

# PIGEON RIVER WALK

Clintonville, WI

Author

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A SENIOR CAPSTONE PROPOSAL

Submitted in partial fulfillment of the requirements for the degree  
Bachelor of Science in Landscape Architecture

Department of Planning and **Landscape Architecture**  
College of Letters and Science

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Approved by  
Eric Schuchardt, PLA, ASLA  
Faculty Associate

# ACKNOWLEDGEMENT

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In addition, I want to thank Eric Schuchardt, who has made this process very streamlined. I know he puts a ton of time into improving this program and I am forever grateful for that. He has taught us so much, and has greatly assisted in my graphic communication abilities.

Thank you Shawn Kelly, for being such an inspiration and energy to our class. Your wisdom is endlessly motivating and your work ethic gives me energy to keep going.

I want to thank my family, my Mom and Dad, as well as my brothers, Patrick and Colin, who have provided me with emotional and financial support through my college career.

Lastly, I want to thank my friends, within the major as well as beyond, for helping me through difficult times in college. Cannot express that thanks enough.

# ABSTRACT

The Pigeon River has been the focal point of Clintonville since the inception of the City. Clintonville and the surrounding area has seen booms in Agriculture, Logging, and Manufacturing over time, and the river has remained an important resource for all these uses. Sense of place is important to city representatives, and a downtown Riverwalk could be the key to this feature. The downtown region of the site has beautiful architecture, and fantastic potential to become a walkable, inviting, and programmed space. Flooding in the City has always been a problem, and so any future design decisions need to keep this in mind throughout.

The city is working on an extended path system for the Pigeon Riverwalk, a mixed-use development in the downtown corridor, improved stormwater management within Walter A. Olen Park and the downtown, enhanced bike and pedestrian circulation, and increased safety for the Main Street street-scape. The proposed changes to the site will influence the community identity, provide economic growth and opportunity, and make the downtown region of Clintonville an attractive destination for residents and visitors.

# ABOUT THE AUTHOR



Figure 1, Michael Walsh

I was born in Waukesha, WI, and shortly after moved to Frankfort, IL, a small town roughly an hour south of the City of Chicago. Originally, I was very interested in mechanical engineering, and after a year at community college transferred to University of Wisconsin - Madison to pursue that interest. After 1 semester, my passion for the field changed, and so my advisor provided me with design degrees that are not strictly science and mathematically based.

Landscape Architecture was one of the suggested paths, and so I looked into the Department, and read through "Contour", and was instantly hooked. My passion for the field has been growing ever since.

Michael Walsh  
Department of **Landscape Architecture**

Spring 2019

# CONTENTS

Acknowledgments .....	2
Project Abstract .....	3
About the Author .....	4
<b>Part I</b>	
Introduction .....	6-7
Project Workflow .....	8-9
Project Context, Background & History .....	10-14
Project Goals, Design Drivers .....	15-16
Programmatic Elements .....	17
Research Topic & Literature Review .....	18-20
Type of Project and Professional Focus .....	21
Precedent Review .....	22-29
The Region .....	30-39
The Community .....	40-51
The Site .....	52-91
Site Master Plan Programmatic Spatial Relationship Studies .....	92-103
Project Summary and Goals .....	104-105
<b>Part 2</b>	
Community Engagement .....	108-109
Master Plan .....	110-127
Site Plan .....	128-155
Phasing Strategy .....	156-157
Future Planning, Grant & Funding Opportunities, Conclusion and Critical Reflection .....	158-159
Appendix .....	160-171

# PART 1

## INVENTORY & ANALYSIS



Here is a picture of the Pigeon River, taken from one of the bridges in Olen Park. Before introducing the project, it is helpful to understand the importance of the Pigeon River to the community.

It has always been a crucial resource for Clintonville. Ultimately, the location of the river was key in the creation of the metro area, as the Pigeon River remains the focal point of the city.

# PIGEON RIVER

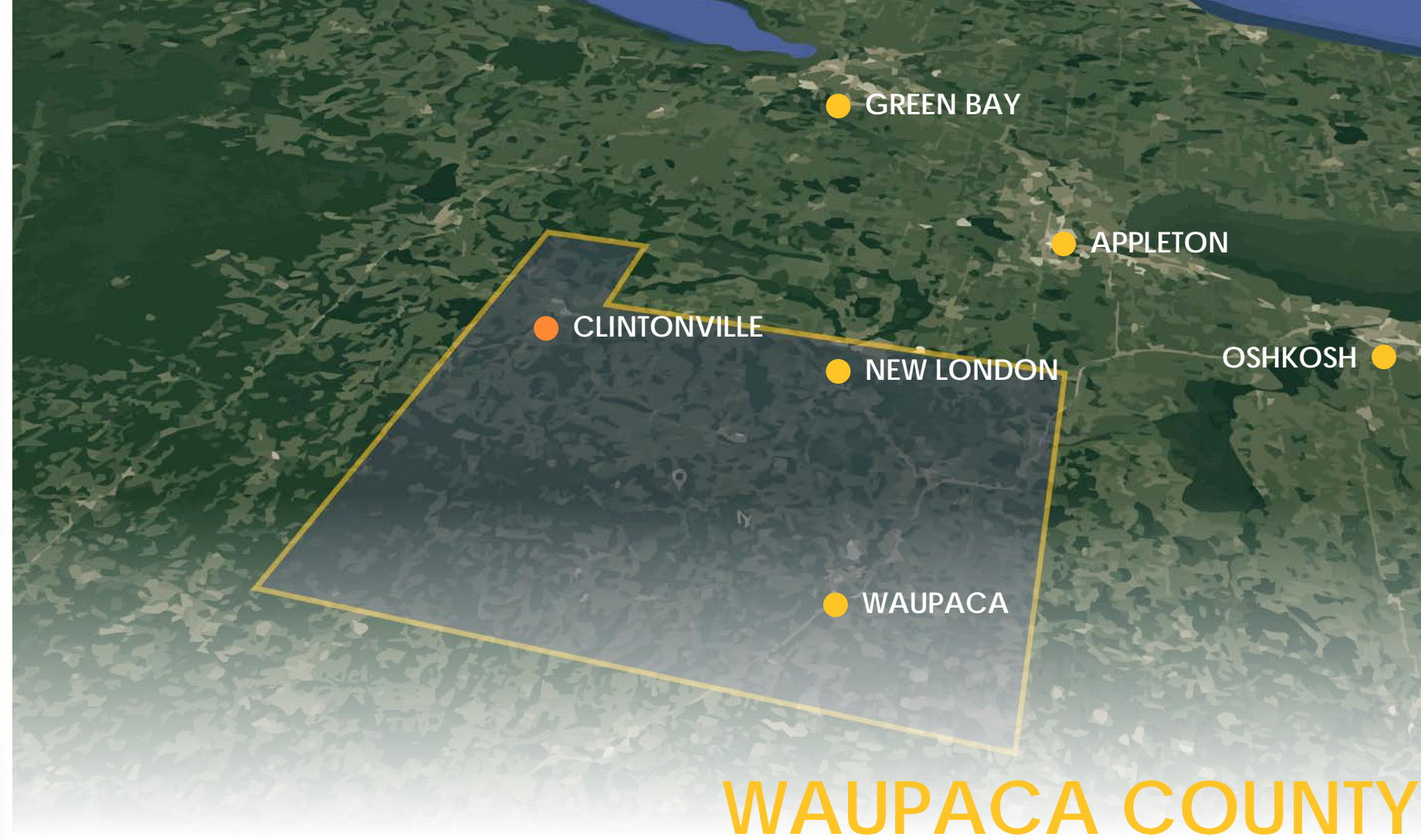


Figure 2, Waupaca County Location Map, Google Earth

## Introduction

To fulfill the requirements of the Senior Capstone Program in the Department of Landscape Architecture at the University of Wisconsin-Madison, I will investigate how ideas of physical and mental health may inform the design of a Downtown Master Plan. This investigation will be given context and focus by the concerns and goals of the City Administrator and the Clintonville community, which include public participation, placemaking, advanced stormwater management, ecology and restoration . The Pigeon Riverwalk in downtown Clintonville, as well as Olen Park will be the site for the study.

