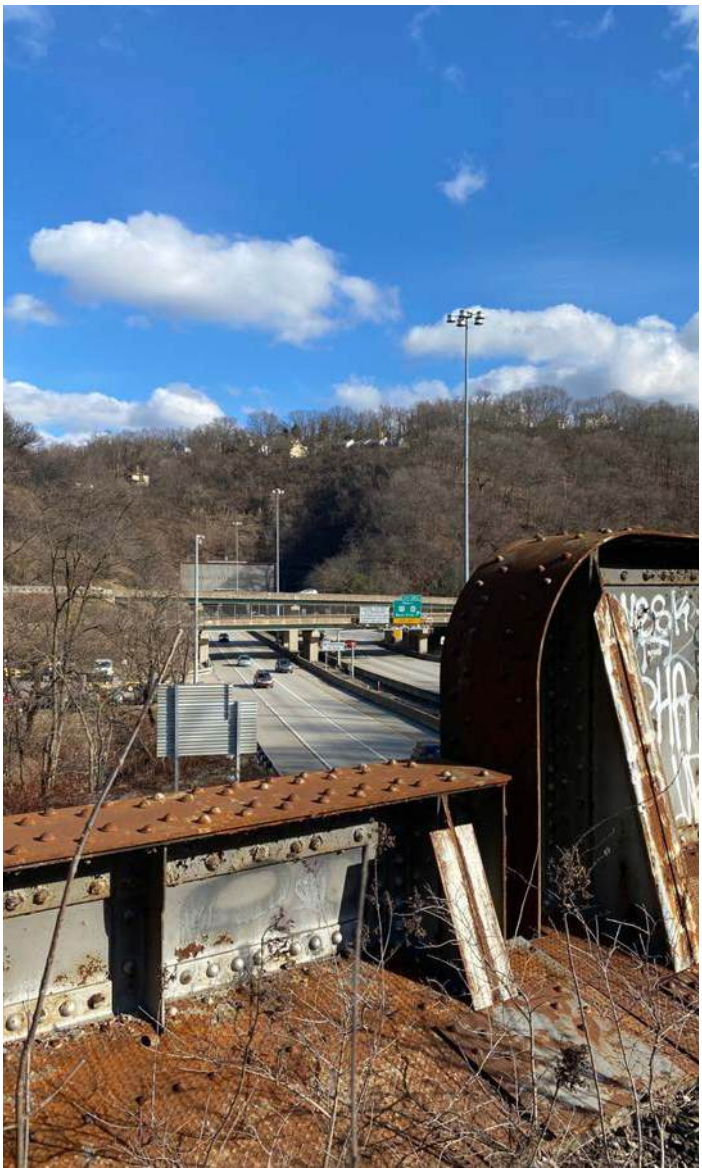
Saw Mill Run between the PRT South Busway and commercial development near the intersection of Route 51 and Route 88



Route 51 Salt Dome (Photo Credit: TrailBlaze Creative)



Route 51 near Red, White, and Blue Thrift



I-376 from the lower railroad trestle

DISJOINTEDNESS... FOR PEDESTRIANS

The Corridor poses challenges for pedestrian connectivity and accessibility. There are several locations where sidewalks end without arriving at a destination. Where sidewalks do exist, they often experience encroachment from surrounding land uses. The congested and fast-paced nature of Route 51 creates a dangerous environment when using sidewalks. In some places, the crosswalks signals are not operable, preventing pedestrians from safely crossing Saw Mill Run Boulevard to access transit or other needs. Bus and lightrail transit is available throughout the Corridor, but some stops are not accessible for pedestrians or riders with limited mobility.

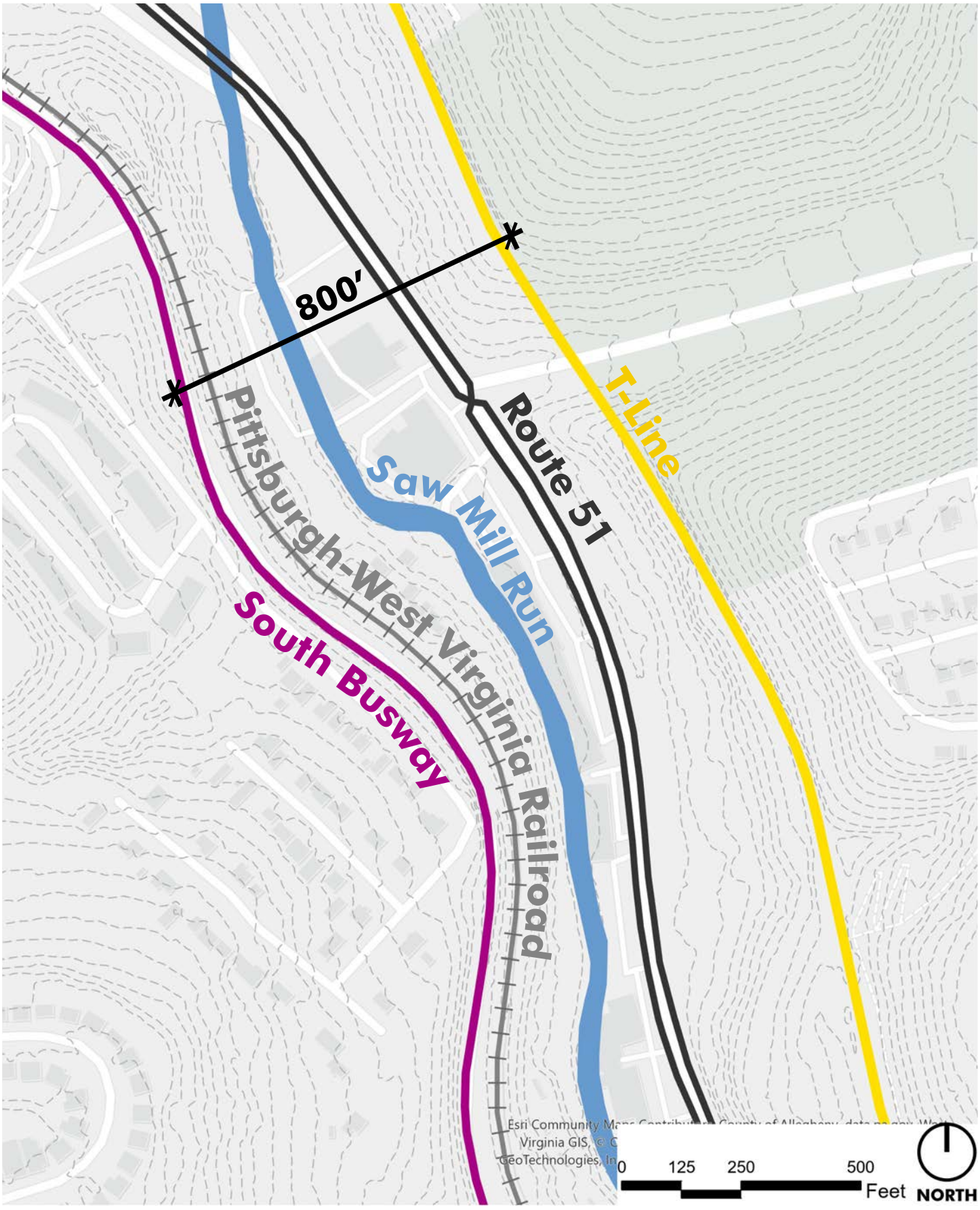
DISJOINTED... FROM THE CITY

Residents, business owners, and other stakeholders identified that there is a perception that this area feels disconnected/orphaned from the rest of the City. The conditions described above may contribute to this feeling, and this perception can make it more difficult to address these challenges.

A CORRIDOR OF CORRIDORS

In addition to the many influences acting throughout the Study Area, the Corridor could be described as "a corridor of corridors". In a span of 800' or less, there are up to five major corridors running parallel to each other, including the South Busway, an active railroad, the stream, Route 51, and the T-Line. The steep slopes on either side create pressure for development in the relatively flat valley bottom, compounded by the presence of several major transportation thoroughfares. The resulting conditions leave little room for the floodplain and create very small developable parcels, causing property owners to need to maximize the development on each parcel. These conditions work together to further exacerbate the impacts on Saw Mill Run.

A CORRIDOR OF CORRIDORS



OTHER CHALLENGES

TRAFFIC

Route 51 serves as a thoroughfare through the Corridor. The segments of Route 51 within the Corridor experience average daily trips ranging from 19,000 to 38,000. Relatively few of trips originate or terminate within the Corridor, as this route is frequently used as a conduit into and out of the City of Pittsburgh. This high volume of vehicles impacts pedestrian safety, particularly when sidewalks are not present or crosswalk signalization is inoperable. It also means that even minor flooding in the right-of-way significantly impacts traffic flow and safety.



Traffic at the intersection of Route 51 and Overbrook Boulevard

LEGACY PROJECTS AND POLICIES

Some of the Corridor's challenges are the result of policies and legacy conditions that continue to persist, even if better alternatives exist. For example, a new wall constricting the stream may not be permitted for construction today, but walls that existed before restrictions were implemented are allowed to remain and be replaced in kind, further perpetuating the constriction of the stream. Long curb cuts that were previously permitted continue to allow vehicles to enter and exit Route 51 in an uncontrolled manner, which compounds the safety concerns associated with the traffic in this area. Updating and changing these conditions can be difficult because it challenges the way things have historically been done.



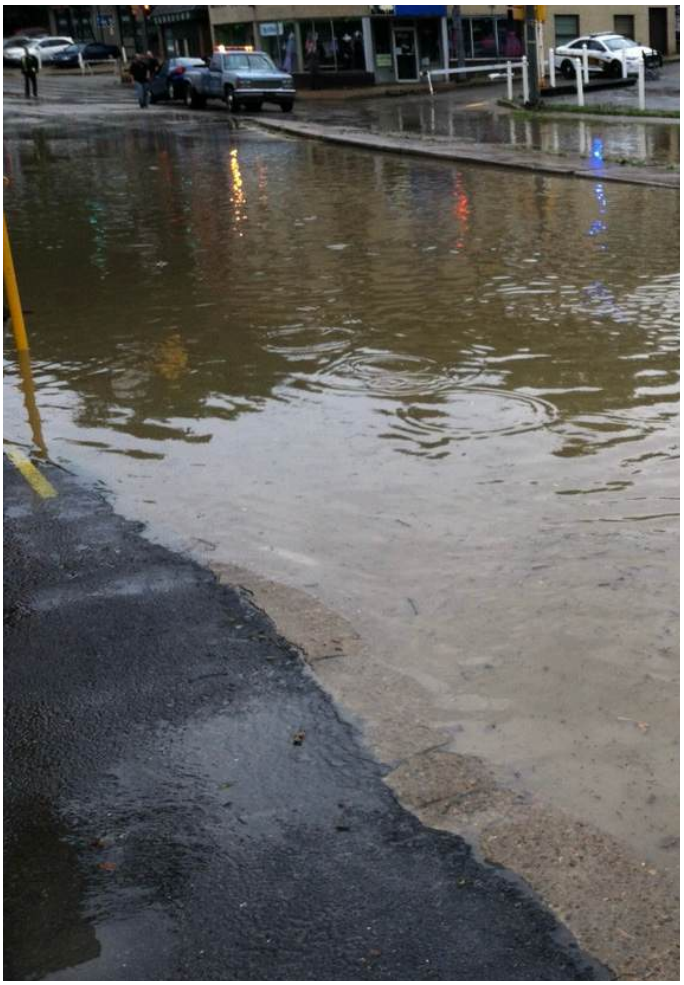
Retaining wall along the trail at Seldom Seen Greenway

DEVELOPMENT PATTERN

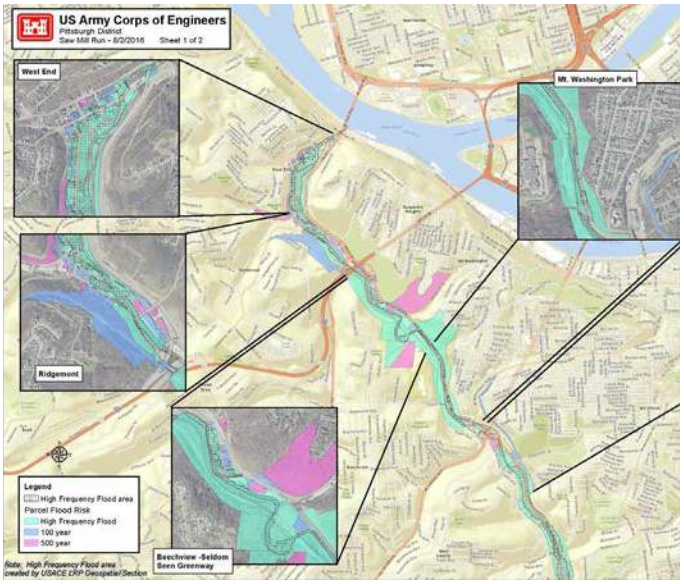
Although Hillside and Park make up around 50% of the zoning in the Corridor, the zoning immediately adjacent to Saw Mill Run and Route 51 is primarily comprised of Local Neighborhood Commercial, Highway Commercial, Neighborhood Industrial, and Urban Industrial. These higher-intensity zoning districts require little to no setbacks and allow relatively high floor area ratio (FAR), over 4.0 in some cases. Further, most of the development in the Corridor took place before impervious surface limitations were enacted. These conditions occur within the 100-year and 500-year floodplains of Saw Mill Run, which exacerbate runoff and flooding, and they lead residents, drivers, and businesses to be in harm's way during the frequent flooding of the stream.



Route 51 near the intersection with Maytide Street



A business owner near the intersection of Route 51 and Maytide Street captured flooding from uncontrolled uphill runoff during a heavy rain in 2018. (Photo Credit: B. Dees)



Map credit: US Army Corps of Engineers

FLOODING

The Saw Mill Run Corridor is known for challenges resulting from flooding. The flooding has several compounding factors, including stream constrictions, catch basin maintenance, and position in the watershed. First, there are many stream constrictions within the Corridor, including a major constriction between the West End neighborhood and the Ohio River. This constriction causes floodwaters to back up into the West End and makes this neighborhood particularly vulnerable. In addition to this, residents and business owners shared that flooding often results from uphill stormwater runoff that is not getting captured in catch basins because they have not been cleared of debris. The challenge of the Corridor's position in the watershed is compounded by the previous two concerns. As a tributary to the Ohio River, Saw Mill Run is the recipient of runoff and floodwaters from the surrounding uphill areas, but the stream constrictions prevent it from being able to convey the water effectively. Some parts of the Saw Mill Run watershed lie beyond the City of Pittsburgh limits, which presents challenges for policy and regulation at a watershed scale. The flooding and the resulting damage to life and property has been studied several times but has not yet seen significant improvements.

STUDIES AND DATA

Saw Mill Run has been the subject of numerous studies conducted by a variety of organizations, including the US Army Corps of Engineers (USACE), Pittsburgh Water and Sewer Authority (PWSA), Allegheny County Sanitary Authority (ALCOSAN), and several others. There is an abundance of data on the stream and related flooding concerns, but some of the most up-to-date flood modeling data is approaching five years old at the time of completion of the Green Boulevard Master Plan. To effectively plan for and manage flooding, having access to consistent, up-to-date data is important, but there are not currently any plans for routinely assessing the Corridor.

CHAPTER 5
OVERALL CORRIDOR RECOMMENDATIONS



Saw Mill Run at the entrance to Seldom Seen Greenway

OVERALL RECOMMENDATIONS

VISION

The vision of this MSDP is to create a healthy, vibrant, verdant and resilient Saw Mill Run Valley that balances ecology quality, economic prosperity, social value, usable green space, equitable mobility and stormwater attenuation. This vision provides an over-arching framework around which to shape the various overall recommendations and specific actions outlined in the following pages.

The Overall Corridor Recommendations outline the suggested actions to transform the Corridor in pursuit of the goals of the Green Boulevard Master Plan. They include recommendations relating to policy, management, and design and implementation in response to the wide-ranging opportunities and challenges explored through analysis and outreach relating to the Corridor. The Corridor-Wide Recommendations have been broken into three categories:

- Policy Recommendations
- Planning and Management Recommendations
- Corridor-Wide Design and Implementation Recommendations

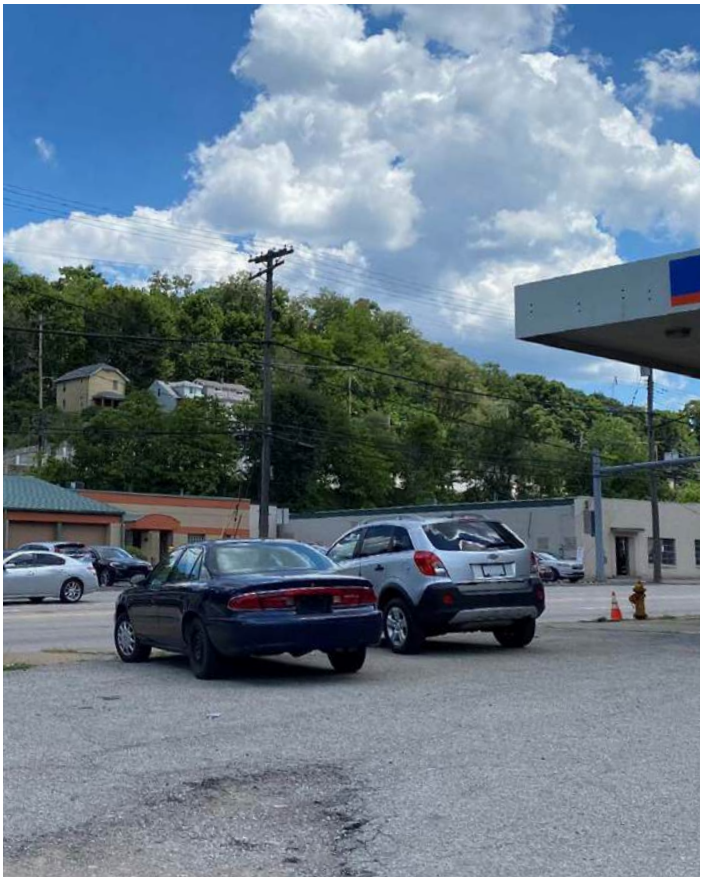
(Please see Chapter 6 for the Design Focus Area recommendations.)

Policy Recommendations

The policy recommendations require coordination with the Department of City Planning to develop implementable and enforceable regulations for the Corridor and to ensure that the goals of the Green Boulevard Master Plan are recognized and supported in short- and long-term planning activities.

To address the variety of challenges spanning the Corridor, employ an existing or new public health and safety zoning overlay to address vehicular and pedestrian safety, flooding, and other concerns. If no existing overlays present potential to be adapted into a public health and safety focus, consider using the City's Interim Planning Overlay District (IPOD) as a means to initiate change in the Corridor while developing a new, permanent overlay.

A zoning overlay is a district applied to a specific area to address unique circumstances and influences. Regulations imposed as part of an overlay district are added onto the requirements of the base districts in the area contained within the overlay. Examples of overlay districts employed by the City of Pittsburgh include the Floodplain Overlay District and the Inclusionary Housing Overlay District, among many others.



Corner of western side of Edgebrook Avenue and Route 51. Zoning provisions could limit the amount of impervious surface permitted on parcels within the overlay district.

A zoning overlay is recommended instead of making modifications to the base zoning districts because the zoning overlay can be used to increase controls in one specific area, whereas base zoning districts occur in places throughout the City and may not necessarily experience the same challenges as the Study Corridor. An overlay allows the planning to be strategic and site-specific, which is essential given the range of conditions that may need to be addressed in this area.

Considering the complex and interrelated nature of the challenges in the Corridor, the overlay should include provisions for a variety of conditions, including:

- Vehicular access management
  - Examples: Controlling the length or frequency of curb cuts/driveways, reestablishing the curbline
- Impervious surface reduction
  - Examples: Impervious surface limitations, incentives for reducing impervious surface
- Pedestrian safety and mobility
  - Examples: Providing sidewalks and crosswalks where key connections are missing, enforcing repair of damaged sidewalks, promoting transit access, providing accessible routes to key destinations
- Control of setbacks
  - Examples: Stream setbacks, increased front/side yard setbacks to reduce encroachment on sidewalks and right-of-way, landscape and riparian buffers requirements to reduce impervious surface and provide greening and shade along Route 51 and Saw Mill Run
- Post-development/retroactive streambank and steep slope stabilization
  - Examples: Requirements for implementing erosion-reducing measures in places where past development has shown increased impacts to or encroachment upon the stream



Eastern side of intersection of Edgebrook Avenue and Route 51. Sidewalk connectivity is not reliably available to pedestrians throughout the Corridor.

- As the City begins to develop the Comprehensive Plan and considers detailed zoning amendments, further scrutinize the land use permissions within the Corridor. Examine land use permissions through the lens of impervious surface impacts created by currently permitted land uses.

- Allocate additional resources and expand departmental capacity to ensure the above policies can be enforced.

- To promote the lasting pursuit of the Green Boulevard goals, integrate the Corridor vision into the City's Comprehensive Plan. The nature of the Green Boulevard Master Plan means that it may take a generation to implement. Incorporating this Plan into the City's Comprehensive Plan will support the pursuit of the long-term goals and visions for the Saw Mill Run Green Boulevard.

CHANGE IN THE CORRIDOR

The types of changes recommended in the zoning overlay can be difficult to visualize. However, recent improvements at Red, White, and Blue Thrift Store provide excellent examples of reduction in impervious surface, increased control of access management and traffic flow, and sidewalk and accessibility improvements in the Corridor.

BEFORE

At the start of the development of the Green Boulevard Master Plan, the parking lot at Red, White, and Blue Thrift Store was a large area of asphalt with limited pavement markings and unclear traffic patterns. There was a grass strip separating the



parking area from Route 51, but there were no curbs or wheelstops to prevent vehicles within the parking lot from encroaching into the right-of-way. A lack of curbs, pavement markings, and designated drive aisles created conditions that could be confusing to drivers who were not familiar with the setting. Aside from the grass strip along Route 51, the parking lot did not contain any other landscaping. Sidewalks were not available along the parcel's frontage.



AFTER

Near the end of the Plan's development, Red, White, and Blue Thrift Store implemented a series of changes in the parking lot and at ingress and egress points. The parking spaces are identified with concrete wheelstops. The driving route through the parking



lot is clearly defined as one-way using curbs and landscape islands to direct the flow of traffic. In addition to improving drivers' safety, the landscape islands also reduce the amount of impervious surface and enhance the appearance of the parking area for patrons and for drivers on Route 51. A sidewalk has



been installed along the parcel's frontage on Route 51, including tactile warning surfaces at the end of each segment of sidewalk.

SETTING AN EXAMPLE

The improvements to the parking lot of Red, White, and Blue Thrift Store provide a great example of the recommended zoning overlay provisions for the Corridor. This work shows that, although the total square footage of the parking lot was reduced, these types of improvements can benefit employees and patrons, both in vehicles and on foot, drivers on

Route 51, and the appearance of the Corridor. The updates to the Red, White, and Blue Thrift Store parking lot demonstrate the types of investment and change that should result from a Corridor-wide zoning overlay. The improvements exemplify the recommended zoning overlay in the following ways:

Vehicular Access Management: Although the number of ingress and egress points onto Route 51 was not reduced, the traffic flow within the parking lot is more clearly defined, showing how proper access management can increase safety and comfort of drivers. (However, it is still recommended that the zoning overlay addresses the number and length of curb cuts along Route 51.)

Impervious Surface Reduction: In addition to controlling traffic movements and increasing separation between the parking lot and Route 51, the landscape islands reduce the amount of impervious surface in the lot. This, in turn, reduces the stormwater runoff that enters Saw Mill Run, which passes immediately behind the parking lot.

Pedestrian Safety and Mobility: The sidewalks along Route 51 designate a space for pedestrians to connect to the store from the parking lot. The tactile warning surface protects pedestrians with visual impairments by alerting them to the end of the sidewalk and the potential presence of vehicular traffic. Curb ramps enable wheelchair users to access the sidewalk.

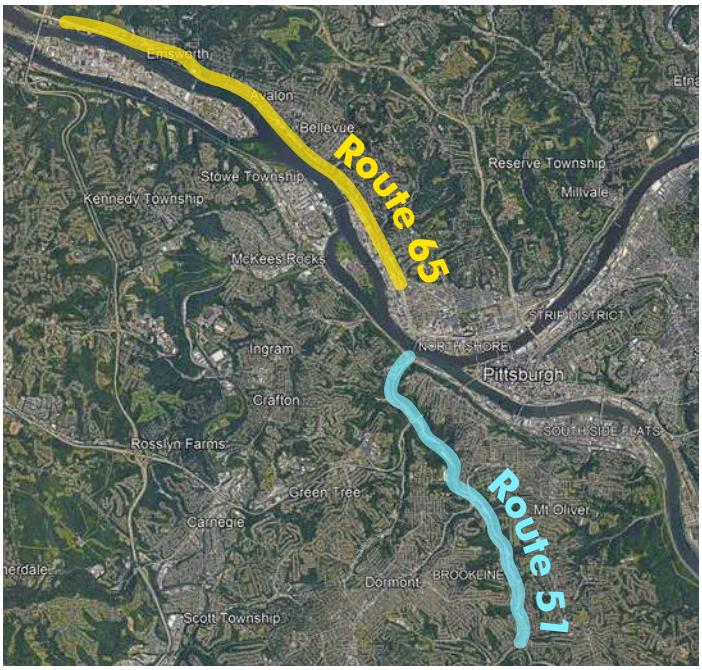
Control of Setbacks: Although the current zoning does not require setbacks, the installation of the landscape areas along Route 51 create a deeper setback into the parking area. This helps to prevent encroachment into the right-of-way and improves the appearance of the parking lot and the view from Route 51.

The improvements to the Red, White, and Blue Thrift Store parking lot emphasize that change is possible in the Corridor. Improvements to one parcel can benefit the safety and appearance for a part of the Corridor. As recommended, the zoning overlay should require or incentivize similar changes to spur improvements through the entire Study Area, creating a safer and more attractive Corridor for motorists and pedestrians.



A LOOK AHEAD

Over a decade ago, Route 65, also known as Ohio River Boulevard, used to look like Route 51. Route 65 serves as a major conduit between Pittsburgh and the North Hills region and is lined with commercial development. The development area is constrained by steep slopes down towards the Ohio River to the southwest, and slopes up to the residential neighborhoods of Avalon, Ben Avon, and Bellevue to the northeast. The configuration of lots in the Route 65 corridor tends to be long and shallow, which presents challenges for dense development. These factors resulted in an area that resembled Route 51 as it is known today.



Route 51 serves as a conduit to the South Hills, while Route 65 is a major connection to the North Hills.

About 13 years ago, the boroughs of Avalon, Bellevue, and Ben Avon adopted a joint zoning ordinance. This ordinance outlines provisions for the Highway Commercial District, which contains the Route 65 corridor, to support more urban, pedestrian-oriented development. For example, the ordinance identifies a maximum front yard setback, requires a five-foot-wide planting strip facing the right-of-way, and outlines landscaping requirements for parking areas. The maximum front yard setback limits the amount of parking that can be developed at the front of the parcel and encourages a more urban development pattern by bringing the building facades closer to the roadway. The planting strip along the right-of-way reinforces the distinction between parking areas and travel lanes, thus increasing safety and legibility for motorists. Further, landscaping requirements apply to parking lots that are being expanded, even if the parking area existed prior to the adoption of the ordinance, thus supporting the continued improvement of these spaces. Although these regulations make small changes to the development pattern along Route 65, the visual impact for motorists and pedestrians is significant.



The planting strips reduce impervious surface, improve the appearance of the corridor, and help to differentiate between parking areas and right-of-way.

In the Route 65 corridor, the provision of sidewalks and crosswalks, particularly at bus stops, is also crucial for pedestrian connectivity. A major barrier to accessibility in the Route 51 corridor is a lack of



Sidewalks that serve the bus stops provide pedestrian connectivity and function as a waiting area for riders.

sidewalks or safe waiting areas at bus stops. Along Route 65, the bus stops are served by sidewalks with signalized crosswalks. Additionally, the planting strips along the parcel frontages provide more space between the roadway and parking area, creating a safer space for pedestrians waiting at the stops.



Improved vehicular access management enhances safety for both motorists and pedestrians.

Although not specifically identified in the ordinance, the access drives of the improved parking lots in the Route 65 corridor also exemplify safer access management. Along Route 51, there are frequent curb cuts of significant length, which reduces control of vehicular ingress and egress and could contribute to unsafe conditions. The clearly defined access drives along Route 65 make navigation easier for motorists and increase legibility and safety for pedestrians, particularly for those who rely on accessibility measures such as curb ramps or tactile warning surfaces.

The improvements along Route 65 in Avalon, Bellevue, and Ben Avon highlight the potential for change in intense commercial and transportation corridors similar to Route 51. However, they also speak to the fact that policy-driven improvements require many years to take effect. This multi-municipal zoning ordinance was adopted in 2009, and improvements resulting from the ordinance's requirements have started to become visible in the last few years, roughly 10 years after its adoption. Transforming Route 51 will take a generation or more, but cases like Route 65 emphasize the fact that change is both possible and worthwhile for the Corridor.