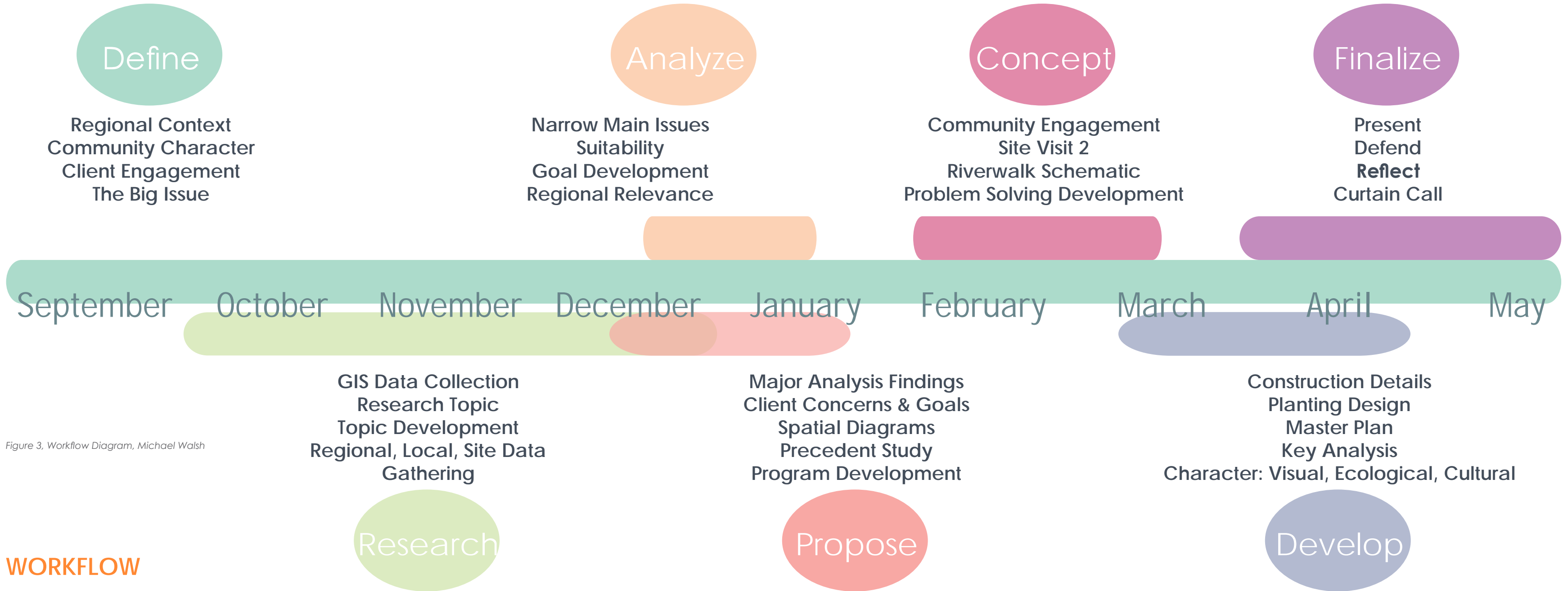


Figure 3. Workflow Diagram, Michael Walsh

**WORKFLOW**

# CONTEXT

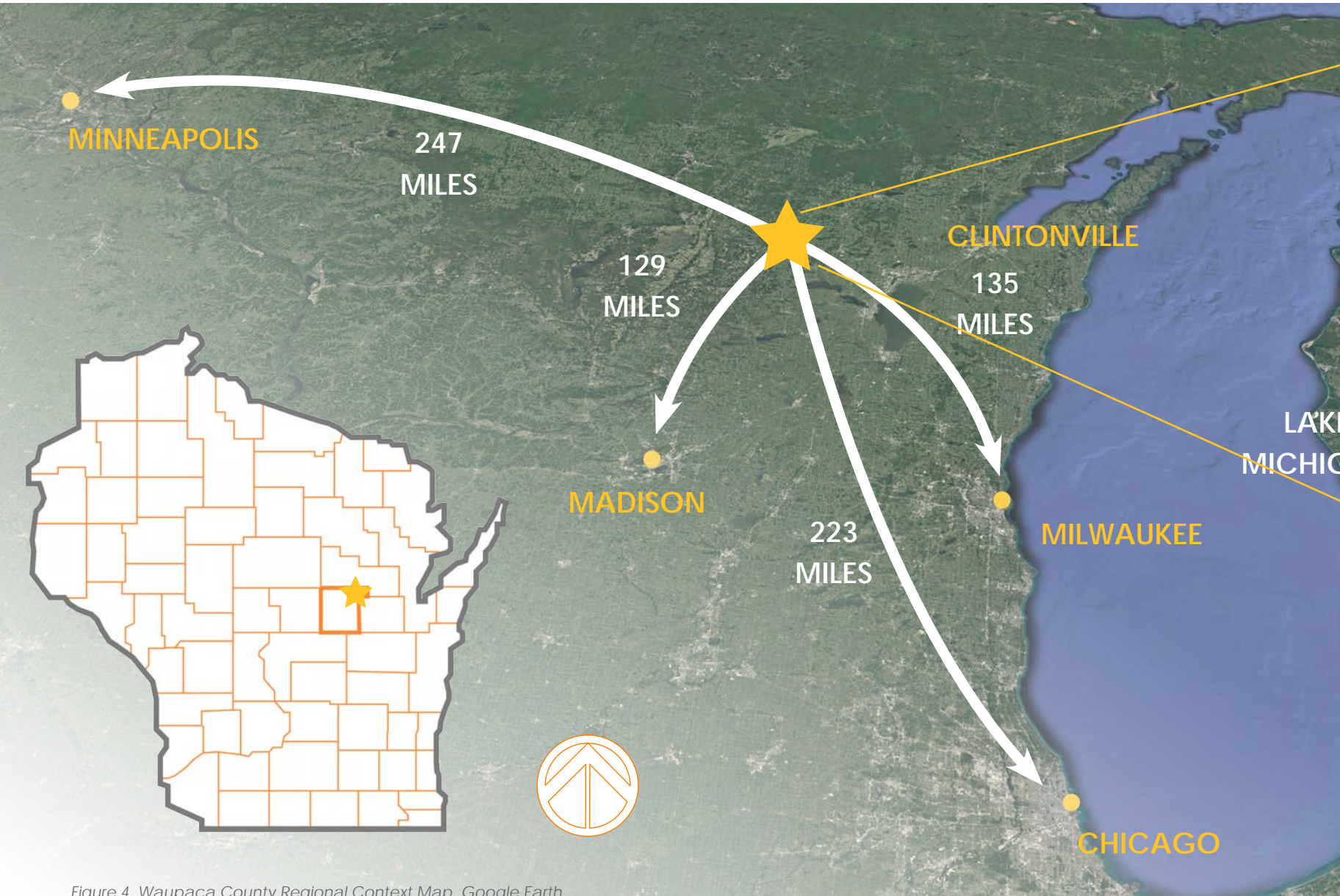


Figure 4, Waupaca County Regional Context Map, Google Earth

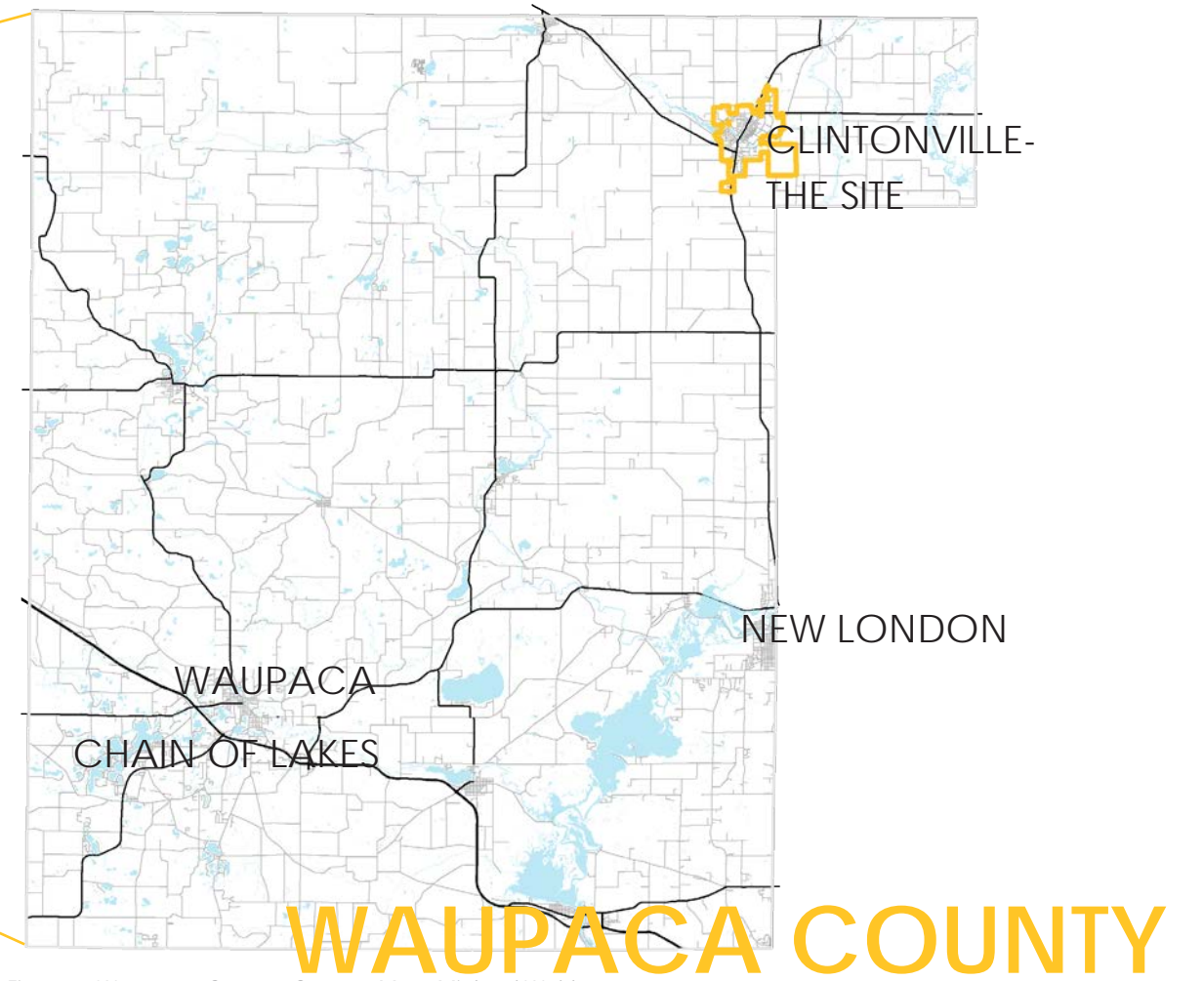


Figure 5, Waupaca County, Context Map, Michael Walsh

Waupaca County is located in East Central Wisconsin. The county has a total land area of 761 square miles. The character of the county's landscape is due to past glacial activity. There is an abundance of rolling hills, lakes, rivers, and streams as a result. The region's geography is appreciated by residents and tourists alike. The county is largely rural, with the exception of the cities of Waupaca, New London, and Clintonville.

# COUNTY HISTORY

The Menomonee Native Americans inhabited the county for an extensive period of time in our history.

French explorers, fur traders, and missionaries arrived in the region, and began to utilize the abundance of natural resources that are found in the county. The logging industry flourished as Waupaca is located within the Great Pine Forest. Sawmills were started throughout the region in the 1850s, and agriculture became an important feature of Waupaca's economy.

The fertile soil drew farmers to the region, and the potato trade was the lasting connection that was made to Chicago from East Central Wisconsin.

The region's natural wonders, like the Chain O' Lakes, drew visitors of nearby cities, which eventually led to the stability of the tourism industry. The Milwaukee Railroad was installed, which only strengthened Waupaca's connection to cities like Minneapolis, Chicago, and Milwaukee.

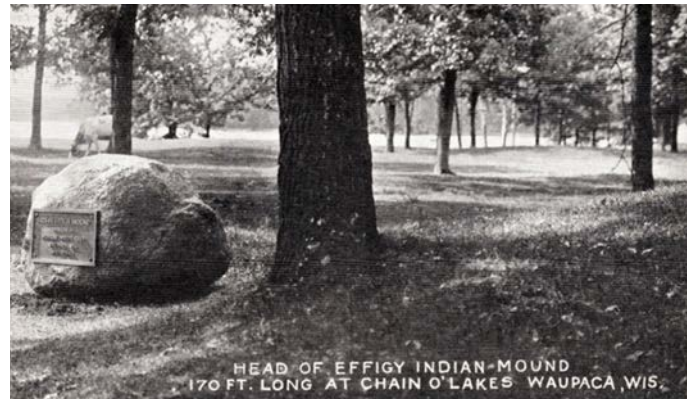


Figure 6, Wisconsin Historical Society



Figure 7, The Nature Conservancy



Figure 8, Northwest Railway Museum



# CONTEXT

PIGEON LAKE

PIGEON RIVER

THE SITE

45

22

45

CITY OF CLINTONVILLE



# CONTEXT

## City of Clintonville Comprehensive Plan 2040

The East Central Wisconsin Regional Planning Commission assisted town representatives in developing a comprehensive plan for the Cities' future.

Major Goals of the Document:

- Promote stormwater management practices
- Enhance recreational opportunities
- Encourage cultural, artistic, and entertainment activities
- Recognize Pigeon River as an important resource
- Increase community identity



Figure 9, East Central Wisconsin Regional Planning Commission Cover Page



Figure 10, East Central Wisconsin Regional Planning Commission Logo

The City of Clintonville Comprehensive Plan 2040 has been a consistent reference for this project. Issues and opportunities are largely derived from this document.

# THE SITE



# DOWNTOWN CLINTONVILLE

# PROJECT GOALS AND DESIGN DRIVERS

## Social

- Retrieve the City of Clintonville’s community identity
- Provide open space for residents and visitors
- Enhance event programming
- Create entertainment nodes
- Generate a more walkable/ bikable place
- Increase community involvement

## Design Drivers

- Increase wayfinding element for pedestrians and vehicles
- Enhance downtown streetscape
- Continuous path along Pigeon River, riverside bridge installations

## Ecological

- Removal of invasive plant species
- Remediate impaired waters (decrease total phosphorous levels)
- Enhance stormwater management practices, limit shoreline erosion
- Connect the community to the river and local green space

## Design Drivers

- Reconnect residents with riverside
- Use of vegetation and stormwater systems
- Increase native plantings, remediate invasives
- Habitat generation for fish and other wildlife

## Economical

- Provide a welcoming, accessible downtown district
- Encourage retail, commercial, and industrial growth
- Provide spaces that encourage and support local business

## Design Drivers

- Utilize Main Street width for additional programming and walkability
- Provide downtown identity through Riverwalk

# PROGRAM



Figure 11, Downtown streetscape



Figure 12, Traffic Calming



Figure 13, Stormwater Systems



Figure 14, Event Programming

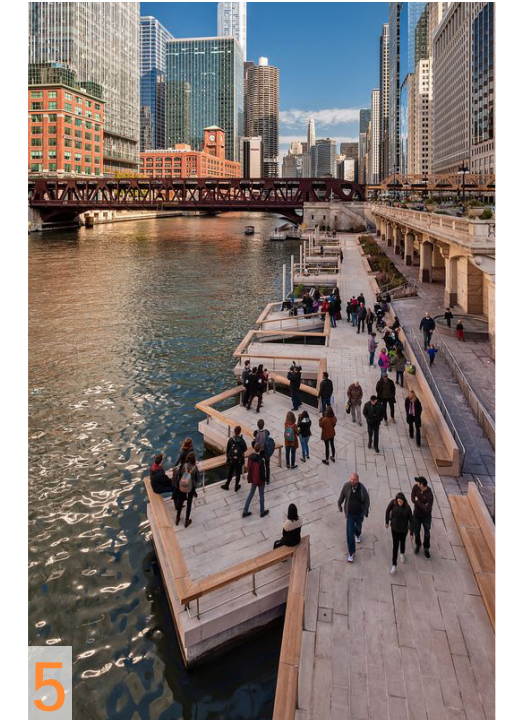


Figure 15, Activated Riverwalk

**1 Downtown Streetscape Revitalization**

**2 Traffic Calming Techniques**

**3 Stormwater Management Systems**

**4 Outdoor event programming**

**5 Public Interaction with River**

The program exhibited in the design will be more extensive than this. For the sake of importance, listed above are the program elements that have been identified as most important for the project.

## RESEARCH TOPIC

Access to nature as it relates to Physical

and Mental Well-Being

Being immersed in

nature is important for

adolescents

Access is crucial for all

ages



Figure 16, Pine Forest Enclosure

## LITERATURE REVIEW

### Access To Nature and Adolescent's Psychological Well being

This journal takes the existing evidence that adolescents mental health is positively affected by natural settings, and expands on it. They state that there is a lot of research regarding these variables, but is lacking in some respects. The goal of this research was to see how natural settings affect adolescents' everyday stress as oppose to more extreme cases. The report features a literary review, as well as outdoor studies.

A major focus is analyzing school campus landscapes, and understanding if consistent exposure to nature changes the overall mentality of these adolescence. An important distinction when testing these phenomena, is the concentration of nature, and the duration of exposure. They take a more specific approach to understanding the effects, and it seems to yield a better understanding of the topic. This article will help inform me of how we can keep the youth in the future Clintonville Downtown Riverwalk design.

### Therapeutic Landscapes

This article is an in depth look on the various types of therapeutic landscapes. It first carries you through all of the different facilities that can utilize gardens like these, and explains how each of them should function. They analyze existing versions of all these gardens, to understand what aspects of design are represented well, and the elements of development that are not successful and should not be repeated.

A common theme throughout the report is the importance of designing places that proficiently transition from the indoors to the outdoors. Towards the end of the reading, they explain how to carry out a successful post occupancy evaluation, and the things to look for to determine functionality. This article will prove very useful for the downtown design, as spaces for physical and mental health in the downtown could be improved.

## LITERATURE REVIEW

### The Impacts of Exposure to Environmental Risk on Physical and Mental Health in a Small Geographic Community

This article is looking at the correlation between minority populations and proximity to environmentally undermining facilities, and how that effects physical and mental health. It points out that many studies link these two variables, but do not delve into the actual outcomes of environments like these. They take a look at a small town in Houston with many industrial facilities to see if these have any consistent effects to the communities' health.

The results confirmed that mental and physical health and stressors were dramatically higher than national averages recorded. An important note from the results was that when there was stronger structural and social cohesion amongst a community, the mental and physical health issues dropped. The necessity of environmental remediation in these communities is crucial, and parallels the situation we have in Clintonville. This article has been very helpful in understanding outcomes of a community with a heavy manufacturing/ industrial economy.

## PROJECT TYPE

### Type of Project: Downtown Riverwalk and Open Space Plan

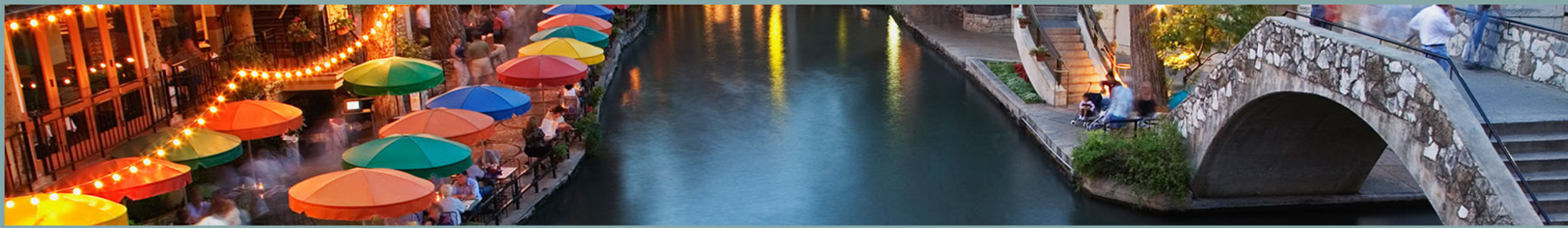
The project is centered around the downtown district of Clintonville, which intersects with the Pigeon River. This area of the city features local and chain businesses, and hosts a large volume of vehicular traffic through an average day. Recreational opportunities are strong in the city, and need to be connected in some fashion. The major goal of the project is to connect the downtown district with Olen Park through a continuous path along the river. Flooding issues in the cities' main green space, Olen park, is a major concern. In addition, the local economy and the work force is threatened, and a downtown open space plan could positively influence commerce in the area.

### Professional Focus: Economic development, Open Space Design, and Stormwater Management

Commercial building vacancy rates in the downtown are very high, and local businesses are struggling to stay afloat amidst the new generation of marketing and business. The project will outline recommendations for economic regeneration, and expand on programming that makes the downtown more walkable and attractive for business owners.

There is vast opportunity to implement and improve open space in the city. Ample green space and an exceeding amount of under utilized concrete infrastructure will lead to the expansion of programmable outdoor space.

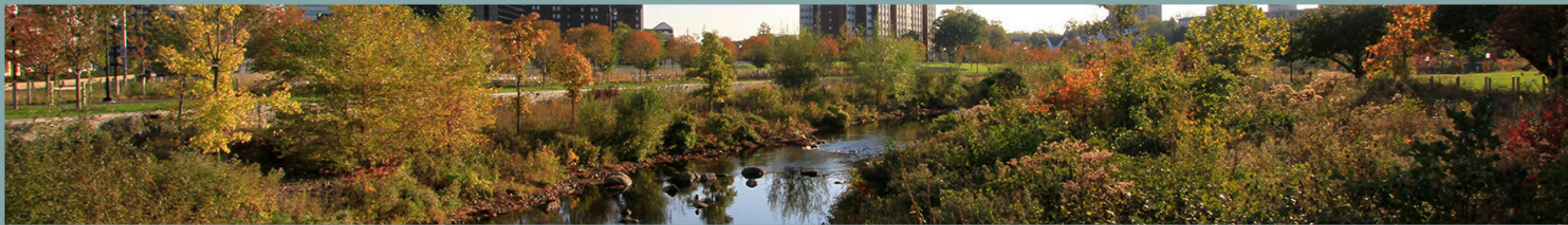
Flooding issues in Olen Park and the downtown provides the necessity of implementing responsible stormwater management systems and solutions. 100-year storms in the city have been known to leave the park unusable for an extended period of time. Shoreline stabilization and flooding remediation are crucial steps to the success of this project.



### San Antonio Riverwalk

San Antonio, Texas

Figure 17, San Antonio Riverwalk



### Mill River Park and Greenway

Stamford, Connecticut

Figure 18, Mill River Park



### Hudson River Park

New York City, New York

Figure 19, Hudson River Park

## PROJECT ABSTRACT

The San Antonio Riverwalk is known to be the cities' historical foundation. *Paseo del Rio*, is amongst one of the most visited places in the state of Texas. It features beautiful natural attractions, entertainment, restaurants, and ample nightlife!

In 2001, SWA group completed a river improvements project design concept to extend the attractions. There is a 13-mile tract of the river beyond the downtown that has opportunity to increase economic, social, and ecological interest in the city and beyond. The concept for the design ensured the historical value is preserved and accentuated, and provided linkages between contemporary and historical neighborhoods.

In their design guidelines, flood control is an essential aspect of the project. The major issues in some of the undeveloped areas of the river were erosion control and invasive plant material management. In addition, implementing new habitat for riparian plants and animals was another focal point.

One of the major considerations of the project is analyzing the existing geomorphology in the areas of future development. Understanding the bankfull discharge of a river will inform the creation/ redevelopment of a stable, natural channel. Their design guidelines for the continuation of the riverwalk offers solutions for slope stabilization, concepts for sidewalk design, and potential ecological systems that reduce stormwater runoff.

# san antonio riverwalk san antonio, texas

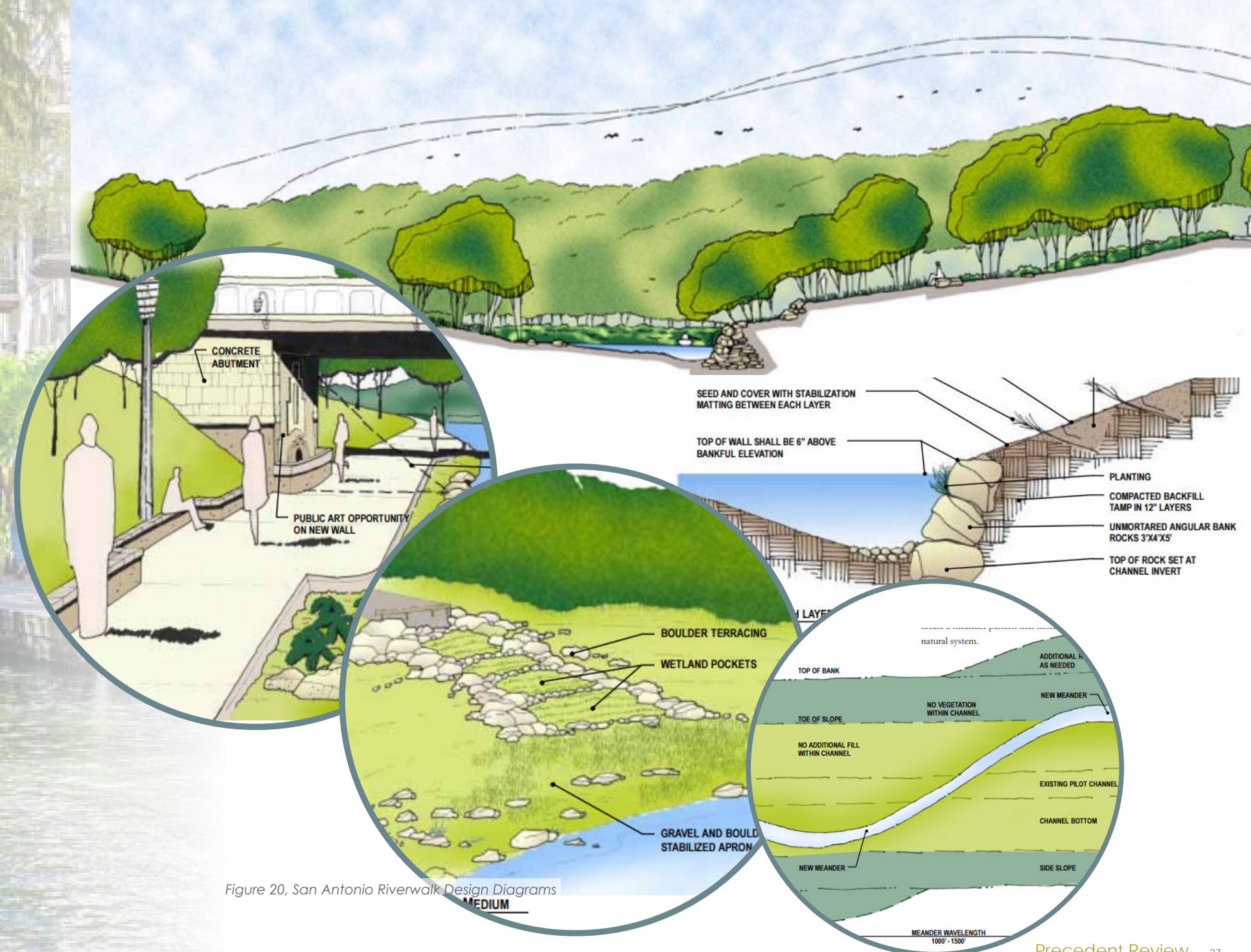


Figure 20, San Antonio Riverwalk Design Diagrams

## PROJECT ABSTRACT

Mill River used to be a very polluted place, and it has since been transformed to a civic space that provides social spaces and ecological remediation. This project was also completed by OLIN studios. There is a system of pathways along the river and throughout the park that connect different areas for "active and passive recreation."

The funding for the project was a collective effort between the federal government, city, and state entities. The 28-acre master plan was created to reestablish and provide diverse habitat for wildlife on land, as well as in the water.

Mill River Park is now able to handle intense storm events, and the design has eliminated the threat of flooding to nearby streets. A combination of trees, shrubs, and seed mixes were planted that has continuously helped with erosion control and damage to surrounding paths.

The park has ample programming year round that can accommodate for large events, as well as programs along the waterfront's edge. In addition, they have managed to get the community involved in cleanup efforts, and it has resulted in a drop in litter/ pollution.

# mill river park stamford, connecticut



Figure 21, Mill River Park, Olin Studios

## PROJECT ABSTRACT

In 1998, the Hudson River Park Act was passed, which allowed for the creation of a new park on Manhattan's west side. 36 piers along with industrial zones along the river were classified as the Estuarine Sanctuary, which defines the importance of the Hudson River ecosystem.

The Hudson River was once a place with ample marine resources, and an abundance of wildlife. The economic boom this area saw in the late 19th- early 20th century led to massive construction of docks and piers to accommodate the demand of maritime growth.

The water quality, surrounding environment, and marine resources have been in rapid decline ever since. These maritime companies have since moved away from the river, and left behind vacant industrial parks and waterfront infrastructure that have wide-spread potential.

In 1988, there was a panel of designers and planners that came together to oversee proper management of waters, revitalize waterfront space, and utilize the piers that were once flourishing with industry. The community was heavily involved with programming the site. They held meetings with local organizations and companies to get feedback from the public.

Because the park is divided into 7 segments that all have different designs/ designers, lets narrow the scope to one of the piers. Pier 26 is a park currently in the design phase at Olin Studio. The park consists of a walkway that will draw visitors to the water's edge, and encourage movement through the pier. The concept ensures that there are view sheds at different nodes within Pier 26, and diverse programming that keeps the visitors engaged and interested.



Figure 22, Hudson River Park, Olin Studios



# THE REGION

Waupaca County has a total land area of 761 square miles, and hosts 34 units of local government.

The county has 12 cities and villages, and is influenced by its surrounding counties. Waupaca is bordered by Shawano, Outagamie, Winnebago, Waushara, and Portage counties.

Appleton and the Fox Valley are very influential to the region due to the accessibility of US Highway 10. Areas like Shawano, Green Bay, and Wausau are considered regional centers for Waupaca.