13 years after the adoption of the Tri-Borough Communities Joint Zoning Ordinance, Route 65 is undergoing improvements that benefit the safety, mobility, and appearance of this important commercial and transportation corridor north of Pittsburgh.

Planning and Management Recommendations

- Coordinate with the various stakeholder organizations and agencies to determine a suitable structure and level of involvement for a working group or "Task Force" to regularly convene and pursue the implementation of the Green Boulevard Master Plan. Organizations that should be involved include, but are not limited to, the following:
  - Watersheds of South Pittsburgh (WoSPgh)
  - Department of Mobility and Infrastructure (DOMI)
  - Department of Public Works (DPW)
  - Department of City Planning (DCP)
  - City Council
  - PennDOT
  - Pittsburgh Water and Sewer Authority (PWSA)
  - Community Organizations (i.e. Hilltop Alliance, Mt. Washington CDC)
  - Pittsburgh Regional Transit (PRT)
  - Allegheny County Sanitary Authority (ALCOSAN)
  - Pittsburgh Parks Conservancy (PPC)

The working group should regularly evaluate progress towards improvements and coordinate on related projects to maximize efficiency and benefits to the Corridor.

Please see Chapter 7 for further discussion of the "working group".



Saw Mill Run at the southern end of Ansonia Place

- Evaluate the preferred strategy for holding and managing parcels proposed for use as additional public green space, such as Design Focus Area 5, Ansonia Place, or the inactive railroad corridor. Determine whether land trusts, conservatorships, designation as a City Park, or other strategies are best suited for each opportunity as they arise.
- Conduct routine flood modeling/assessments to ensure up-to-date data (such as a HEC-RAS model) is available and incorporated into planning or improvements in the Corridor. FEMA flood maps are updated every 5 years to reflect changing conditions. Modeling programs and data used for planning and decision making should also reflect changes to the Corridor, such as new development or stream constrictions.

HEC-RAS modeling is conducted using a software system developed by the US Army Corps of Engineers (USACE) for analyzing flow conditions. HEC-RAS specifically refers to the modeling of river hydraulics. This system allows the user to study a variety of flow conditions, such as velocity and depth, during various water levels in a specified area. The results can be used to understand current conditions or to evaluate the impact of future changes.

Corridor Wide Design and Implementation Recommendations

OVERALL

- Seek support from State and/or Federal agencies or representatives as needed to implement Plan recommendations. In cases where local support is not sufficient to pursue plan implementation, State Representatives or other agencies may be able to provide the resources needed to move forward.
- As opportunities arise, implement the best practices from each of the Design Focus Areas to similar parcels along the Corridor, as identified by the parcel typologies discussed throughout the report.

TRANSPORTATION

- At the time of report completion, a reconstruction project for Route 51 was identified on PennDOT's Twelve-Year Plan (TYP), which identifies upcoming projects as part of the Transportation Improvement Program. Coordinate with PennDOT during the development of the Route 51 reconstruction plan to integrate improved access management controls, pedestrian safety measures, and other recommendations identified in the Southwestern Pennsylvania Commission (SPC) Roadway Safety Audit.
- Coordinate with PennDOT, Department of Public Works, DOMI, and other related agencies to implement the recommendations of the SPC Roadway Safety Audit not addressed in the Route 51 reconstruction project. Other projects that impact roads, such as bank stabilization projects that could affect the roadway embankment, should also be coordinated with PennDOT.

CONNECTIVITY

- Improve pedestrian connectivity to parks, green space, and transit resources throughout the Corridor through the following actions:
  - Provide universal accessibility improvements to connect to bus stops and T-Stations within the Corridor, including sidewalk repairs/ installations, detectable warning strip and curb ramp installations, and crosswalk striping and signalization where needed.
  - Seek grant funding to pursue the implementations of the six Design Focus Area recommendations, discussed further in Chapter 6. Additional funding considerations are covered in Chapter 7.
  - Conduct a trail feasibility study and geotechnical analysis for the PennDOT-owned railroad corridor from Seldom Seen Greenway to the West End. This analysis should include a determination of which entity or organization should take ownership of the parcels and the trestle over I-376. It should also identify short- and long-term strategies for acquiring and holding the parcels until access can be formalized.

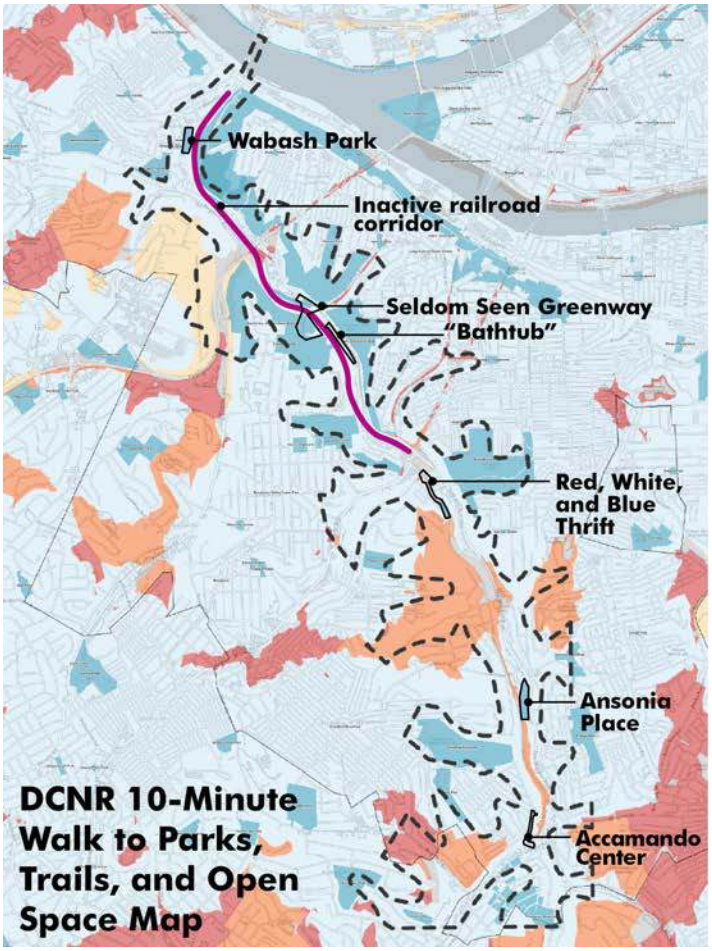


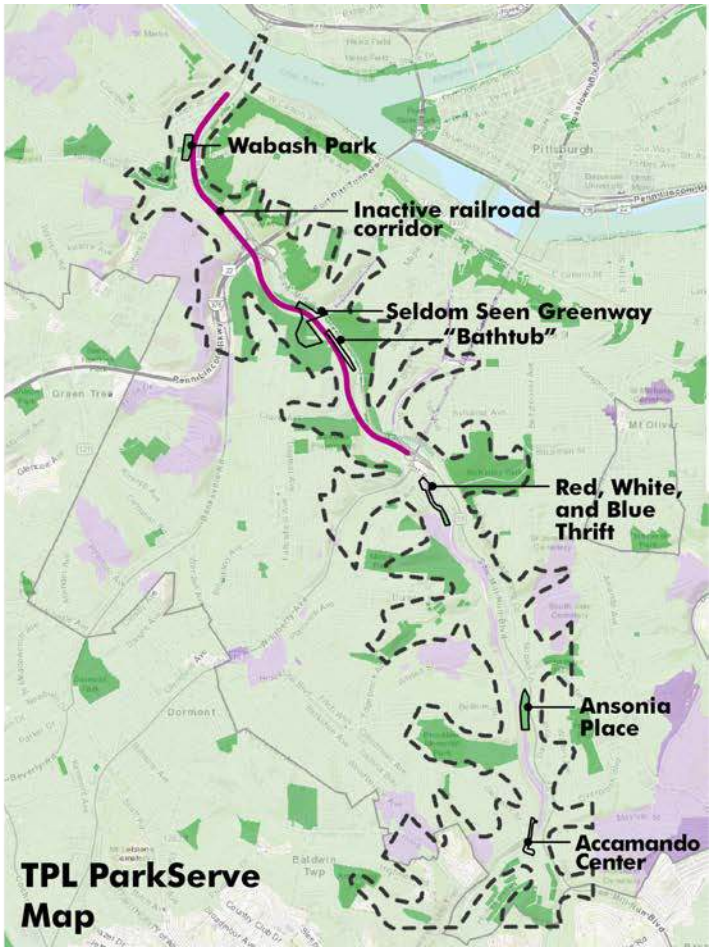
The upper (active) and lower (inactive) railroad trestles crossing I-376

Together, these improvements help address areas of need for 10-minute walk access to parks identified by DCNR and the Trust for Public Land in the maps at right. Although two of the Design Focus Areas do not create publicly accessible open space, these will contribute to the appearance of the Corridor by designating visual open space. Ansonia Place is located within an identified area of need along Route 51 in this section of the Corridor. Additionally,

Ansonia Place is accessible by the T-Line, further expanding the reach of people that could visit.

The inactive railroad corridor offers potential pedestrian or bike connections north-south across I-376, which would enable access to the Trolley Trail and Three Rivers Heritage Trail in the north, and Seldom Seen Greenway and McKinley Park to the south.





Open Access Land
Has Access
High Need
Medium Need
Low Need
Zero Population
Military Land
Inactive Railroad Corridor

Parks
10 Minute Walk Service Areas
Priority Areas for New Parks
Moderate Priority Area
High Priority Area
Very High Priority Area
Inactive Railroad Corridor

The inactive railroad corridor would connect communities across I-376 and would link the three northernmost Design Focus Areas, ending near the fourth Design Focus Area.

ECOLOGY

- Incorporate the following ecological improvements into other projects planned within or near the stream channel. The Ecological Assessment report is available in the Appendix.
  - Improve stream channel and floodplain connectivity
  - Increase vegetated cover around the stream channel, with an emphasis on tree cover
  - Implement velocity-reducing strategies to lessen the washout of important organic matter from the stream



Eastern side of intersection of Edgebrook Avenue and Route 51. Large expanses of impervious surface contribute stormwater runoff to Saw Mill Run and reduce the amount of vegetation along the streambanks and in the floodplain.

CONSIDERATIONS FOR INVASIVE SPECIES

Invasive species are notorious for thriving in areas of disturbance or poor soils, where native species cannot flourish to the same degree. Unfortunately, in many places throughout the Corridor, invasive species have taken hold. Although the most desirable solution may be to remove all of the invasive species and replant with native vegetation, this may not be the most economically feasible solution. The invasives are likely present in these locations because little else could grow there, which poses multifaceted challenges for attempts to revegetate with natives.



Knotweed and vacant houses behind Red, White, and Blue Thrift

Japanese Knotweed, Tree-of-Heaven and the other invasive species of the project area are species that take advantage of poor ecological situations. In the case of the streambanks of Design Focus Area 6, Accamando Center, Japanese Knotweed is probably thriving because very little else could. The streambanks in this location are likely rocky and comprised of very little soil. Any soil present probably has poor nutrient quality. Although the Knotweed can thrive in this type of situation, most other species cannot. Similarly, Tree-of-Heaven thrives throughout the Corridor because it is a species that loves disturbed areas and spreads rapidly through suckers when itself is disturbed or damaged. Understanding this, the first step in ultimately controlling these unwanted species is to improve growing habitat for native species. Attempts to remove invasive species without first improving the growing conditions will simply result in the return of the unwanted species.

For this reason, there may be some cases where it is better to leave the invasive species to grow. It has been established that the root structure of Japanese Knotweed is not as good as other species at erosion control, but Japanese Knotweed growing along the streambanks is preferable to nothing growing along the streambanks. The soil in places similar to Design Focus Area #6 may simply be too poor to support other vegetation. In this case, it is best to allow any vegetation to grow to reduce erosion of the streambanks.

In other areas of the Corridor, there may be opportunities for successful native species revegetation. In situations where there is a good soil layer, such as the floodplain flat in Seldom Seen Greenway, Knotweed can be successfully controlled and replaced with robust native species. Proper due diligence, such as soil tests and other site examinations, should be conducted to determine if the conditions could support native species where invasive species removal is desired. When these conditions are met, the following steps can be used for revegetation:

- Cut the Knotweed stand to about ground level in early June
- Apply a glyphosate herbicide that is approved for use near water (such as Rodeo) to the cut stems
- Reapply the glyphosate herbicide as needed, following monitoring, in the late summer or early fall
- Plant the area in cool season grasses in late fall to allow for easy observation of any emerging Knotweed the following year
- Retreat emerging Knotweed the following year with the glyphosate herbicide and repeat this step until the population appears to be removed. Only focus on reemerging stems for retreatment. Complete eradication may take several years.



Wetland vegetation at Ansonia Place

- Plant native woody shrubs and trees and introduce native grasses, including warm season grasses.

There may be opportunities for native species revegetation in tandem with other projects that disturb the streambanks, such as a sewer line or bridge replacement. Consider conducting analyses of the Corridor to determine areas suitable for native species revegetation. Once these areas have been identified, any projects requiring streambank disturbance within these areas could be incentivized to remove invasive species and replant with natives. The identification of suitable locations could also be used to inform decisions about where new projects should take place, or to prioritize planned projects.

While any vegetation, even invasive, is better than a lack of vegetation on the streambanks, there are several reasons why native species are preferable when possible. Invasive species tend to be aggressive and can inhibit the growth of other species. On the other hand, native species tend to exist in "communities", with a variety of herbaceous plants, shrubs, and trees able to grow in close proximity. The varied vegetation of a native landscape ensures stability in the case of extreme conditions such as flooding, drought, or disease. Additionally, native plant species often support native fauna by providing forage, breeding or nesting ground, and habitat, while invasive species typically do not provide these benefits to the same extent.