-Waupaca County Inventory  
and Trends Report

## WAUPACA COUNTY

# LAND USE

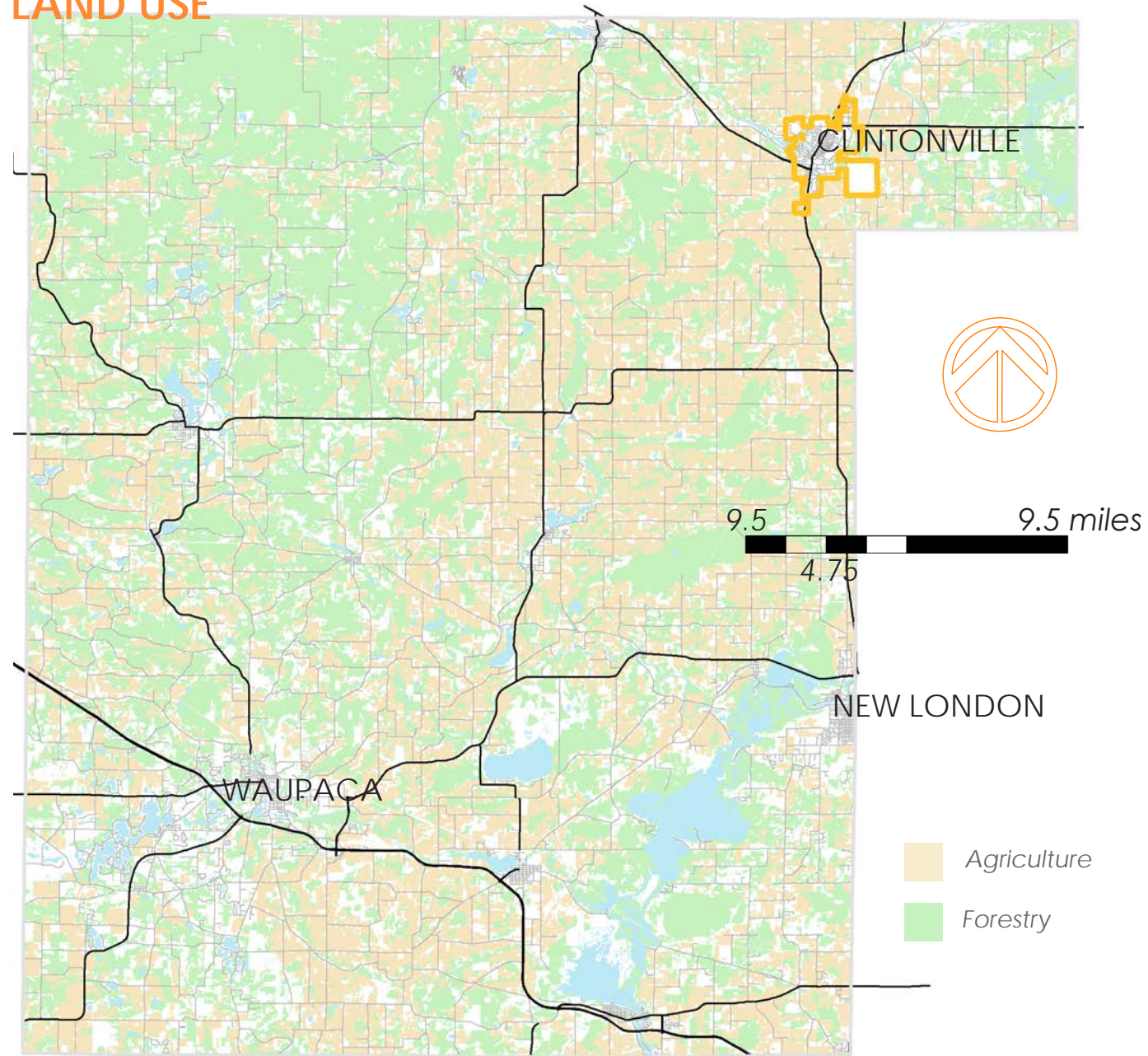


Figure 23, Land Use Map, Michael Walsh

40% of Waupaca County is woodland

32% is Agricultural Land

These categories of land-use must be preserved

These two categories of land use prove very important to the counties' representatives and greater community. In the future, the county has plans to improve major highway systems, and they outline that this could support these land uses by increasing mobility of the road. On the contrary, because these roads are more accessible to county travelers, it is possible this could cause an increase in urban development along these roadways. Their county comprehensive plan communicates the importance of zoning ordinances and driveway regulations to protect the contemporary land uses.

Agriculture is considered one of the major pillars of the county. Waupaca county is the top milk producing county in the Central Wisconsin region (1,200 farms identified in 2002). Based on a land-use calculation from the regional analysis, the estimated total percentage of Agricultural land was 32%. In 1993, a land survey found that there was roughly 53% of total agricultural

land. In around twenty years, this number has drastically decreased. These statistics outline the importance of preserving the remaining areas. Not to mention, agriculture has tangential benefits to the economy, as related industries like vegetable and meat processing plants can be found throughout the region.

One of the top opportunities in the county is to preserve woodlands and open space. There are woodlots dispersed through the county in addition to concentrated forest regions. The northwest portion of the county is identified as a majority forested land-use. The smaller wood tracts have high economic, recreational, and tourist value. The value of these areas have increased drastically, and recently surpassed the value of agricultural land.

Agriculture and Woodland tourism is the dominating preferred land-use category in the southern portion of the county.

# PARKS AND RECREATION

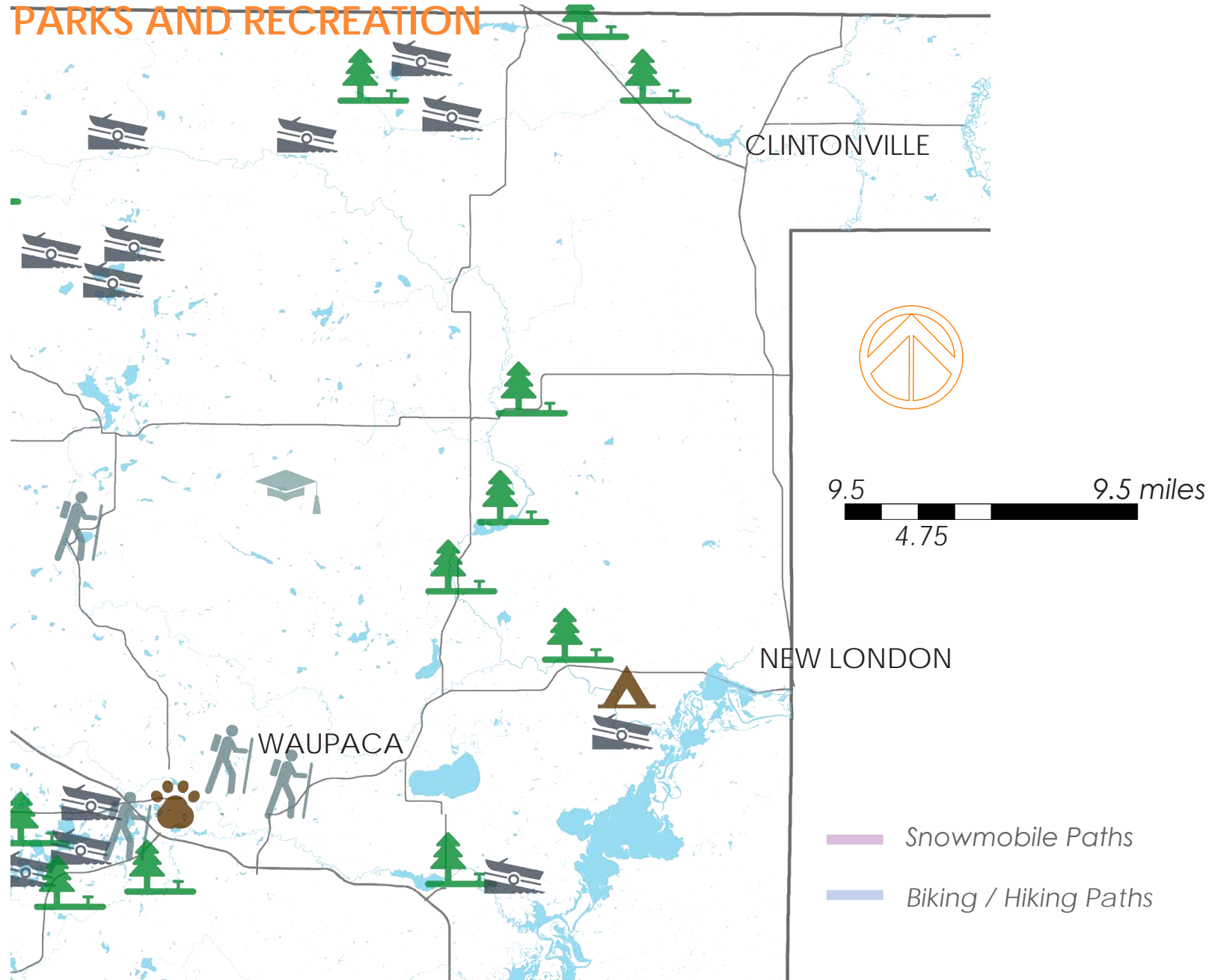


Figure 24, Parks and Recreation Map, Michael Walsh

## County Managed Parks

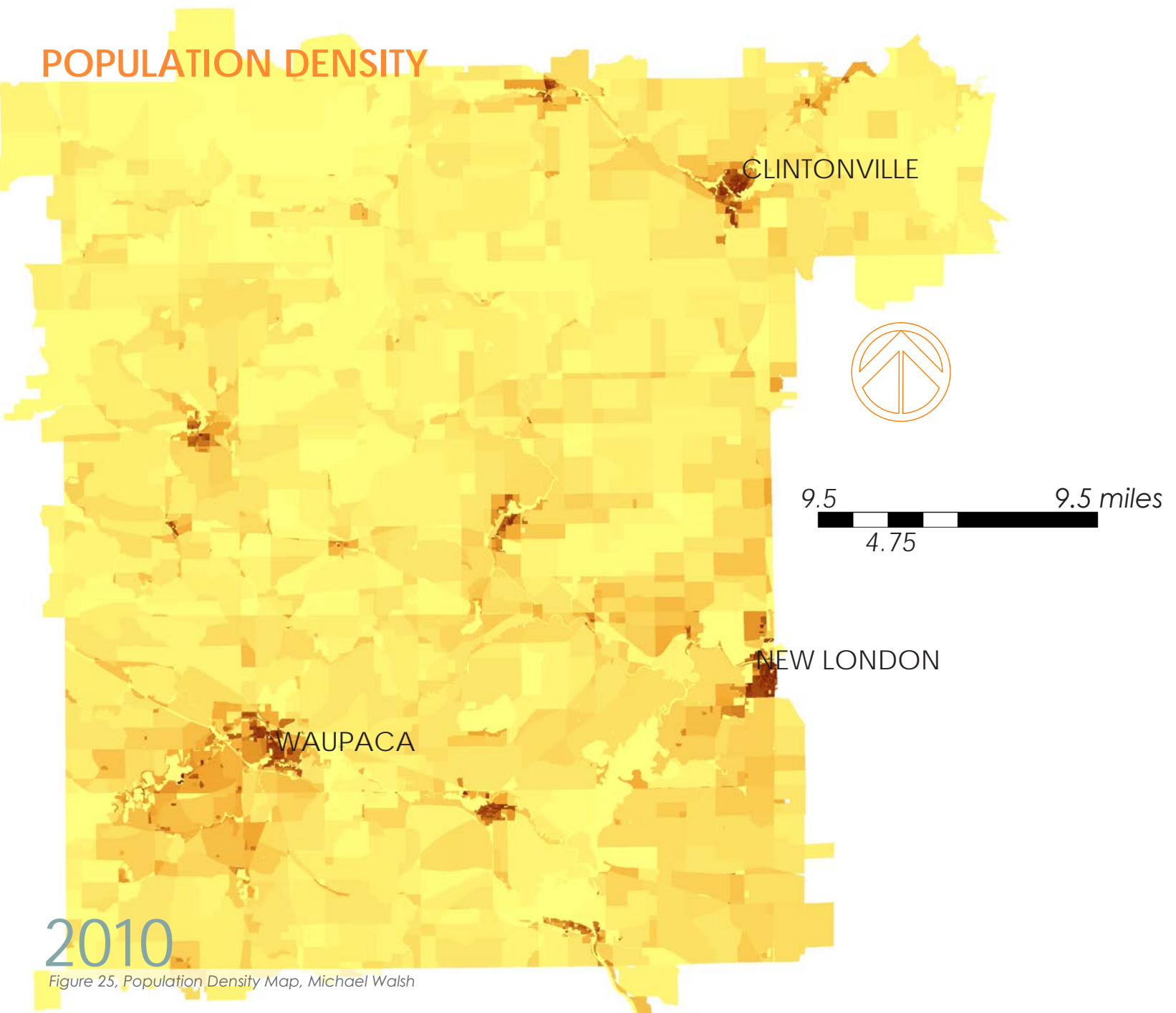
- Camp Vic-To-Rae
- Chief Waupaca Historical Site
- County Fairgrounds
- County Forest
- Gill's Landing
- Indian Crossing
- Keller Park
- Lembke-Long Lake Access
- Little Wolf River Park
- Lowney-Rohan Wetlands Preserve
- Manawa Park
- Marion Park
- Nelson Park
- Northland Park
- Oakwood Park
- Pauer's Educational Environmental Preserve
- Pigeon River Park
- Royalton Park
- Waupaca County Dog Park

Another pillar of the county is tourism, and this economic feature is largely brought by the region's extensive set of natural wonders and outdoor recreation. Trout streams, forests, lakes, and rivers provide many opportunities to enjoy the outdoors. The region is home to an abundance of state natural areas, fish and wildlife areas, as well as Hartman Creek State Park. The *Waupaca County Inventory and Trends Report* found that outdoor recreation has some of the most potential for sustaining and growing the economy.