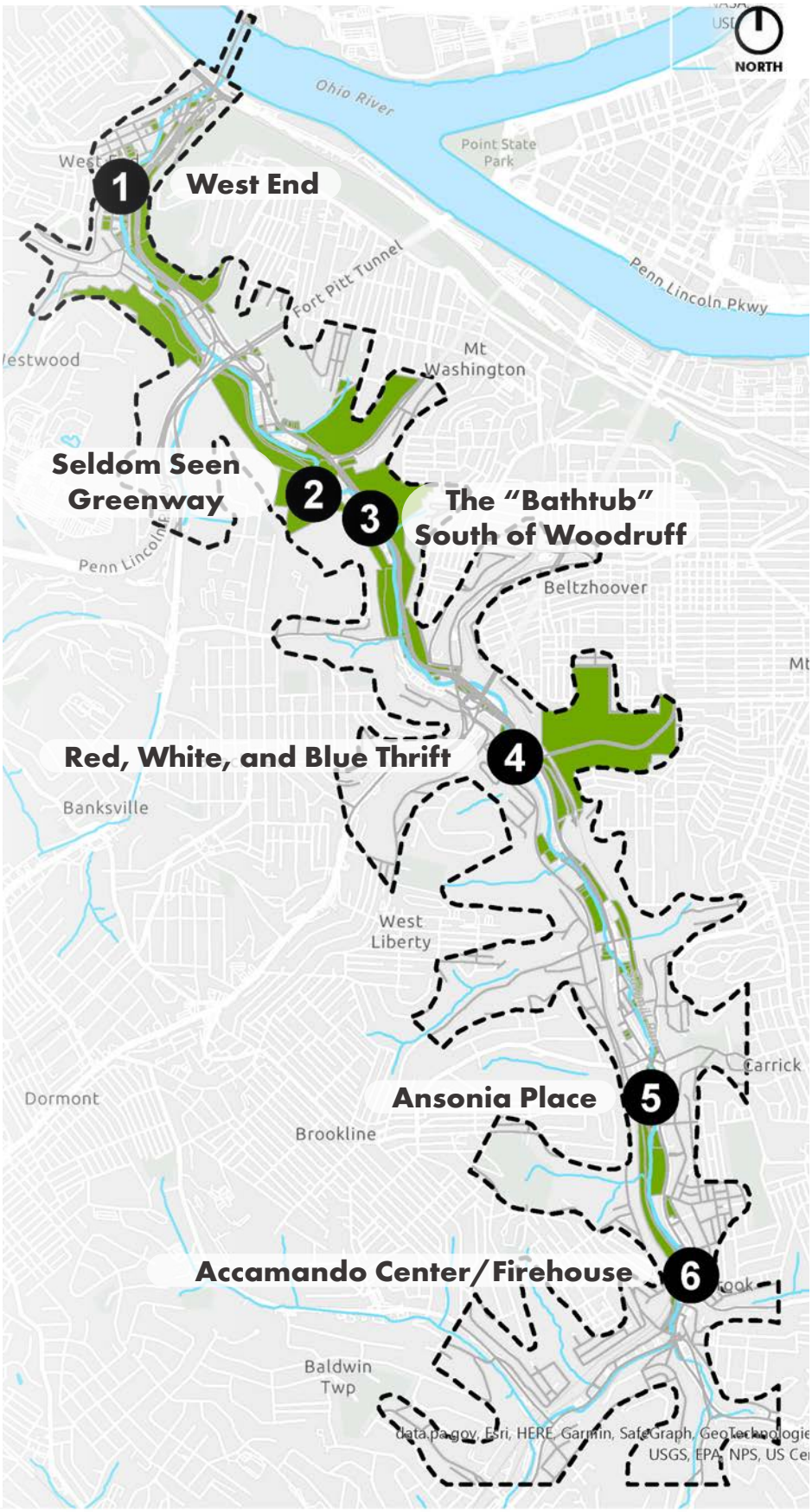
CHAPTER 6
DESIGN FOCUS AREA RECOMMENDATIONS



Saw Mill Run at the northern end of Ansonia Place

DESIGN FOCUS AREA RECOMMENDATIONS

In order to effectively address the challenges and opportunities present throughout the Study Corridor while providing a sufficient level of detail for site-specific improvements, the Collaborative Team developed a series of six typologies for parcels adjacent to Saw Mill Run within the Corridor. Parcels along the stream were sorted into these six categories based on conditions such as position in the watershed, types of stream channelization present, and parcel ownership. Each typology is represented by a Design Focus Area. The site designs for these areas serve as examples for the types of interventions that could be applied to other parcels in the typology group.



GENERAL RECOMMENDATIONS

In addition to the creation of the Working Group discussed in Chapter 7, Stakeholder Committees should be formed to pursue the implementation of the Design Focus Area sites. The Plan recommends five total Stakeholder Committees: one committee for each site, with the exception of Seldom Seen Greenway and the Bathtub, which should be combined due to their interrelated nature and close proximity. The Stakeholder Committees should include property owners and any agencies or organizations that will be affected by the proposed work. The Committees should coordinate with the Working Group to determine priorities, identify potential partnerships or collaboration opportunities, and pursue the recommended improvements.

WABASH PARK

The concept plan for Wabash Park blends the recommended changes noted in the OpenSpace PGH report with additional improvements developed during the Public Workshop. As identified in the OpenSpace PGH report, the basketball court should be relocated to the northern end of the site, creating a large space for naturalized plantings. Given the proximity of the Healthy Active Living Center, senior-friendly amenities should be provided as described in the 2011 West End Village Master Plan. This includes seating along the Promenade and in The Terrace area for passive observation of the meadow and stream. The Creekside Promenade also offers a loop through the community with views of Saw Mill Run, while the Terrace provides additional streamside recreation and socialization opportunities. In the stream channel, concrete mattresses of the upper slopes should be replaced with vegetated geocells, which help to green the channel, thus improving views for visitors and potentially reducing water velocity. However, the primary benefit of the geocells is the greening of the streambanks, as any velocity reduction from the replacement will be minor. It is also recommended to reduce the stream channel side slopes from the existing 1H:1V to the recommended 2H:1V identified in the US Army Corps of Engineers original designs for the concrete mattresses to further support the reduction of the channel velocity.

The initial concept plan developed during the Public Workshop included a pedestrian bridge to connect the Walking Loop to the Saw Mill Trail at the southern end of the park, but further investigation into the flooding conditions in this area highlights the challenges associated with doing so. A pedestrian bridge that is elevated high enough and spans far enough to avoid flood impacts would be cost prohibitive. Conversely, a smaller or lower pedestrian bridge would create an additional stream constriction and could worsen the flooding that occurs in this area. As a result, this connection is no longer shown in the final Concept Plan. Instead, the existing bridge in the right-of-way at Skid Way would be used to connect to the Saw Mill Run Trail.

The Concept Plan also proposes lowering the elevations of the Naturalized Area and the Terrace to allow for the installation of underground floodwater storage in these areas. The system will function to store water during high-water conditions, while the naturalized plantings reduce stormwater runoff in lower intensity rain events. Together, these changes improve the resilience of Wabash Park and create a green escape for the West End Neighborhood.

IMPLEMENTATION CONSIDERATIONS

Due to the nature of the recommended improvements for the stream channel near Wabash Park, there are some additional considerations to bear in mind when strategizing implementation.

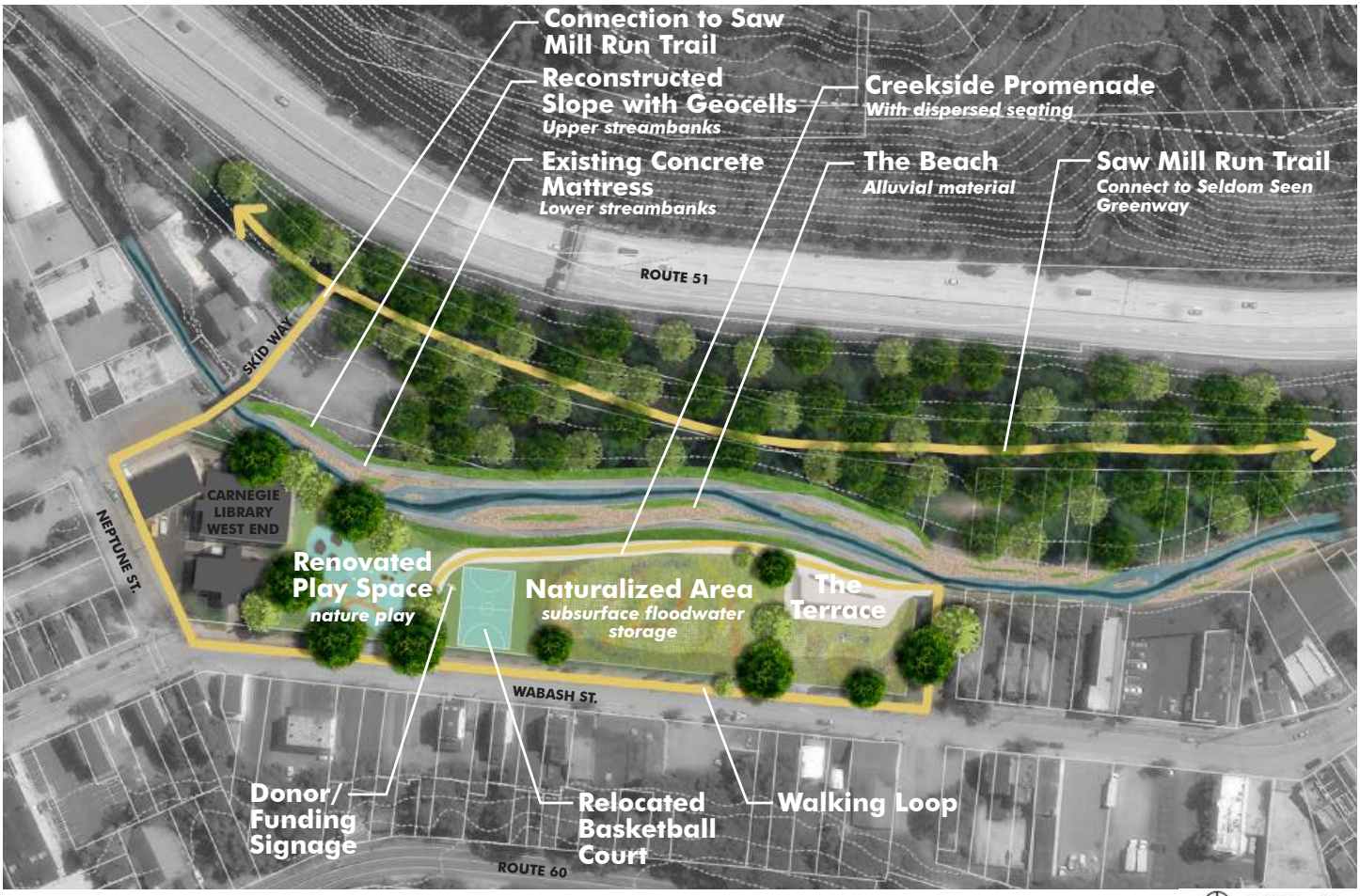
- Pursue an erosion control and flooding study of this segment of the stream to verify that replacing the upslope concrete mattresses with geocells and other recommended improvements will not have negative impacts on the stream. The study should also determine the extents of the top of bank slope to be covered by the geocells
- Replace the concrete mattresses along the streambank that already show damage, such as the left bank toe of slope at the upstream portion of the Wabash
- Reduce the bank slopes to 2:1 as recommended by the Army Corp of Engineers. Current modeling shows existing slopes as 1:1.

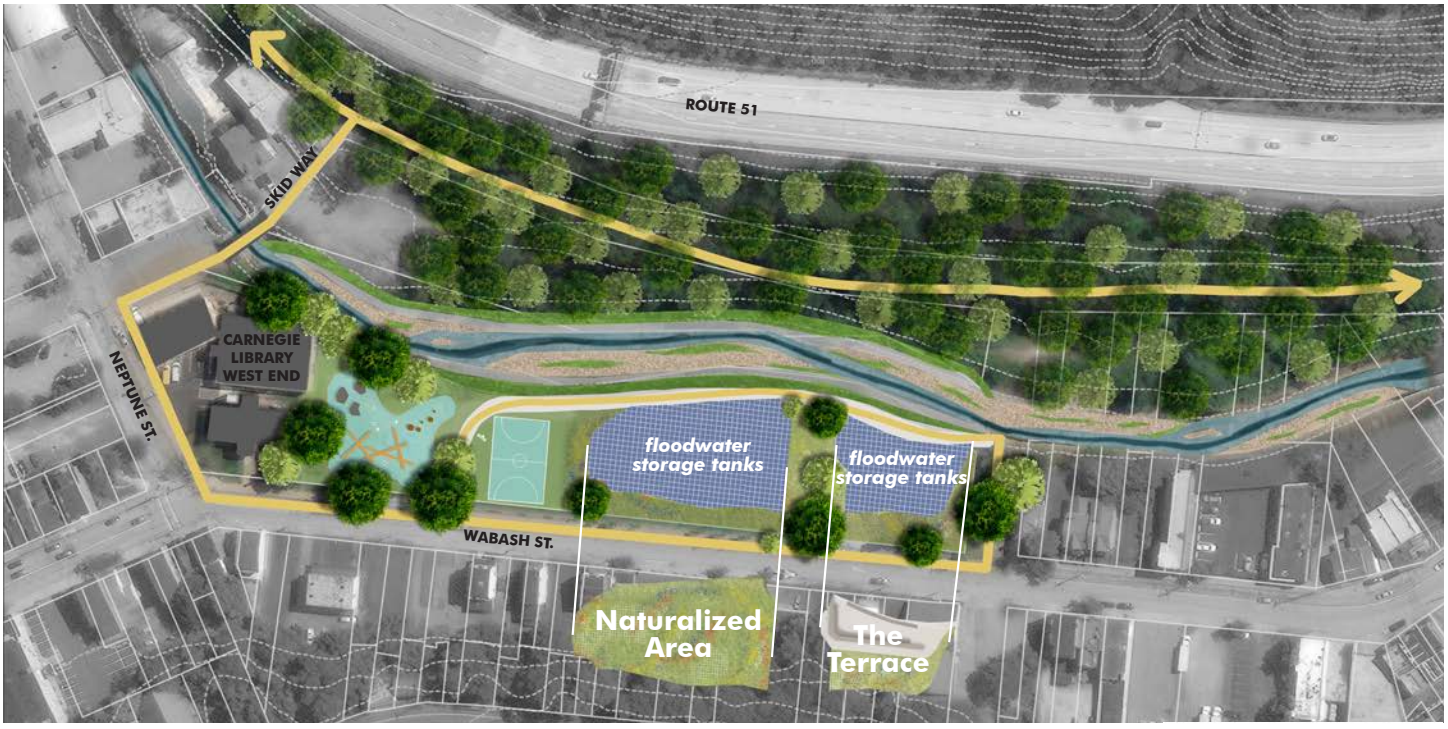
Improvements at Wabash Park should be coordinated with current planning documents, such as the Open Space PGH report referenced above.