Rural land prices continue to climb, and this will continue to increase the demand for outdoor recreational land. Fortunately, the

county has funds allocated for recreational ventures that cities plan to pursue. Contrary to some sections of the Waupaca County Comprehensive Plan 2030, representatives believe that it will become more and more crucial to convert agricultural land into other more productive uses for the future, one of those categories being outdoor recreation. Over the next 25 years, there are plans to allocate 1,000 acres of cropland into outdoor recreation, woodlots, and other land uses.

# POPULATION DENSITY



2010

Figure 25, Population Density Map, Michael Walsh

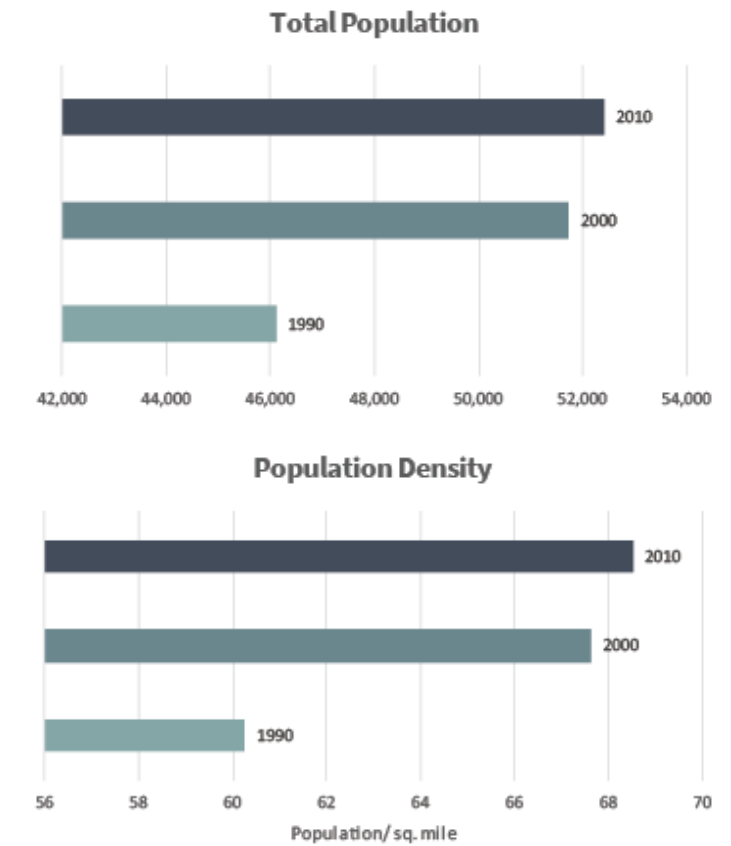


Figure 26, Population and Population Density Graphs, US Census

**12.05%**  
INCREASE  
FROM 1990  
TO 2010

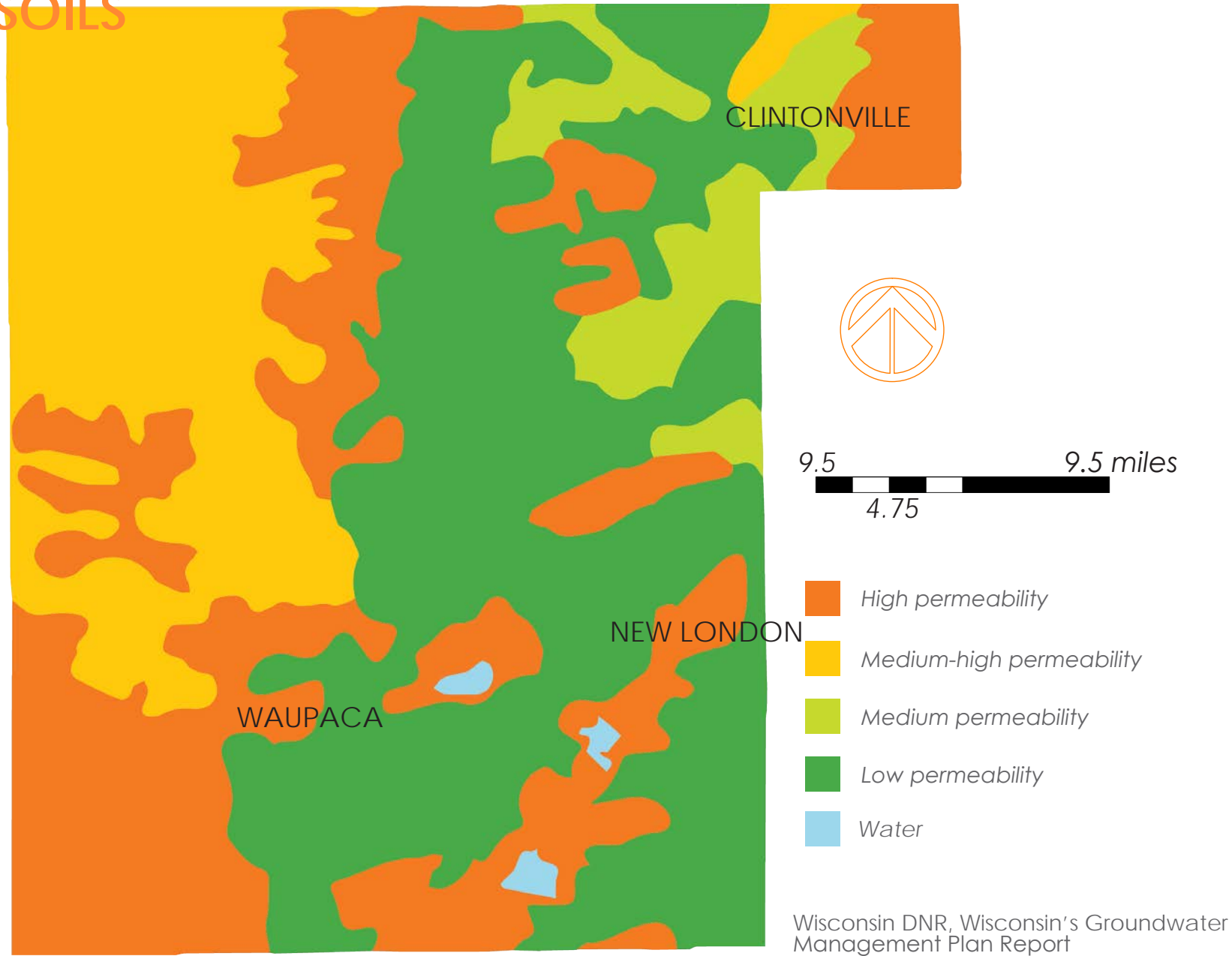
**11.09%**  
INCREASE  
FROM 1990  
TO 2010

The density of the county is moderate, compared to other counties in Wisconsin. The average density is roughly 68 persons per square mile. Land character in the region is mostly rural, besides the urban areas like Waupaca, New London, and Clintonville. Data on population will help in understanding the demand in community facilities and services, and most importantly housing needs.

Waupaca County has grown in population by more than 20,000 in the last 100 years. It has

been on the steady incline since 1900. The most important feature of the population density analysis, was the future necessity for increased public housing and mixed-use development in Waupaca urban areas. There has been an 11 percent increase in population density over the past 30 years, and this means the current land use within downtown regions of cities should be renovated and reconsidered as more diverse, efficient type of development.

# SOILS



Wisconsin DNR, Wisconsin's Groundwater Management Plan Report

Here is a look at soil permeability. High permeability, is defined by highly susceptible with coarse texture, usually sand and gravel, Medium-high permeability, defined by medium/high susceptibility with coarse texture, typically sandy soils, Medium permeability, which is moderately permeable with medium texture, usually loamy soils, and Low susceptibility, which are the least permeable soils with fine texture, usually silty and clayey soils. The site features Medium Permeability.

Figure 27, Groundwater Management - Permeability, Michael Walsh

# THE COMMUNITY



PIGEON LAKE

22

PIGEON RIVER

MAIN STREET

THE SITE

45

45

# CITY OF CLINTONVILLE

The City of Clintonville is located in the Northwestern portion of Waupaca County. The major scenic element of the city is Pigeon River, which runs right through the downtown area. Major development of Clintonville was originally shaped by the river. The intersection of Main Street and the Pigeon River is arguably the focal point of the project.

-City of Clintonville Comprehensive Plan

# DEMOGRAPHICS

CLINTONVILLE  
CITY HALL

Population: 4,429

Median Household  
Income: \$34,766

Median Property  
Value: \$92,500

Number of  
Employees: 2,049

17.8% IN POVERTY

# GREEN SPACE



22

## Seven Maples Area



Figure 28, Seven Maples Area, City of Clintonville



## Pigeon Riverwalk



Figure 29, Pigeon Riverwalk, Michael Walsh

\*THE SITE

## Buchholtz Park

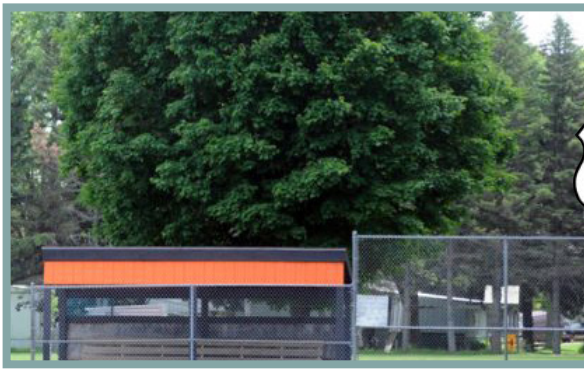


Figure 30, Buchholtz Park, Michael Walsh

## Walter A. Olen Park

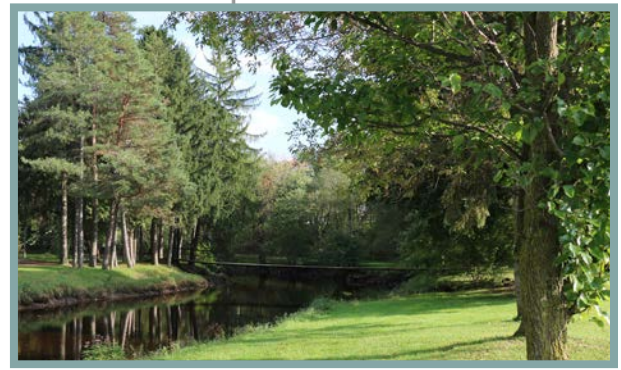
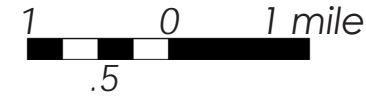


Figure 31, Walter A. Olen Park, Michael Walsh



22

## Seven Maples Area

- Walking Trails
- Educational Signage

## Pigeon Riverwalk

- Walking Path

## Buchholtz Park

- Softball Diamonds
- Lighted Tennis Courts
- Basketball Courts
- Picnic Areas
- Playground Equipment
- Bathrooms
- Open Shelters

45

\*THE SITE

45

The city manages a system of parks and outdoor recreational facilities. The public school district in Clintonville also manages parks in the area. The East Central Wisconsin Regional Planning Commission has identified a public service standard of 10 acres for 1,000 residents for parks. Community parks are defined by a one-two mile radius, and Walter A. Olen and Buchholtz are within this category of green space.

These are not the only parks in the city, but just the major ones. There is a total of 328 acres of outdoor recreation land in Clintonville. The city maintains 15 parks (91 acres). In addition, Clintonville Schools have roughly 93 acres of recreational land use. There is an agreement to share these facilities.