Concrete mattresses line the streambanks near Wabash Park

CONCEPT PLAN





SELDOM SEEN GREENWAY

Seldom Seen Greenway is an existing park located adjacent to a salt storage facility for the Department of Public Works. At the time of report completion, there are plans for the reconstruction of the salt shed. The concept plan shows a potential reconfiguration of the site to accommodate a new salt facility with safer ingress/egress from Route 51. The parking area includes six spaces for the Seldom Seen Greenway trailhead. Armoring the bend of the streambank could help reduce erosion resulting from the harsh curves in the stream. The concept plan also recommends repairing the eroded bridge abutments and retaining wall along the trail.

Through the process of developing this concept plan, it has become clear that there are additional trail opportunities nearby. The abandoned railroad crossing over the brick arches connects all the way to the West End. The trestle over Route 51 to Woodruff Street appears to be owned by the City and could create a safe pedestrian connection, since a safe crossing configuration currently does not exist. These opportunities should be pursued promptly given the nature of several developing PennDOT projects, which may impact the potential for using such structures.



Scour of the bridge abutment
Photo credit: TrailBlaze Creative

IMPLEMENTATION CONSIDERATIONS

As plans for the new salt shed are developed and finalized, coordination should occur between the City and Public Works Department, Watersheds of South Pittsburgh, Pittsburgh Parks Conservancy, and other involved groups to ensure that the new plans for the salt facility accommodate trailhead parking.

If there is interest in pursuing a pedestrian connection using the trestle over Route 51 to Woodruff Street, a feasibility study should be conducted to determine the challenges and opportunities associated with this connection. The study should explore ownership, access agreements, long-term planning for Route 51 in this area, and management scenarios. The removal of this trestle is identified on the Transportation Improvement Program (TIP) list, which suggests that the timeline for pursuing this connection could be limited. See coordination with PennDOT and the City of Pittsburgh Project Manager for projects in this area.

Because the improvements at Seldom Seen Greenway depend on the reduction of erosion through the improvements at the Bathtub, the Stakeholder Committee for Seldom Seen Greenway should include the stakeholders for the Bathtub as well.



Bus tour attendees at Seldom Seen Greenway

CONCEPT PLAN



THE "BATHTUB"

The "Bathtub" South of Woodruff Street is named for the shape of the channel, which is situated between two steep banks. Given the narrow and straight nature of the channel, the potential improvements here are limited but primarily focus on slowing the velocity of water to reduce erosion at the northern end of this area and to reduce the washout of organic matter in the stream, which is important for aquatic life. Check dams with plunge pools help to slow the water by incorporating a vertical drop in the flow path.

Although this site is not accessible to the public, it does provide visual open space along the stream channel. Additionally, Seldom Seen Greenway is just downstream from this site. The trestle structure in the greenway is showing signs of erosion and scour, but the proposed improvements in the "Bathtub" could help address the problems at this site and downstream, leading to benefits that extend beyond the limits of this Design Focus Area.

The Concept Plan also recommends the removal of invasive species and replanting with native species when planned streambank disturbances occur, such as a construction project. It is important to maintain vegetative cover of the side slopes because any vegetation, even invasive species, provides more stabilization and erosion resistance than a lack of vegetation. However, it may be most impactful to integrate removal and replanting during other projects because removing vegetation may lead to erosion until new vegetation is established, but this can be better addressed during planned streambank disturbances when vegetation removal would need to occur regardless. Additionally, if soil tests or other analyses indicate that this area is not suitable for replanting native species, it may be more effective to allow invasive species to persist and to focus restoration efforts on more suitable locations.

IMPLEMENTATION CONSIDERATIONS

Although the improvements proposed for the "Bathtub" do not have a significant visual or public impact, they can bring benefits to a variety of stream features by slowing erosion and potentially improving in-stream habitat by reducing the washout of organic matter in this site and downstream. These types of improvements should be considered in other areas throughout the Corridor where feasible or as opportunities arise. In places where check dams and plunge pools could be visible from the road or sidewalk, consider adding informational signage explaining the challenges of high water velocity and the benefits resulting from these improvements.

In this section of the stream, there may be locations of gabions or rock baskets that stabilize Route 51. In cases where the implementation of these recommendations could impact the roadway stabilization, seek coordination with PennDOT.

The Stakeholder Committee for the Bathtub should be included in the committee for Seldom Seen Greenway because the recommended improvements for these sites are interrelated and in close proximity to one another.



The Bathtub from Route 51
Photo credit: Google Street View



The Bathtub from existing bridge off of Route 51
Photo credit: Wilson Ecological Consulting

CONCEPT PLAN



RED, WHITE, AND BLUE THRIFT STORE

The area surrounding Red, White, and Blue Thrift has a variety of complex conditions and unique opportunities. Several vacated parcels directly behind the store have been acquired by the City. The Concept Plan suggests that a couple of parcels north of the storage facility, and the vacant warehouse to the south of the thrift store, could be used for greening and stream improvements in the long-term. Gateway Landscaping at the north end of the area would reinforce the identity of the Corridor. At the southern end, a short walking loop and stream observation area provides views of the expanded floodplain. The existing bridge should be removed and replaced with a pedestrian bridge in the same location to access the green space on the opposite side of the streambank. Similar to the "Bathtub" site, robust native species should be introduced in the riparian buffer zones when construction or maintenance projects, such as a sewer line repair or bridge removal, take place and necessitate the disturbance of streambank vegetation. A soil test and other on-site evaluations should be conducted to verify that the soils in this location can support native vegetation. If the tests identify poor conditions, it may be more effective to leave the invasive species due to the erosion resistance they provide. Finally, pedestrian crossing improvements could provide a connection to McKinley Park, located uphill from the intersection of Bausman Street and Route 51.

There is an important consideration to explore regarding the replacement of the bridge in this location. Removal of the bridge would eliminate a stream constriction, which is better for flood concerns. However, the parcels on the opposite side of the stream are already owned by a public entity and could be used for green space, but they are not accessible without a bridge across the stream. Designs exist for bridges that can withstand high water flowing over them, which would likely be needed in this scenario. When an opportunity arises for the implementation of the Red, White, and Blue Thrift Store Area Concept Plan, additional analyses and decisions will be necessary to determine the challenges of replacing this stream constriction with the benefits of providing access to green space.

IMPLEMENTATION CONSIDERATIONS

Although phases are not identified on the Concept Plan, the improvements in this area are unlikely to be completed all at once. For example, the Gateway Landscaping requires a much smaller investment and can create quick visual improvements for the Corridor. Improvements on publicly-held land require less coordination than privately-held land. Where improvements are proposed on private land, strategies such as acquisition, easements, or access agreements should be explored and will require additional time in advance of implementation.



Thrift store parking lot and vacant warehouse



Saw Mill Run behind the warehouse at Red, White, and Blue Thrift

CONCEPT PLAN



ANSONIA PLACE

The proposed improvements at Ansonia Place are separated into two phases. The first phase encompasses the City-owned parcels along Saw Mill Run. The traffic signal and crosswalks at the former access road named Ansonia Place should be removed because the crosswalk signals are inoperable and create unsafe conditions for crossing. Instead, sidewalk and crosswalk improvements should direct pedestrians to the crossing at Midwood Avenue. Additional sidewalk improvements into the surrounding communities should be pursued where the existing connections are in poor condition or do not exist.

Currently, the site is only accessible from Midwood Avenue by stairs, despite the recent accessibility improvements at the South Bank T-Station. To remedy these conditions, the Concept Plan recommends replacing the stairs with a universally accessible pedestrian bridge and ramp system to connect to a paved route leading to the T-Station.

A separate walking path would lead visitors north towards a boardwalk and constructed wetland area. This area of the site currently supports some wetland vegetation, such as cattails. A constructed wetland could provide benefits to habitat and water quality, and it could serve as an educational feature in this small public park space. The boardwalk should be constructed to withstand the frequent flood conditions present on site. Additionally, the existing bridge at the intersection of Ansonia Place and Route 51 should be removed to eliminate this stream constriction. The development at Ansonia Place must remain minimal because the area lies within the 100-year floodplain and is restricted by the agreements of FEMA buyouts.

The potential future phase was developed during the Public Workshop. The parcel to the west of Ansonia Place is considered part of Brookline Park and it and its sub-parcels are zoned as Park. If there is a future opportunity when this area is no longer used for mobile homes, the site could provide a pedestrian connection from Whited Street to the T-Station and the South Busway without the need to walk along Route 51. The space could also support some more traditional park amenities that cannot be located within Ansonia Place due to its location in the flood zone.

During the Public Workshop, the Collaborative Team explored the possibility of treating abandoned mine drainage (AMD) in Saw Mill Run at Ansonia Place. The initial concept showed the diversion of the stream to limestone treatment pools. However, further investigation and discussions with members of the Advisory Committee identified that this solution is not practical. The AMD discharge occurs at the intersection of Route 51 and Route 88, and the discharge should be treated where it occurs, rather than downstream. However, Ansonia Place is almost a mile downstream, which would require piping and a significant grade change. In addition to these challenges, the amount of AMD in Saw Mill Run would likely require the whole site of Ansonia Place to treat, and even then, some of the treated water may still appear orange. Even if the system is working, conditions like this may lead the public to see the project as a failure, which could reduce public support for the improvements. Further, these improvements would require the removal of the tree canopy on the site, but this is one of very few green spaces along the stream. For these reasons, the AMD treatment was removed from the Ansonia Place concept plan.

IMPLEMENTATION CONSIDERATIONS

Although the parcels in Ansonia Place area currently held by the City of Pittsburgh, they are not formally designated as public space. As part of the implementation of the recommended improvements, a formal designation and management strategy should be determined. The site could be designated as a City Park or held in an agreement such as a land trust or conservatorship. Coordinate with Pittsburgh Parks Conservancy, the City, and other stakeholders to determine the best strategy for the site.

Prior to implementing any improvements at Ansonia Place, verify the requirements and limitations imposed on these properties as a result of their FEMA buyout status. Generally, parcels acquired through such buyouts may have limitations on potential for redevelopment.

CONCEPT PLAN



The upper and lower portions of the Ansonia Place site are divided by the Pittsburgh Regional Transit (PRT) T-Line. The concept plan shows a connection using the crossing provided at the South Bank Station. Preliminary conversations with PRT indicate that this could be a potential option for connecting the sites. However, ongoing coordination with PRT is recommended for the implementation of this plan. PRT should be included as a member of the Stakeholder Committee for Ansonia Place to leverage other improvements, plans, and projects occurring in this area.

ACCAMANDO CENTER

As a narrow, highly constrained site, Accamando Center experiences similar challenges to the "Bathtub" and is contaminated with abandoned mine drainage (AMD) discharging from uphill sources. The space is too narrow for any AMD treatment to take place in the stream channel. Instead, the Concept Plan recommends installing check dams and plunge pools to reduce water velocity and slow the washout of organic matter to improve stream habitat. As with other sites throughout the Corridor, invasive species should be removed and native species should be planted when construction projects take place in or around the stream channel, if site assessments indicate that native species could survive in these locations. If poor conditions would prevent the establishment of native species, then the invasive species may be more beneficial to the erosion resistance of the streambank and more effective in the context of cost, materials, and labor.

Residents and business owners at the Public Workshop provided valuable insight into the improvements needed in this area. Accamando Center and a pedestrian bridge to the South Busway are important community assets in this area, but the sidewalk connections from nearby communities and along Route 51 are limited or do not exist. This creates a dangerous experience for residents attempting to access these amenities. To address this, the Concept Plan suggests sidewalk and crosswalk improvements from surrounding residential areas to these key features.

Public Workshop attendees also identified that flooding occurs in this area as uncontrolled stormwater runoff flows down from Overbrook Boulevard and Maytide Street, even when Saw Mill Run has not yet flooded. The Concept Plan suggests installing additional catch basins on the uphill streets.

Gateway Landscaping treatments make up the final recommendation for this Design Focus Area. The recommended area for the Gateway Landscaping is highly visible from Route 88 and Route 51. Visually striking native plantings would improve the view for pedestrians and motorists as they enter the Corridor and reduce impervious surface on these parcels. The Gateway Landscaping should match the plantings recommended near Red, White, and Blue Thrift to begin to create a common identity for the Corridor.

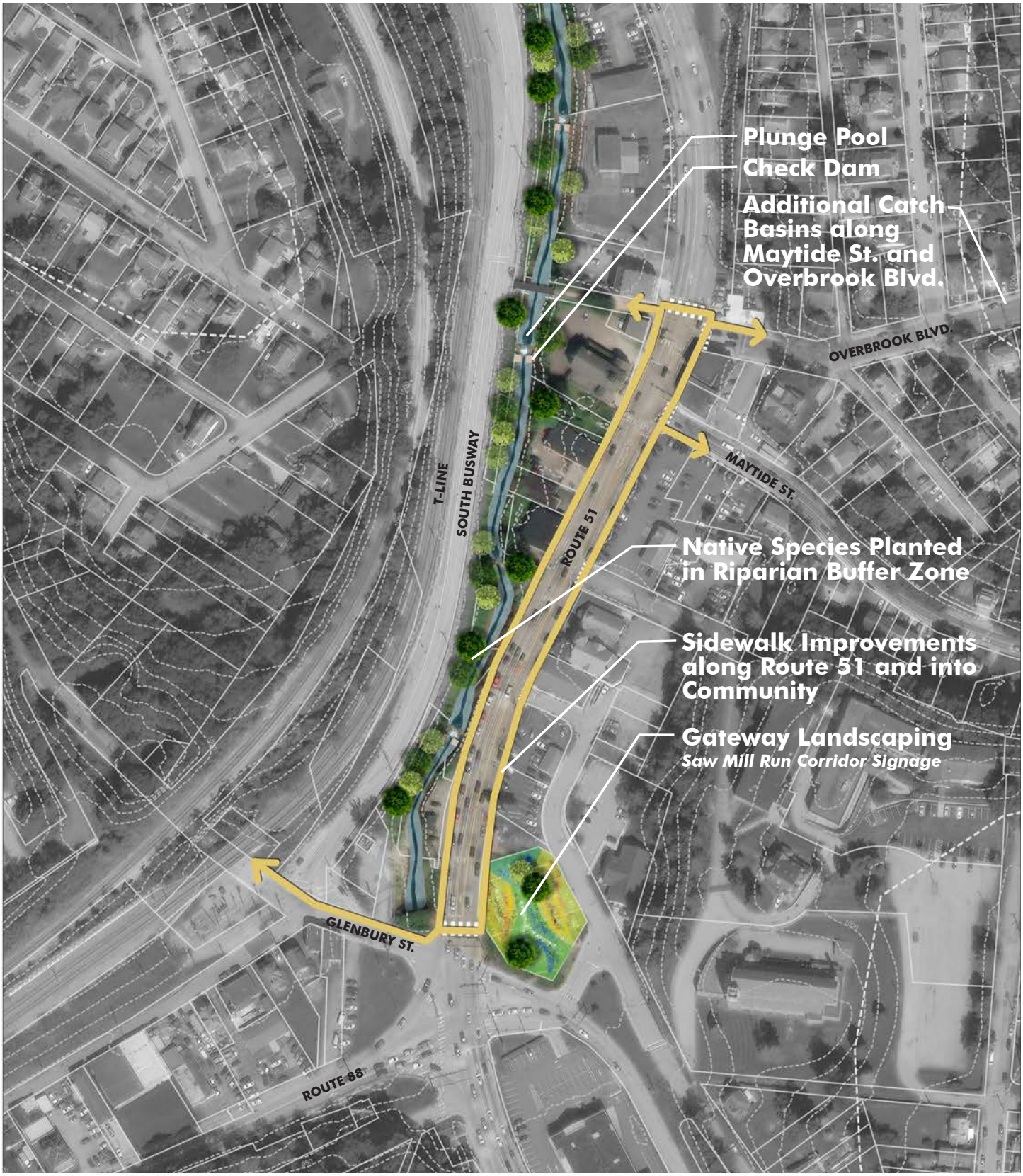
IMPLEMENTATION CONSIDERATIONS

Although the Concept Plan proposes the installation of additional catch basins on Overbrook Boulevard and Maytide Street, Public Workshop attendees also indicated that there is a need for increased maintenance of existing catch basins in this area. Additionally, past roadway resurfacing projects may have resulted in improper drainage patterns on the roadways. Coordination between several agencies, including PennDOT, DPW, DOMI, and PWSA, will be necessary to remedy these conditions, and the flooding and management concerns should be investigated further as they relate to the future PennDOT Route 51 reconstruction project. Chapter 7 discusses the need for increased collaboration between the many departments that have roles within the Corridor.