-(East Central Wisconsin Regional Planning Commission)

## Walter A. Olen Park

- Playground equipment
- Horseshoe Pit
- Baseball / Softball Fields
- Open / Closed Shelters
- Ice Skating Rink
- Bathrooms
- Disc Golf Course

Figure 32, Green Space - City of Clintonville Map, Michael Walsh



## PARK ACCESS

Most of the residential zones are within a 1/2 mile radius to a park / usable open space

Northeastern portion of residential zone is not covered by usable open space

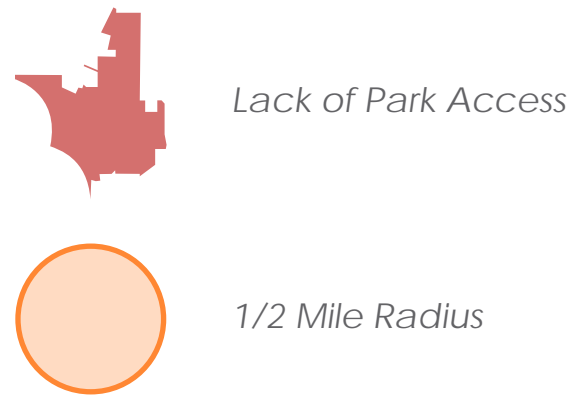
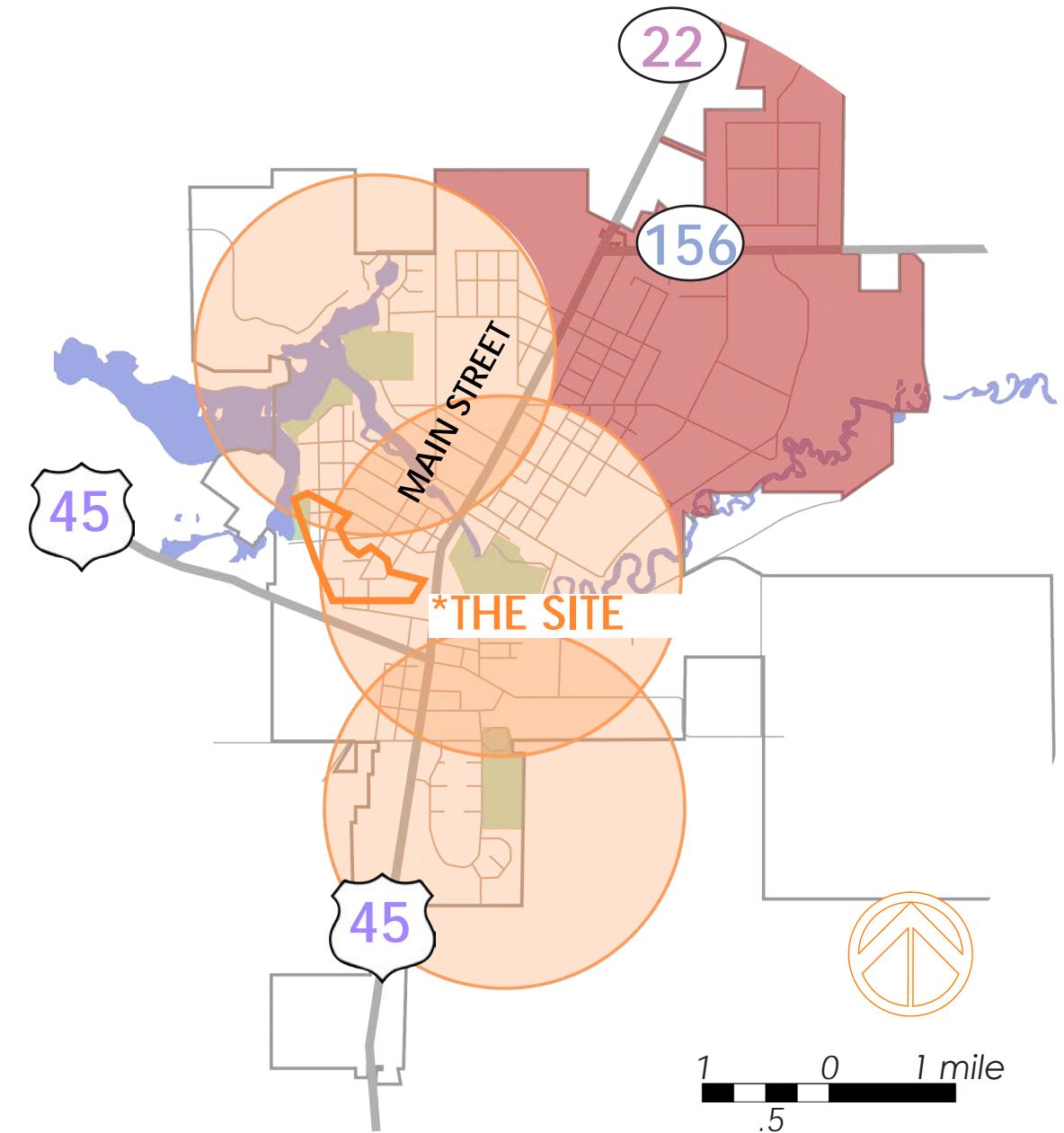


Figure 33, Park Proximity Map, Michael Walsh

The diagram to the left is showing the amount of adequate park access to the City residents. Orange circles represent a half-mile radius, which is considered a walkable distance for most people. As you can see, most of the City has proficient access to green space, except a portion of the residential district to the Northeast in the downtown.



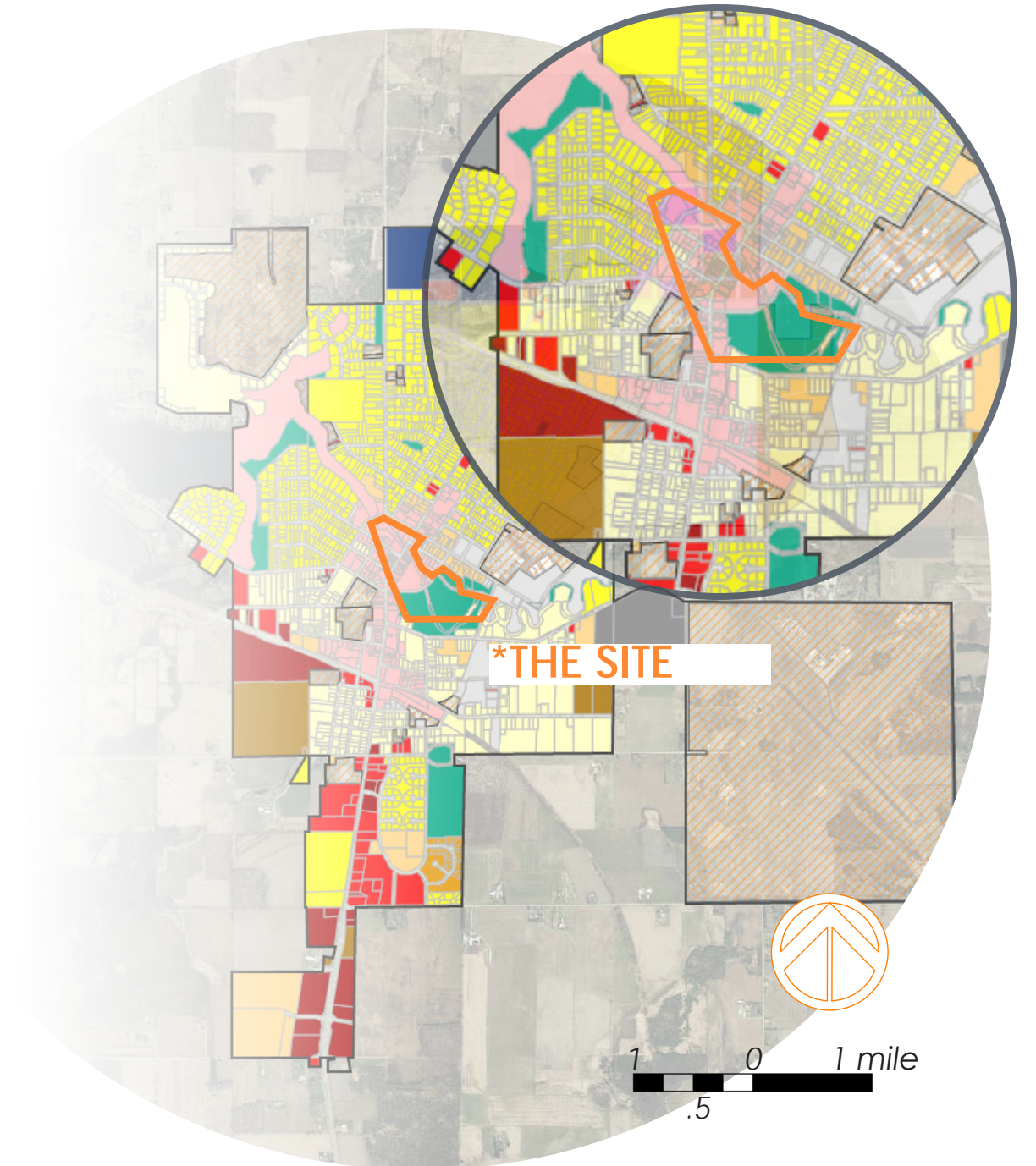
# ZONING

## Legend

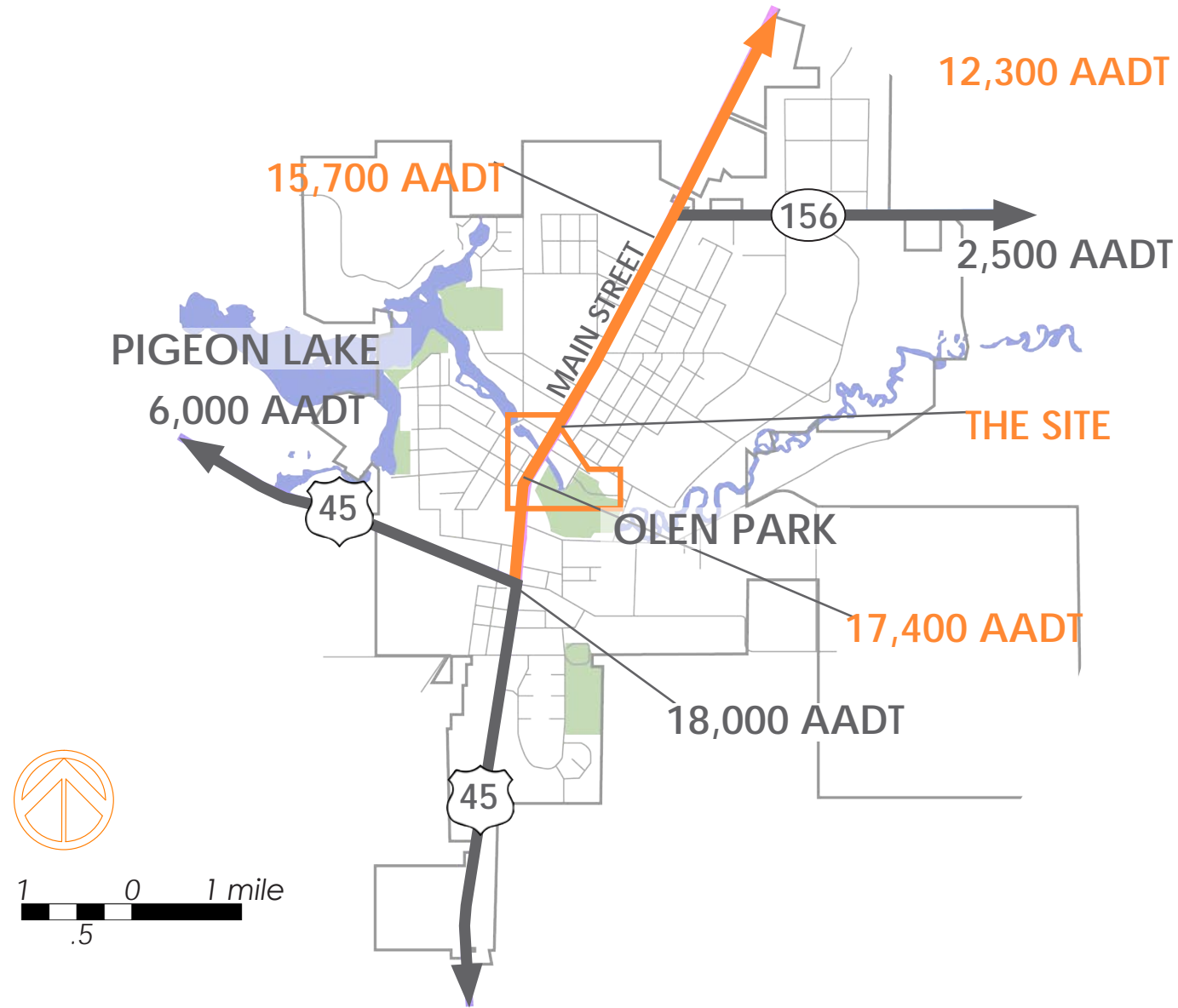
- C - Conservancy
- R1 - Residential District
- R2 - Residential District
- R3 - Multiple Family District
- MH - Planned Community Mobile Home Park
- RT - Rural Transition District
- B1 - Downtown Business District
- B2 - Neighborhood Convenience Retail District
- B3 - Highway Commercial District Overlay
- GF - Government Facilities
- I1 - Industrial District
- I2 - Intensive Industrial District
- IP1 - Industrial Park District
- IP2 - Industrial Park District
- AI - Airport Industrial District
- AM - Airport Municipal
- PUD - Planned Unit Development District

Figure 34, Zoning Map, City of Clintonville

This is a quick look at the current zoning exhibited within the City. The most important districts to keep in mind are, B1, the Downtown Business District, and R1, the Residential District. In the future, the Downtown Business District should be reconsidered as Mixed-Use to accommodate for expansion of residential and commercial within the downtown region.



# CIRCULATION



**AADT = AVERAGE ANNUAL DAILY TRAFFIC**

There is a heavy amount of vehicular traffic that runs through downtown Clintonville

Main Street receives the most of this traffic

Pictured here is a vehicular circulation study. The Department of Transportation has created a model that analyzes the Average Annual Daily Traffic for a place. The downtown region of Clintonville receives 17,400 cars per day, specifically along Main Street. This is good news for the City, as we know that people are travelling through, but not necessarily stopping. The program will attempt to address this audience capturing.

Figure 35, Circulation Map, Data from Department of Transportation

# THE SITE

PIGEON RIVER

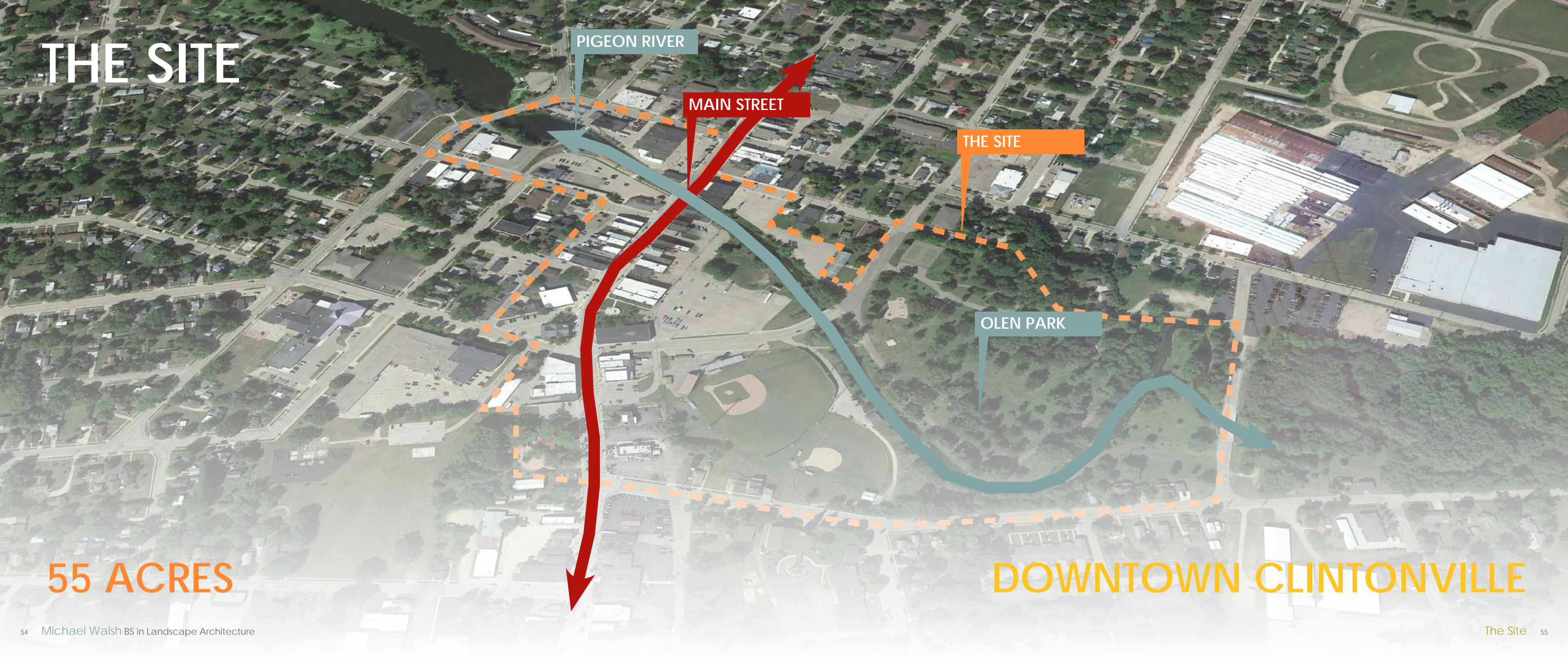
MAIN STREET

THE SITE

OLEN PARK

55 ACRES

DOWNTOWN CLINTONVILLE



## FEMA FLOODWAYS

### Pigeon River

Pigeon River's flood plain consists of commercial, recreational, and industrial land use.

2 dams and reservoirs are operated to control the elevation of Pigeon Lake

They provide little protection from major floods.

The largest flood, estimated to be of magnitude near an Intermediate Regional Flood (IRF), occurred in July 1912.

Another severe flood occurred in spring 1970, and was estimated at 2500 cfs compared to the estimated peak discharge of 4,000 cfs for an IRF

An IRF would be .4 to 5.2 feet higher than 1970 flood

Flood stages of the Standard Project Flood (SPF) would be from 8.9 to 13.4 feet higher than the 1970 flood

FEMA defines a Regulatory Floodway as: "The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height."

As one can see, flooding is a common issue on the site. Flooding often renders the recreation fields and portions along the river unusable.

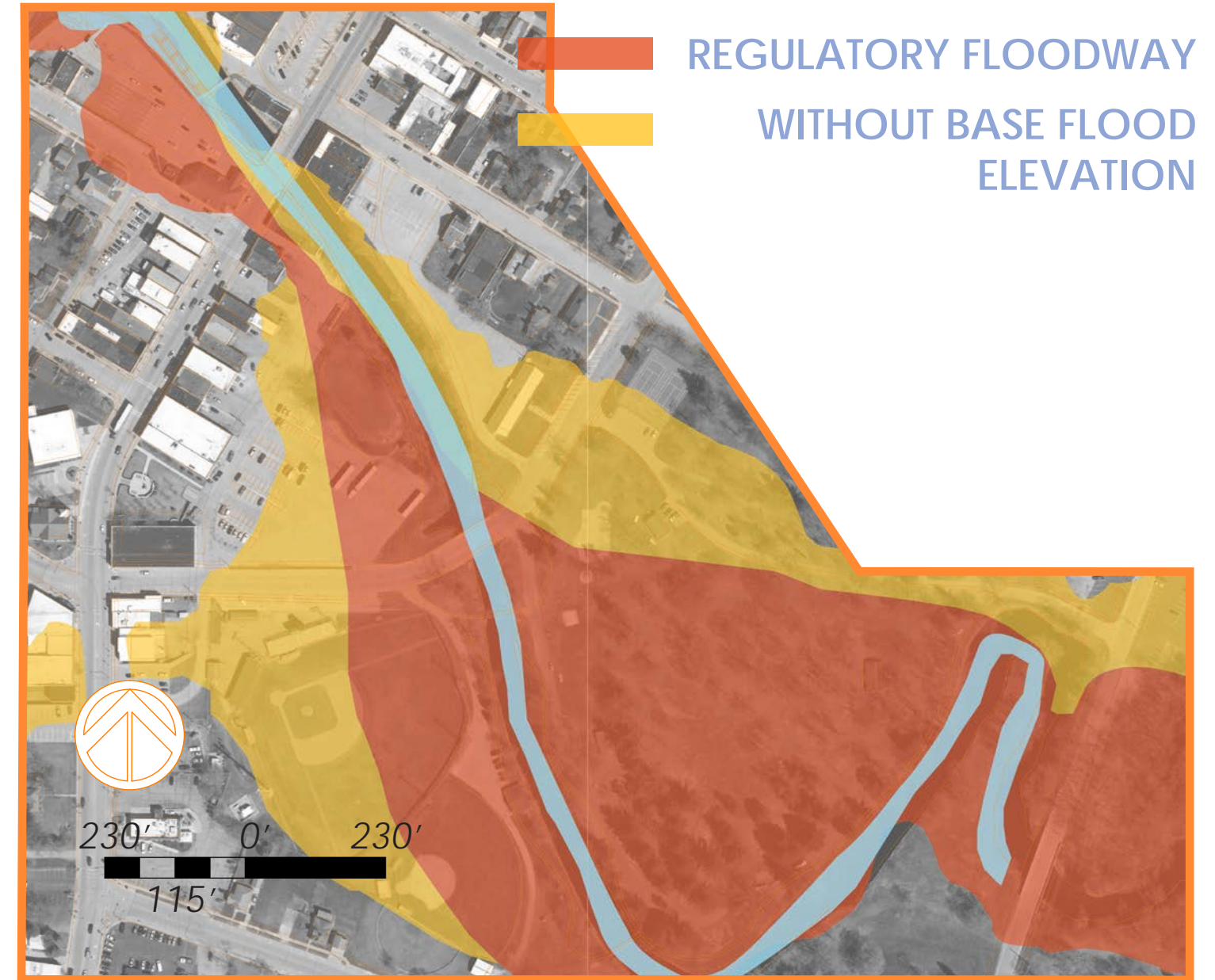


Figure 36, FEMA Floodway Map, Michael Walsh (FEMA)

## EXISTING - CANOPY COVER

Here is a look at canopy coverage on site. The existing canopy character within Olen Park is fantastic, and covers most of the park, leaving some areas of open space. The Economic and Pigeon Riverwalk districts are quite lacking in vegetative coverage. Increasing the overall canopy within the downtown region of the site will be a very important feature of the design.

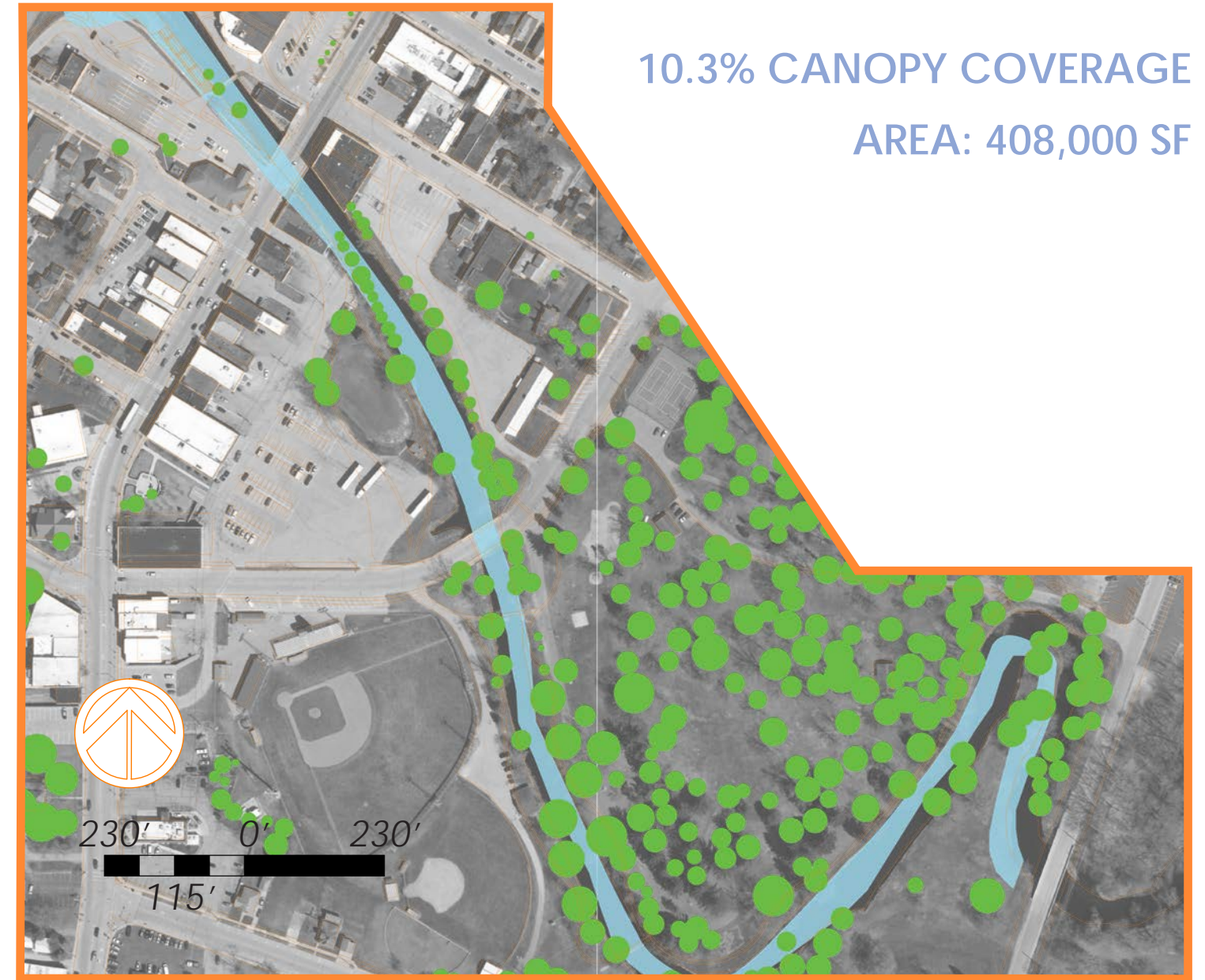


Figure 37, Canopy Cover Diagram, Michael Walsh

## EXISTING - PARKING

Fortunately, there is a ton of parking on the site. If anything, an issue is that there is a vast excess of it. There are parking lots found connected to commercial buildings, public centers, and in proximity to Olen Park. In addition, there is street parking along a majority of Main Street, and by the old Mercator building.