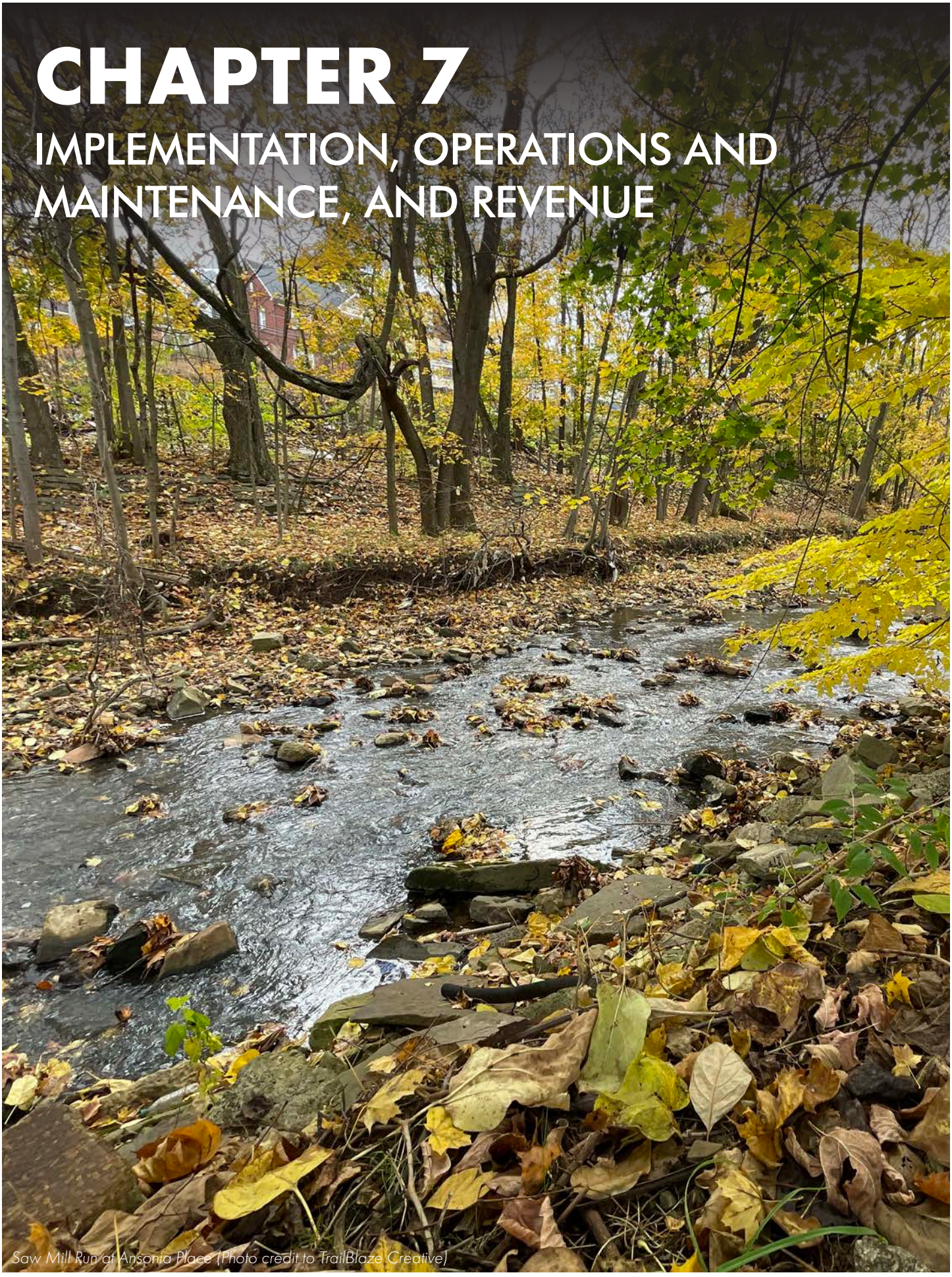


Access to the South Busway at Overbrook Boulevard

CONCEPT PLAN



CHAPTER 7
IMPLEMENTATION, OPERATIONS AND MAINTENANCE, AND REVENUE



Saw Mill Run at Ansonia Place (Photo credit to TrailBlaze Creative)

OVERVIEW

THE WORKING GROUP

Before pursuing plan implementation, input from stakeholder interviews, the Advisory Committee, and the Public Workshop underscored the need for improved collaboration between the many agencies that work in the Corridor. The process of developing the report and speaking with stakeholders unveiled aspects of management that do not fall clearly into one department's responsibility or mission. As a result, some tasks (such as the removal of a car that remains in the bottom of the stream) are difficult to initiate and see to completion because the responsibility can be passed between many different entities without landing on a clear solution. For a property owner attempting to resolve an issue, the task only becomes more complicated.

The Plan recommendations span the responsibility of a variety of agencies and departments and will require coordination over many years to see to completion. Given the limited nature of planning and interaction between these groups, it would be challenging to implement the Plan under the current conditions.

For these reasons, the Green Boulevard Master Plan recommends that a working group for the Saw Mill Run Corridor should be assembled, prior to the implementation of any of the plan recommendations. Because many departments work within the Corridor, there are likely projects and plans that coincide with each other in timing, mission, or scope. Coordinating such actions can create opportunities to leverage funding and address multiple issues at once. Improving coordination can also help to ensure that actions are taken to pursue the vision of the Green Boulevard Master Plan, ultimately to improve the Corridor over the next generation.

THE CORRIDOR WORKING GROUP

Over the course of Plan development, the Collaborative Team worked with the Advisory Committee to conceptualize the ways in which a working group could be formed to support the Corridor. The purpose of the working group should be to:

to make the saw mill run corridor better, safer, more resilient, more attractive, and more vibrant

A series of roles were identified and scored based on input gathered from residents, business owners, stakeholders, and the Advisory Committee. The Corridor working group should fulfill some or all of the following roles:

1	**Concierge**: Serve as a "one-stop shop" for residents, property owners, and business owners when an issue or concern arises.	D
2	**Project Coordination**: Facilitate broad-scale coordination on improvements, maintenance, and management of the Corridor.	C
3	**Voice**: Advocate to City or higher-level government for the changes in policy and management needed to improve the Corridor.	C
4	**Identity**: Create a positive "brand" or visual language to develop a sense of place in the Corridor.	D
5	**Stewardship**: Conduct assessments of and organize efforts to maintain or improve the ecological health of Saw Mill Run.	A

A – Effort exists and has been successful

B – Effort exists with some success

C – Effort exists in a very limited fashion and with limited success

D – Effort does not exist

The level to which the roles are currently achieved is indicated by the letter score next to each role. Stewardship of the Corridor has been successful, while other functions, such as advocacy and project coordination, could be improved. The creation of an identity for the Corridor and the availability of a point of contact for residents and business owners of the Corridor do not exist at the time of report development.

The following three diagrams illustrate potential structures for the working group. Each one requires a different intensity of involvement from the related organizations and achieves the roles to varying degrees.

Option A: "Loose Confederation"



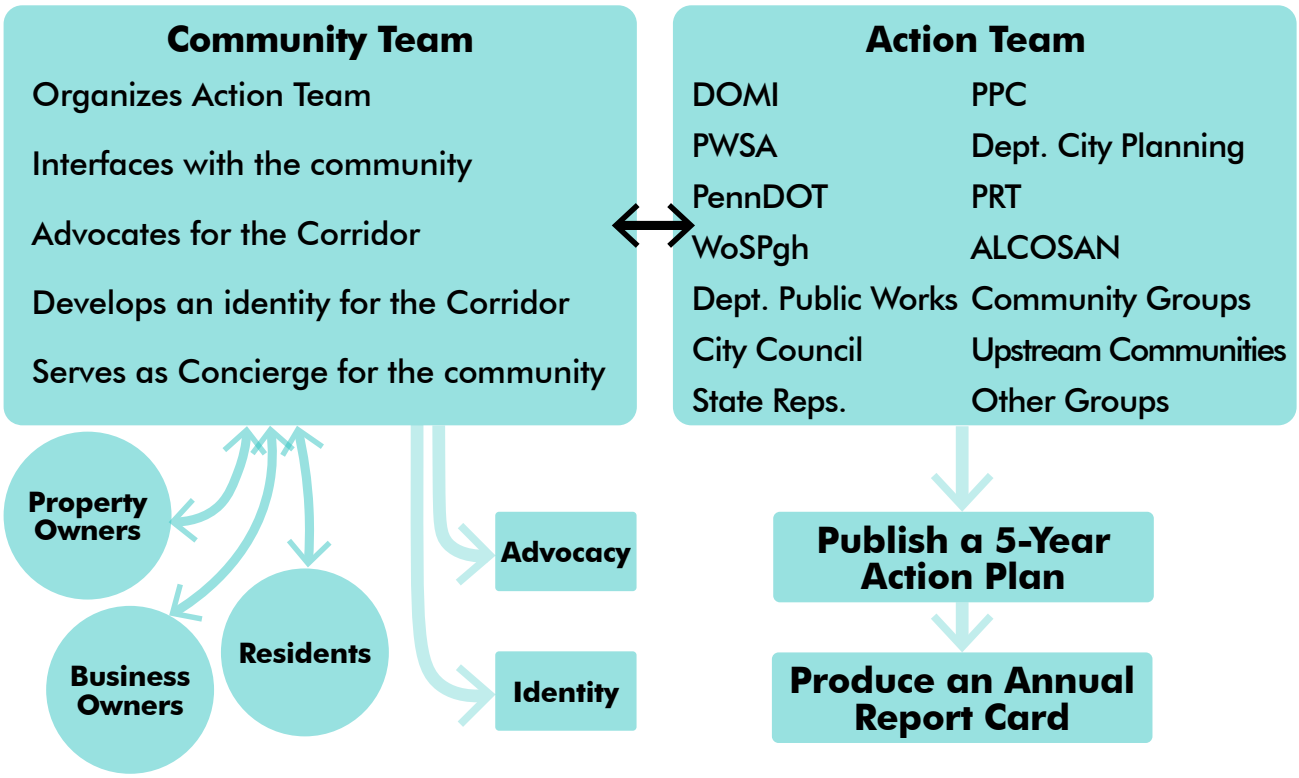
Addresses Coordination (2) and Stewardship (5) | Does not address Concierge (1), Voice (3), or Identity (4)

Option B: "One Stop Shop"



Addresses Concierge (1), Coordination (2), and Stewardship (5) | Does not address Voice (3) or Identity (4)

Option C: Community Team



Addresses Concierge (1), Coordination (2), Voice (3), Identity (4), and Stewardship (5)

Comparison

option	pros	cons
Option A: Loose Confederation	Supports roles of Task Force (2) and Stewardship (5) Least resource intense No structural changes	Does not support roles of Concierge (1), Voice (3), or Identity (4) Requires existing organizations to self-organize Unclear who would be responsible for organizing the Summit
Option B: One Stop Shop	Supports roles of Concierge (1), Task Force (2), and Stewardship (5) Higher level of coordination among departments and with public	Does not support role of Voice (3) or Identity (4) More resource-intense, relating to staffing and funding of Concierge Team Unclear who would be responsible for organizing and managing Action Team
Option C: Community Team	Supports all desired roles (Concierge, Task Force, Voice, Identity, Stewardship) Advocacy with one voice Designates a group to coordinate the Action Team	Requires creation of a new organization Risk of further exacerbating the problem of too many organizations with individual goals and responsibilities Most resource intense

OPTION A represents the most basic form of routine collaboration among the Corridor's agencies, but it does not fulfill several of the desired roles. The Saw Mill Run Summit in Option A should occur as a first step towards deciding which of the three options best addresses a long-term strategy for the agencies involved in the Corridor, although Option A could also be used as a long-term strategy itself. The first convening may be organized by Watersheds of South Pittsburgh. If this is selected as a long-term strategy, responsibilities for drafting the 5-Year Action Plan and Annual Report Card will need to be discussed and agreed upon with all involved organizations.

OPTION B explores the creation of a "Task Force" with two distinct functions: project coordination and pursuit of the Corridor vision by the Action Team, and interfacing with the public through the Concierge group. Although Option B fulfills more of the roles, it may also be the most resource-intense option because it requires funding and staffing for the Concierge component. There currently are no existing City structures or processes for creating or organizing a group such as the one shown in this option. Option B differs from Option C because Option B proposes working with existing organizations to convene and staff the Concierge, while Option C proposes creating a new entity in addition to the others that already exist and work in the Corridor.

OPTION C addresses all of the desired roles, but may require the creation of a new organization, which also risks perpetuating the present problems if a lack of oversight results in the new organization failing to regularly convene the Action Team. The Community Team described in Option C could be similar to a community development corporation.

When evaluating the three options, is important to consider the roles that City Council representatives could have in organizing the Action Team and interfacing with residents and business owners. Although this may not be part of their current responsibilities, engaging City Council members could reduce some of the time and resources that would otherwise need to be allocated by the groups within the Action Team in order to enact any of these organizational structures.

Prior to the start of Plan implementation, the listed agencies and any other related groups should be convened to review the above three options to decide the best route to pursue. The assessment of each of these options should include a review of each agency's mission to determine their roles relating to Saw Mill Run. Once a structure is selected and pursued, the recommendations of the Green Boulevard Master Plan can be implemented methodically, holistically, and in coordination with other concurrent projects in the Corridor.

ADDITIONAL CONSIDERATIONS

Once the Work Group has been established, coordination with upstream communities and incorporation of the Saw Mill Run Integrated Watershed Management Plan (IWMP) should be pursued. While the MSDP focuses on the Study Corridor, the IWMP studies the overall Saw Mill Run Watershed and has far-reaching impacts that may influence the MSDP. Additionally, upstream communities outside of the Study Corridor contribute runoff to Saw Mill Run, and the Study Corridor serves as an entrance to their neighborhoods. Although the IWMP and the surrounding communities extend beyond the limits of this study, they should be considered and involved due to their influence in the Study Corridor.

CASE STUDY

Other municipalities throughout Pennsylvania have grappled with the complex relationships between watershed boundaries, city limits, and organizational missions. In Blair County, a collection of 10 municipalities joined together to form the Intergovernmental Stormwater Committee (ISC) to address improvements related to Municipal Separate Stormwater System (MS4) program requirements. The group includes Blair County, the City of Altoona, four other townships, and four Boroughs and meets monthly to pursue the implementation of the Blair County Collaborative TMDL & Pollution Reduction

Plan. Because watersheds typically cross several municipalities, organizing in this way promotes a unified approach to tackling challenges in the watershed. The Intergovernmental Stormwater Committee should serve as a precedent for the creation of a working group for the Saw Mill Run Corridor.

PREFERRED WORK GROUP STRUCTURE

Following the development of the MSDP's initial draft and inclusive of the full gamut of recommendations, the Advisory Committee revisited the discussion related to the "most ideal" structure for the Working Group. Each of the three (3) structures that was studied in detail (refer to pages 91-94) was further evaluated and the pros and cons of each were considered. It was decided that a Loose Confederation-style make-up (Option A) made the most sense in the near future for organizing, focusing and managing the Work Group. The immediacy and specificity of the Corridor's most important or pressing issues often require rapid, inter-agency responses. Option A enables the Corridor's major stakeholders to remain actively involved and focused on specific tasks or issues where their expertise or involvement is necessary. And conversely, to recede in involvement when appropriate. Option A also allows the major stakeholder's existing staff resources to continue to address issues within their current funding or operating structures and would not require extensive budgetary outlays beyond their current levels.

It was also determined by the Advisory Committee that Watersheds of South Pittsburgh (WoSPgh) should be the lead organization or "convener" of the Work Group. WoSPgh would be responsible for developing an agenda for each convening and inviting or coordinating the attendance of the Work Group members. It was anticipated that the Work Group would meet two (2) to three (3) times per year depending on the activities, efforts, projects and programs that are actively affecting or influencing the Corridor. WoSPgh staff and the Advisory Committee developed an estimate of annual costs related to WoSPgh being the lead organization. This cost, estimated to be approximately $75,000 per year, would provide a full-time staff person inclusive of a benefit package. The position would be housed within WoSPgh. This staff person would be dedicated to the implementation of this Plan and would be instrumental in coordinating the various implementation activities and efforts within the Saw Mill Run Valley. WoSPgh believes that the position could be funded in the short-term through a grant request to a local philanthropic organization for a three-year period. This timeframe would allow the Work Group and dedicated implementation coordinator to: a) establish effective communication lines between the Work Group members and other key stakeholders; b) rules/procedures for data/information sharing and decision-making/actions; c) develop an Immediate and Three Year Action Plan; d) set a regular meeting schedule; e) create a standing quarterly agenda and reporting format; and f) outline Implementation Goals and Measurements of Success.

As a final note related to the Work Group structure, the Advisory Committee did recognize that in the long-term the Option C – Community Team structure will be the most effective. Creating such a Work Group structure without having completed any successful implementation or dedicated funding source is premature at this time. However, as the Work Group is able to successfully implement some of this Plan's recommendations or the projects/implementation focus begins to center on lands or properties fully-owned by the City of Pittsburgh, the Work Group should begin to transform its organizational structure to a more Community Team-style make-up. The Community Team structure will enable to address the full range of issues and needs found in the corridor irrespective of urgency, severity or financial demands.

PRIORITIES DISCUSSION

The Concept Plans for the Design Focus Areas reflect site specific improvements that create or enhance public green space, improve the health of the stream channel, and expand pedestrian connectivity.

Although the sites are separate, they are interrelated. Improvements at multiple sites will provide more benefits than improving a single site, but there is value in improving any single site as well.

For example, constructing check dams in the "Bathtub" will reduce water velocity and erosion at the first sharp bend around the Rohrich Parts building. Without any other improvements, this solution may still reduce erosion at Seldom Seen Greenway. However, implementing the Seldom Seen Greenway plan will both add to and benefit from the upstream improvements at this site.

While the recommendations for the Design Focus Areas are valuable, transformation in the Corridor will result from the Corridor-wide recommendations. The challenges in the Corridor surpass the mission of any single organization or the limits of any single focus area. The Design Focus Areas can serve as an opportunity to create visual change and garner public support, as policy and planning changes take place in a way that is less visually impactful in the short term.

The ultimate priority to drive change in the overall Corridor is enacting heightened zoning and land use controls, which are the largest drivers for the current conditions in the area. However, these changes will take the longest and can be difficult for the public to understand and support when the changes are not necessarily visible or immediate. As discussed above, highly visible and engaging projects, such as Ansonia Place, will be helpful for garnering support from the public. Ansonia Place and Wabash Park also present fewer logistical obstacles to implementation because these areas are already held by the City, as compared to the plans for Red, White, and Blue Thrift or Accamando Center. It is important to note that, if funding or acquisition opportunities arise for other areas, these should be pursued whenever possible due to the dynamic and complex nature of the Corridor.

With regard to prioritizing the six (6) Design Focus Areas, the Advisory Committee acknowledged that not all projects or recommended improvements will be simultaneously implemented. They also recognized that some projects will require significant investments in time, expertise and financial resources. These projects may also span long periods of time because of design, engineering and permitting requirements or can only be completed over the course of multiple funding cycles. Given this reality, the Advisory Committee prioritized the improvements related to the six (6) Design Focus Areas as a means of directing or concentrating implementation resources. The Advisory Committee discussed important considerations such as overall cost, public visibility and advocacy value, ease of access, project control, interdependencies between the Focus Areas themselves, immediate value to a resident, etc.... After much debate, the Committee's priorities are as follows:

#1 Ansonia Place
#2 Red, White and Blue
#3 The "Bath Tub"
#4 Seldom Seen
#5 Wabash Park
#6 Accomando Center

Ansonia Place provides the most significant set of immediate benefits for the surrounding properties, the neighborhood residents and potential visitors. The Committee also felt that Ansonia Place embodies the full breadth of the vision of this Plan. The design interventions for this location as suggested by the Plan address the gamut of ecological, accessibility, equity in mobility, open space development and stormwater attenuation identified in the existing conditions analyses discussed in Chapters 2 and 4. Finally, the Ansonia Place design interventions bring into the fold the broadest set of stakeholders and potential implementation partners. The location can best demonstrate the "power of working together" because of the diversity of partners.

OPINION OF PROBABLE DEVELOPMENT COST

The following tables reflect the Opinion of Probable Development Cost (OPDC) for each of the six Design Focus Areas. These tables can be used for planning purposes, such as grant applications. The OPDC's take an optimistic view of the improvements that can be implemented at each site. In other words, they assume that all of the desired improvements at each site are feasible and practical from a construction standpoint. For example, several of the OPDC's assume that the soils are suitable for invasive species removal and replanting with native species. However, additional due diligence, such as a soil analysis, is required to determine if these improvements are feasible in each location. Other site-specific notes have been included with the tables.

The line item for Detailed Design and Engineering is calculated at 15% of the subtotal for the recommended improvements. This is typically used in the industry to estimate the budget needed for design and engineering costs as it relates to the estimated costs of the capital improvements.

The total projected costs and the price per square foot for each Design Focus Area are summarized in the table below. The price per square foot can be used to compare the scale of improvements across the six areas. The public access spaces tend to have higher prices per square foot because the improvements in these areas are more extensive. Ansonia Place and Red, White, and Blue Thrift have the highest prices per square foot because both sites include the installation of new pedestrian bridges, which is a significant cost influence.

Summary Table

	Design Focus Area	Projected Cost	Sq. Ft.	$/SF
1	Wabash Park	$1,791,625	283,140	$6.33
2	Seldom Seen Greenway	$2,483,350	435,600	$5.70
3	The "Bathtub"	$273,150	165,528	$1.65
4	Red, White, and Blue Thrift	$2,105,300	248,292	$8.48
5	Ansonia Place	$3,599,700	352,836	$10.20
6	Accamando Center	$502,475	121,968	$4.12

Design Focus Area 1: Wabash Park

	Improvement	Projected Cost
1	Renovated Nature Play Space	$150,000
2	Relocated Basketball Court	$50,000
3	Donor/Funding Signage	$500
4	Naturalized Area	$62,000
5	The Terrace	$150,000
6	Other Landscape Improvements	$50,000
7	Subsurface Floodwater Storage	$525,000
8	Creekside Promenade	$200,000
9	Geocell Slope Reconstruction	$210,000
10	Walking Loop Markings and Signage	$30,000
	Improvements Subtotal	**$1,427,500**
11	Permits	$150,000
12	Detailed Design and Engineering (15%)	$214,125
	Soft Costs Subtotal	**$364,125**
	Total Projected Cost	**$1,791,625**

Notes

1 Saw Mill Run Trail is not included in this summary because the feasibility and projected cost for developing this trail must be determined through additional studies.

Design Focus Area 2: Seldom Seen Greenway

	Improvement	Projected Cost
1	Trailhead Parking Lot	$75,000
2	Donor/Funding Signage	$1,000
3	Pittsburgh Parks Signage	$30,000
4	Interpretive Signage	$25,000
5	Trail Connection to Parking Lot	$40,000
6	Special Brick Arch Lighting	$150,000
7	Engineered Hillside	$70,000
8	Streambank Armoring	$48,000
9	Bicycle Connection to Saw Mill Run Trail	$400,000
10	Bridge Abutment Repairs	$100,000
11	Reconstructed Retaining Wall	$200,000
12	Reconstructed Trail Surface	$70,000
13	Safety Barrier along Trail	$100,000
14	Invasive Species Removal[3]	$40,000
15	Native Species Plantings[3]	$80,000
16	Expanded Floodplain with Restoration Plantings	$200,000
17	Constructed Wetland	$400,000
	Improvements Subtotal	**$2,029,000**
18	Permits	$150,000
19	Detailed Design and Engineering (15%)	$304,350
	Soft Costs Subtotal	**$454,350**
	Total Projected Cost	**$2,483,350**

Notes

1 Saw Mill Run Trail is not included in this summary because the feasibility and projected cost for developing this trail must be determined through additional studies.

2 The new Salt Shed is not included in this summary because its design is funded in a separate effort.

3 Soil testing should be conducted prior to invasive species removal to verify suitability for native plantings.

Design Focus Area 3: The "Bathtub"		
	Improvement	**Projected Cost**
1	Invasive Species Removal[1]	$25,000
2	Native Species Plantings[1]	$50,000
3	Donor/Funding and Informational Signage	$1,000
4	Plunge Pools	$50,000
5	Check Dams	$75,000
	Improvements Subtotal	**$201,000**
6	Permits	$42,000
7	Detailed Design and Engineering (15%)	$30,150
	Soft Costs Subtotal	**$72,150**
	Total Projected Cost	**$273,150**

Notes

1 Soil testing should be conducted prior to invasive species removal to verify suitability for native plantings.

Design Focus Area 5: Ansonia Place		
	Improvement	**Projected Cost**
Phase 1		
1	Demolish Existing Asphalt Access Drive	$20,000
2	Remove Inoperable Signal and Crosswalk	$10,000
3	Remove Existing Bridge	$50,000
4	Drainage Improvements along Existing Wall	$50,000
5	Sidewalk Improvements	$100,000
6	Crosswalk Striping/Pedestrian Signal Phasing	$15,000
7	Pedestrian Bridge[1]	$800,000
8	Universally Accessible Ramp	$100,000
9	Donor/Funding Signage	$1,000
10	Wayfinding/Informational Signage	$1,000
11	Walking Path	$91,000
12	Boardwalk with Observation Deck	$600,000
13	Shade Tolerant Seed Mixture	$15,000
14	Constructed Wetland	$310,000
	Phase 1 Improvements Subtotal	**$2,163,000**
15	Permits	$125,000
16	Detailed Design and Engineering (15%)	$324,450
	Phase 1 Soft Costs Subtotal	**$449,450**
	Phase 1 Total Projected Cost	***$2,612,450***
Potential Future Phase		
17	Path to T-Station	$140,000
18	Lawn Area	$15,000
19	Shade Structures	$100,000
20	Nature Play Area	$150,000
21	Children's Adventure/Climbing Area	$200,000
22	Rain Gardens	$200,000
23	Permeable Parking Area	$10,000
	Potential Future Phase Improvements Subtotal	**$815,000**
24	Permits	$50,000
25	Detailed Design and Engineering (15%)	$122,250
	Potential Future Phase Soft Costs Subtotal	**$172,250**
	Potential Future Phase Projected Cost	***$987,250***
	Grand Total	**$3,599,700**

Notes

1 Summary assumes a prefabricated steel truss bridge designed to minimize flood obstructions; location to match existing bridge and should be considered a permissible replacement.

Design Focus Area 4: Red, White, and Blue Thrift		
	Improvement	**Projected Cost**
1	Demolish Vacant Houses	$50,000
2	Invasive Species Removal[1]	$40,000
3	Shade Tolerant Seed Mixture	$20,000
4	Native Species Plantings[1]	$80,000
5	Gateway Landscaping	$75,000
6	New Riparian Buffer	$100,000
7	Donor/Funding Signage	$1,000
8	Watershed/Informational Signage	$1,000
9	Crosswalk Striping/Pedestrian Signal Phasing	$15,000
10	Pedestrian Route Markings	$5,000
11	Removal of Existing Bridge	$15,000
12	New Pedestrian Bridge[2]	$800,000
13	Stream Observation Area	$30,000
14	Walking Loop and Trail	$90,000
15	Expanded/Reconstructed Floodplain with Restoration	$400,000
	Improvements Subtotal	**$1,722,000**
16	Permits	$125,000
17	Detailed Design and Engineering (15%)	$258,300
	Soft Costs Subtotal	**$383,300**
	Total Projected Cost	**$2,105,300**

Notes

1 Soil testing should be conducted prior to invasive species removal to verify suitability for native plantings.

2 Summary assumes a prefabricated steel truss bridge designed to minimize flood obstructions; location to match existing bridge and should be considered a permissible replacement.

Design Focus Area 6: Accamando Center		
	Improvement	**Projected Cost**
1	Plunge Pool	$50,000
2	Check Dam	$75,000
3	Additional Catch Basins	$20,000
4	Donor/Funding Signage	$500
5	Watershed/Informational Signage	$1,000
6	Crosswalk Striping/Pedestrian Signal Phasing	$15,000
7	Sidewalk Improvements	$100,000
8	Gateway Landscaping	$75,000
9	Invasive Species Removal	$30,000
10	Native Species Plantings	$60,000
	Improvements Subtotal	**$426,500**
11	Permits	$12,000
12	Detailed Design and Engineering (15%)	$63,975
	Soft Costs Subtotal	**$75,975**
	Total Projected Cost	**$502,475**

Notes

1 Soil testing should be conducted prior to invasive species removal to verify suitability for native plantings.

POTENTIAL FUNDING SOURCES

To pursue the implementation of the Design Focus Area recommendations, grant opportunities offer additional resources and support. The following list identifies a variety of grants that are applicable to the types of projects recommended for the Corridor. The following pages contain more detailed information and descriptions about the listed grant programs, as well as their associated general conditions or requirements, if known. However, this is not an exhaustive list and given the 15- to 20-year timespan of some projects, it is important to stay informed about new funding opportunities as they arise. Because grant applications often specify the type of eligible grantee (such as municipal or nonprofit organizations), coordination with departments, agencies, and organizations through the Corridor working group will be essential as grants are pursued.

POTENTIAL GRANT LIST

DCED CFA Greenways, Trails, and Recreation Program

DCNR Community Conservation Partnership Program (C2P2)

DCNR Riparian Forest Buffer Program

DCNR/DEP Growing Greener Environmental Stewardship Fund

USDA/NRCS Environmental Quality Incentives Program

PennDOT Transportation Alternatives Program

PennDOT Multimodal Transportation Fund

SPC Multimodal Transportation Fund

NFWF Urban and Community Forestry Grants

Community Development Block Grant (CDBG)

Land and Water Conservation Fund (LWCF)

Recreational Trails Program (RTP)

USFWS Grants

Pennsylvania Parks Fund

NFWF Grants

The North Face Explore Fund

KEEN Effect Grant

AARP Community Challenge Grant

GRANT AND FUNDING SOURCE DETAILS

KEY POINTS REGARDING MATCH GRANTS

When a project utilizes federal money, the project may not be funded entirely with federal money. The rest of the project is funded with either state or local money.

Also, state to state funds may be used to match each other. A project may have $1 million verified in funding. This funding can be broken down into the following: PennDOT $500,000, CFA $250,000, and DCNR $250,000. In this case, the CFA and DCNR grants may be used to match the PennDOT grant.

Typically, there is a logical order in which grants are applied for so that other grants can be used as leverage. This is dependent upon the match requirement. For example, PennDOT and CFA grants have lower local match levels so they are at the top.

LEGEND

M – MUNICIPAL

N – NON-PROFIT

A – AUTHORITY

F – FOR-PROFIT

FOOTNOTES/COMMENTS

1. CFA is administered through the PA DCED.

2. As per past experience with the developing PA DCNR, PA DEP and PA DCED grant applications, it is suggested that the owner groups contribute 10-20% from capital resources or general operating expenses to the overall project as a means of demonstrating support for the project.

Please see the tables on the following pages.

GRANT AND FUNDING SOURCE DETAILS

Grant/Funding	Grant/Funding Source	General Scope/Improvement Work	Realistic	State	Required	Application	The Grantee
DCED (CFA) [1]	Greenways, Trails and Recreation Program	Projects involving development, rehabilitation and improvements to public parks, recreation areas, greenways, trails, and river conservation	$ 250,000	85%	15%	February 1- May 31	M N A
DCNR	Community Conservation Partnership Program (C2P2)	Projects involving planning, acquisition and development of public parks, recreation areas, motorized/non-motorized trails, river conservation and access, and conservation of open space	$ 200,000 - 300,000	50%	50%	Annually, January to April	M N A
DCNR	Riparian Forest Buffer Program	Projects involving landowner outreach, buffer design, site preparation and buffer installation, plant materials and tree shelters, and short-term maintenance	Minimum of $50,000	50%	50%	Annually, January to April	M N A
DEP	Growing Greener Environmental Stewardship Fund	Projects involving watershed restoration and protection, abandoned mine reclamation, and abandoned oil and gas well plugging https://www.dep.pa.gov/Citizens/GrantsLoansRebates/Growing-Greener/Pages/default.aspx	Unknown	85%	15%	May 14 - July 13	M N A
USDA/ NRCS Environmental Quality Incentives Program	Management	This program is a cost-share program that offset the costs of invasive species control, forest management, and other overall improvements for forest health. If accepted into the program, costs for plan development are offset as are the actual costs of operations (i.e. herbicide application). If it remains in a non-public entity ownership, this is one option. https://www.nrcs.usda.gov/programs-initiatives/eqip-environmental-quality-incentives	Unknown	Unknown	Unknown	Unknown	
PennDOT	Transportation Alternatives Program	Projects involving transportation alternatives (on-and-off road pedestrian and bicycle facilities, community improvement activities, trails that serve a transportation purpose, safe routes to school, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, and environmental mitigation)	$ 1,000,000	80%	20%	Rolling	M N A
PennDOT	Multimodal Transportation Fund	Projects involving development, rehabilitation, and enhancement of transportation assets to existing communities, streetscape, lighting, sidewalk enhancement, pedestrian safety, connectivity of transportation assets and transit-oriented development	$ 3,000,000	70%	30%	Rolling	M N A
SPC	Multimodal Transportation Fund	Projects involving economic growth, enhance livability and connectivity in communities throughout the region, and provide residents with sustainable and resilient transportation choices	$ 1,000,000	80%	20%	Rolling	M N A
Urban and Community Forestry Grants	Programming	The purpose of this grant is to improve the health of urban and community forests and to increase the sustainability of forestry programs. https://www.nfwf.org/programs?items_per_page=All https://www.dec.ny.gov/lands/5285.html	Unknown	Unknown	Unknown	Unknown	

Grant/Funding	Grant/Funding Source	General Scope/Improvement Work	Realistic	State	Required	Application	The Grantee
Community Development Block Grant (CDBG)	Planning	The Department of Housing and Urban Development provides grants for the benefit of low-income persons, aid in the prevention or elimination of slums and blights, and to meet urgent community needs. Funded projects include acquisition, demolition, rehabilitation of structures, construction of public facilities, provision of handicap access, historic preservation, community planning, and energy conservation. https://www.hud.gov/program_offices/spm/gmomgmt/grantsinfo	Request Amount: Varies. State program Max $750,000; Loan $500,000-$140 Million	Unknown	Unknown	Unknown	
Land and Water Conservation Fund (LWCF)	Development	The goal of the Land and Water Conservation Fund is the creation and maintenance of high quality recreation resources through the acquisition and development of public outdoor recreation areas and facilities. Towns, villages, cities, counties, tribal governments, school districts or other state political subdivisions are eligible to apply. Applications are due annually by May 1. https://www.nps.gov/subjects/lwcf/stateside.htm	Provides matching funds	Unknown	Unknown	Unknown	
Recreational Trails Program (RTP)	Development	The federally administered Recreational Trails Program (RTP) uses federal gas excise taxes to fund recreational trails and their facilities. Eligible projects may receive up to 50 percent of the total project cost. RTP funds may be used to build new trails. Towns, villages, cities, counties, tribal governing bodies, school districts, state agencies, federal agencies or incorporated organizations may apply for project funds. https://www.pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol29/29-32/1282.html	Up to 50 percent of the total project cost.	Unknown	Unknown	Unknown	
USFWS	Development	Work on a wide range of public lands and can do a wide range of habitat improvements. https://www.fws.gov/service/financial-assistance	Unknown	Unknown	Unknown	Unknown	
Emergency Watershed Protection Program	Development/ Construction	The USDA Natural Resource Conservation Service provides funding to aid individuals and conserve natural resources through preparation for imminent hazards such as floods, fires, drought, windstorms, and further natural incidents. The program is divided into the EWP- Recovery and the EWP Floodplain Easement (FPE). https://www.nrcs.usda.gov/programs-initiatives/ewp-emergency-watershed-protection	Request Amount: 75% construction Match: Varies; 25% Cash/In-Kind	Unknown	Unknown	Unknown	

Grant/Funding	Grant/Funding Source	General Scope/Improvement Work	Realistic	State	Required	Application	The Grantee
Pennsylvania Parks Fund		The Pennsylvania Parks Fund is a fiscally-sponsored project of the nonprofit organization SocialGood with the goal of funding national, state, county, city, borough, and township parks as well as national and state forests. There are funds for each county in Pennsylvania. Their goal is to support projects that will benefit local communities to help them become healthier and happier places to live and work. Their grant initiative will begin in 2023. https://www.pennsylvaniaparks.org/pages/apply-for-grant	Unknown	Unknown	Unknown	December 1, 2023 - January 31, 2024	
National Fish and Wildlife Foundation	Programming	Awards competitive grants through our programs to protect and conserve our nation's fish, wildlife, plants and habitats. The Foundation works with public and private partners in all 50 states and U.S. territories to solve the most challenging conservation problems. https://www.nfwf.org/apply-grant/application-information	Unknown	Unknown	Unknown	Unknown	
The North Face	Programming	Explore Fund Grant Since 2010, the Explore Fund Grant program has created access and driven equity in the outdoors by funding hundreds of nonprofit organizations around two themes: Enabling Exploration and Loving Wild Places. https://www.thenorthface.com/en-us/about-us/outdoor-exploration/about-the-explore-fund	Unknown	Unknown	Unknown	Unknown	
KEEN	Programming	Since 2005, the KEEN Effect Grant Program supports organizations that are reducing the impact of climate change and improving access to outside and the trades. From protecting public lands to getting historically marginalized communities out into nature, their grantees are actively creating a better world. https://www.keenfootwear.com/pages/keen-effect-grants	Unknown	Unknown	Unknown	Unknown	
AARP Community Challenge Grant		Examples of qualified improvements include: Benches, murals, transportation access training, bike fix it stations, bike racks, crosswalk improvements, bike lanes, garden beds, sculpture/art installed No match requirement https://www.aarp.org/livable-communities/community-challenge/	$ 10,000	Unknown	Unknown	January - March	Unknown

OPERATIONS & MAINTENANCE AND REVENUE

OPERATIONS & MAINTENANCE

The Operations and Maintenance (O&M) work needed for the upkeep of the six Design Focus Areas involves some additional considerations given the context of the sites. Two of the Design Focus Areas, Wabash Park and Seldom Seen Greenway, are existing public spaces managed by the City of Pittsburgh. These sites likely have existing operations and maintenance plans, although the routine tasks will need to adapt to the proposed improvements at each site. It is recommended that the departments responsible for the upkeep of each of these sites, such as Public Works, be involved in the operations and maintenance planning when pursuing the improvements at these locations.

Ansonia Place and the area behind Red, White, and Blue Thrift are recommended to become public green space, but are not managed that way currently. These two sites should be designated as public space and maintained by an organization that has the authority and capacity to complete the necessary upkeep, such as Public Works or the Pittsburgh Parks Conservancy. It is important to note that the Gateway Landscaping area near Red, White, and Blue Thrift may be maintained by a department or organization separate from the areas designated as public space. For example, volunteer efforts could be used for much of the upkeep associated with the Gateway Landscaping, whereas full-time staff will be needed to maintain spaces that are open to public access.

Finally, the "Bathtub" and Accamando Center are not intended for public access. For this reason, these two sites require less maintenance compared to public park spaces. These sites could be maintained by a different organization or department than the public spaces. While the public spaces may be managed by Pittsburgh Parks Conservancy, Public Works, or another similar entity, the nonpublic, in-stream improvements may be maintained by Watersheds of South Pittsburgh or other stewardship-focused entities.

Regardless of which organizations ultimately take on the responsibility of maintaining the sites over time, these roles should be discussed when the Corridor working group is convened, and the delegation of responsibilities should decided prior to implementing each set of improvements. Maintenance has also been identified as a concern for sidewalks and catch basins at the southern end of the Corridor. Although these upkeep tasks are already part of existing management programs through departments such as PWSA and Public Works, the working group should explore ways to increase or support these activities to ensure that infrastructure is properly maintained and functioning.

When management tasks and responsibilities are being evaluated, consider engaging volunteer efforts whenever possible. For example, volunteers could provide extra support in cleaning up litter and stream debris, maintaining planted areas, repairing trail surfaces, or removing invasive species where appropriate. These efforts can save costs associated with labor, and they can help build public interest and support for the improvements in the Corridor.

REVENUE DISCUSSION

For public-access sites, revenue opportunities can play a role in budgeting and funding opportunities. Direct revenue describes the income generated from programs, classes, rentals, concessions, and other non-tax sources. It is anticipated that Wabash Park, Seldom Seen Greenway, and Ansonia Place could generate direct revenue through opportunities such as:

- Educational programs relating to Saw Mill Run, ecology, native/nonnative species, plant identification, or stewardship
- Recreational activity groups, such as hiking (or climbing at Seldom Seen)
- Rentals of gathering spaces, such as the lawn or sunshades at Ansonia Place

Because these sites function primarily as public open space, their revenue generation opportunities are likely fairly limited relative to the scale of funding needed for implementation and maintenance of the proposed recommendations. However, the above opportunities should be considered if there is desire to offer such programs, or if there is a need for additional revenue generation.

APPENDICES LIST

APPENDIX A
RELATED PLANNING DOCUMENTS

APPENDIX B
DESIGN FOCUS AREA DOCUMENTS

APPENDIX C
SOIL SURVEYS

APPENDIX D
PNDI RESULTS

APPENDIX E
ADDITIONAL DEMOGRAPHIC ANALYSES

APPENDIX F
ECOLOGICAL CONDITIONS REPORT

APPENDIX G
CRASH DATA POINT MAPS

APPENDIX H
HEC-RAS ANALYSES

APPENDIX J
AMD REPORT BY HEDIN ENGINEERING

APPENDIX K
FULL-SIZE EXISTING CONDITIONS MAPS