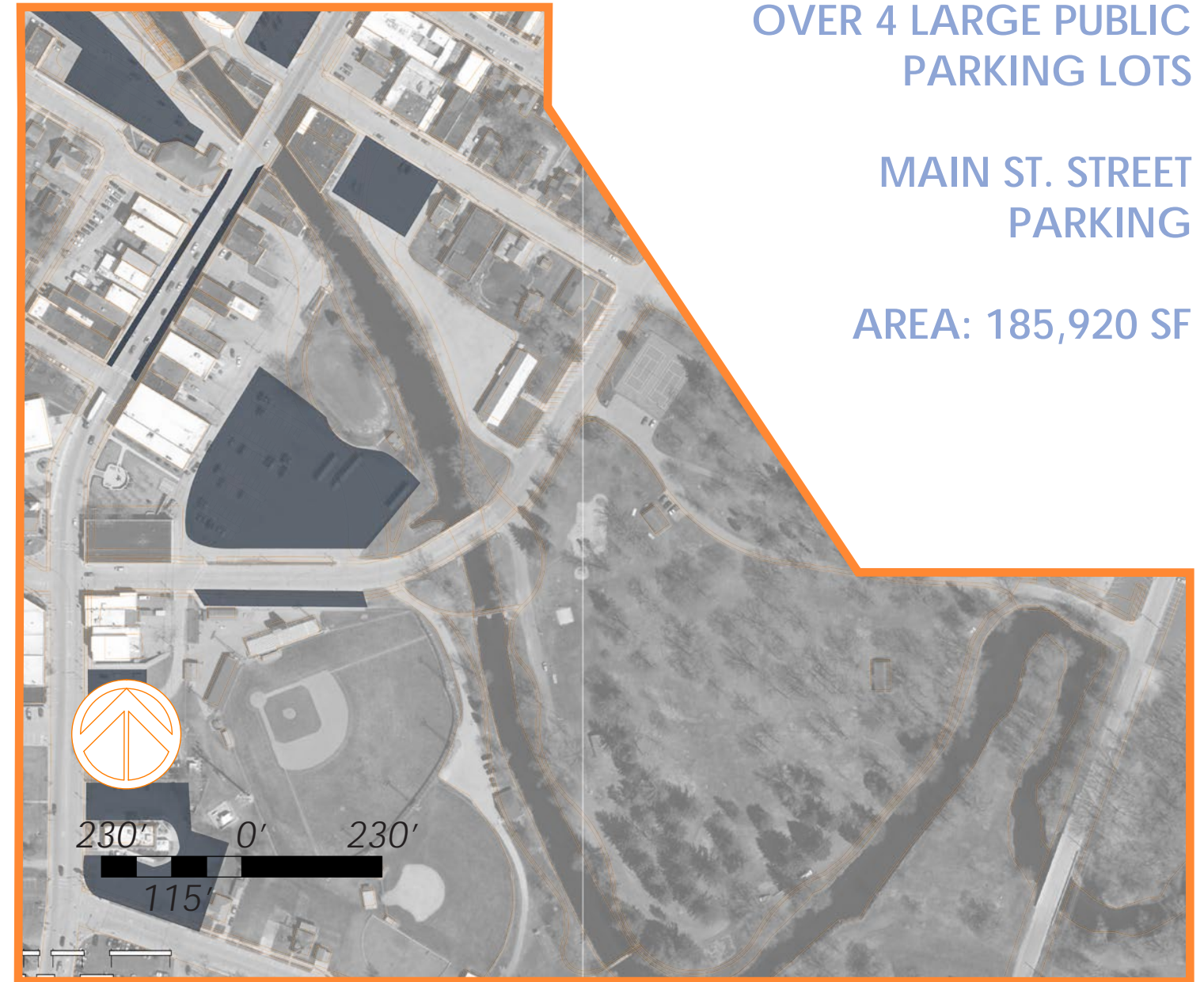


Figure 38, Parking Lot Diagram, Michael Walsh

# EXISTING - PERVIOUS TO IMPERVIOUS COMPARISON

The site features a majority of impervious surface, which includes many buildings, roads, and parking lots. These numbers are definitely contributing to the intense flooding issues the City is having, and much of the impervious surface should be reduced in the future plans for the site.

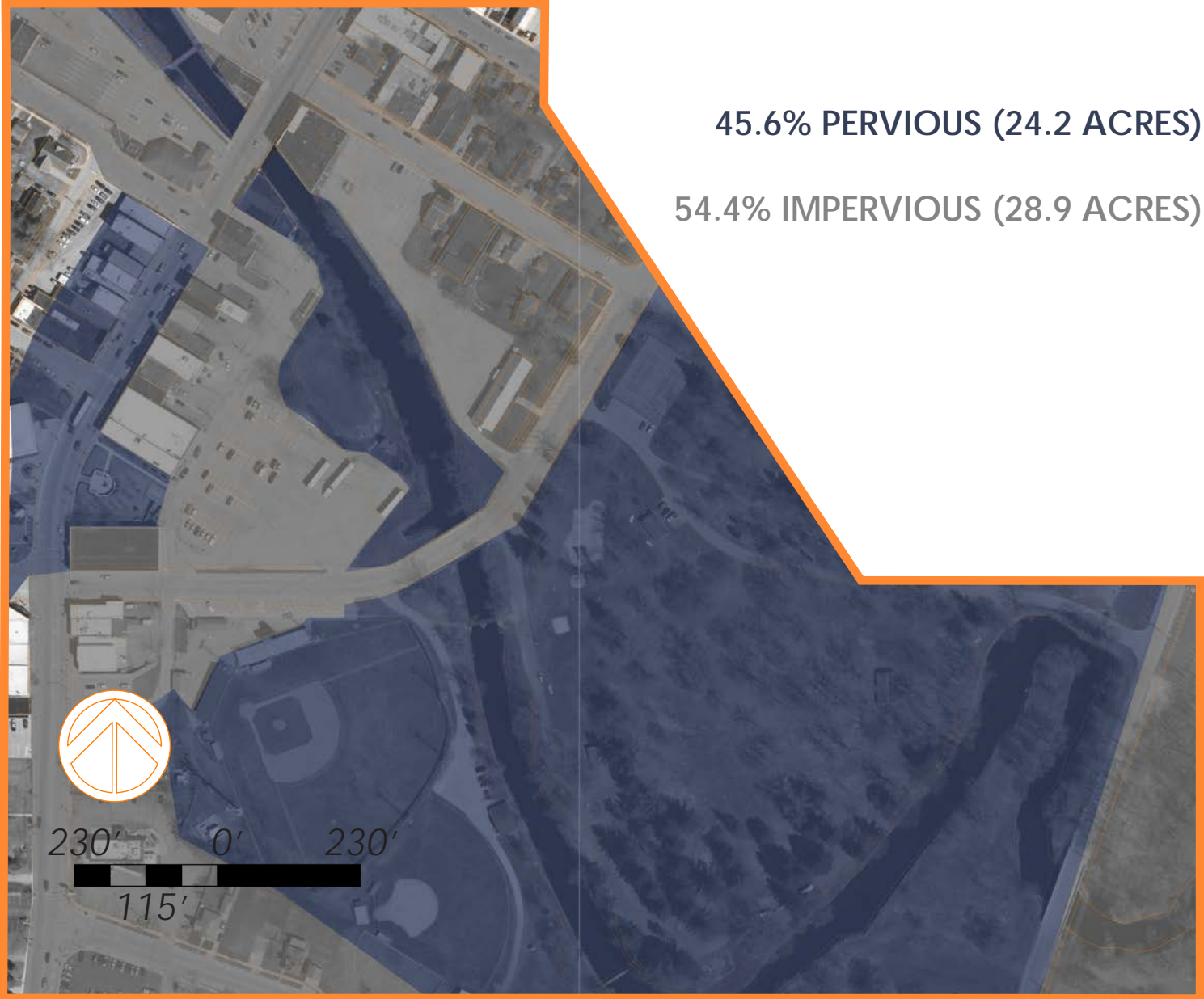


Figure 39, Impervious vs. Pervious Surface Diagram, Michael Walsh



## EXISTING - USABLE OPEN SPACE

Usable open space is fairly adequate. Olen park is a great aspect of the local open space, but is unfortunately pretty disconnected from the downtown. Also, there are portions along the Pigeon River that are accessible outdoor space, but finding these spots proves difficult for the average visitor to the city. The connection to the park from the downtown should be enhanced, and the amount of usable open space exhibited in the downtown district should be increased.



Figure 40, Usable Open Space Diagram, Michael Walsh

# PROJECT DISTRICTS



PIGEON RIVERWALK DISTRICT

ECONOMIC DISTRICT

OLEN PARK DISTRICT

Figure 4.1, District Map, Michael Walsh



The site was broken into the major districts featured in the space. The Olen Park District is found in the Southeastern portion of the site, and showcases the Cities' most extensive program of outdoor recreation and open space.

Pigeon River, is the focal point of the city, and has proved to be an important resource for the community. The intersection between Main Street and the Pigeon River was the foundation for downtown development in the past. The Pigeon Riverwalk District features some commercial, recreational, and industrial land-use.

The final major area is the Economic District, which features chain restaurants, local cafes and shops, among other commercial uses. These districts were further broken down into the current issues and opportunities for each region.

# OLEN PARK DISTRICT



Figure 42, Olen Park Context Aerial, Michael Walsh

Figure 43, Olen Park Bridge, Michael Walsh



## \*NEED FOR STORMWATER MANAGEMENT SYSTEMS

Figure 44, Flooded Olen Park Bridge, Michael Walsh

The parks and recreation director for the City explained that flooding is the number one issue in Olen Park. When they have to release the dam around the junction of Pigeon Lake and River, the park suffers.

Recreational fields on site, and the open space north of the river become unusable. They have attempted to utilize rain gardens and other stormwater systems, but to no avail.

In addition, there are some other problems that are found within this region of the site. As Olen Park has little to no lighting, it attracts undesirable late night activity, with groups of people post up in the Park's parking lot to use drugs or drink.

The client has also addressed the need for updated playground equipment.

# OLEN PARK DISTRICT

## Opportunity

Maximize program

Strategies to increase water retention

Devices to ensure safety and well-being in the park

\*Park Improvements to Olen Park is acknowledged in the Clintonville Comprehensive Plan 2040

The park could become a lasting connection to the River/ Riverwalk



The biggest discussion amongst the community and city representatives is to implement an extension to the Pigeon Riverwalk that connects to Olen Park. This is a fantastic opportunity for this beautiful, natural space to become a lasting link to the heart of the city.

# ECONOMIC DISTRICT

This area of Clintonville has always been the hub of economic activity in the town. This area of Main Street exhibits a combination of highway-oriented commercial use, as well as a variety of local commercial business. Bordering the district is mostly residential and industrial use.

Main Street is the main thoroughfare for bordering cities to the region. There are many parking lots in this district, as well as street parking. The abundance of parking could accommodate for the expansion of usable open public space.

The building character is defined by 20th Century commercial vernacular buildings. Many of these structures are in great condition, and provide an attractive character for pedestrians, residents, and tourists. Some of these buildings need renovation, but this is only a feature of some of the buildings in the downtown.



Figure 45, Economic District Context Aerial, Michael Walsh

## ISSUES:

**AUTO-ORIENTED BUSINESSES**



**LACK OF WAYFINDING**

**AGED STOREFRONTS**



**LOSS OF SMALL BUSINESS**



Figure 46, Economic District Issues, Michael Walsh

# ECONOMIC DISTRICT



Figure 47, Economic District Annotated Character Imagery Michael Walsh

## OPPORTUNITY:



- 1 MAIN STREET WIDTH STREET SCAPE REVITALIZATION
- 2 PARKING VOLUME CAN ACCOMODATE FOR INCREASED TOURISM
- 3 NEW MIXED-USE DEVELOPMENT

The current condition of the downtown's streetscape is fairly good, and could just utilize minor improvements. The historical architecture and classic storefront facades generate the potential for an active, programmable space.

Lighting fixtures and seasonal plantings provide an inviting character to the Clintonville metro. The tree canopy in this area could be strengthened. The amount of parking lots makes the area pretty auto-oriented.

Main Street is very wide, at roughly 52 feet. This is a potential hazard to pedestrians traveling through the downtown.

One of the biggest opportunities of the project is the site of the former Mercantile building, which is south of 11th street. In the future, the building will be knocked down, and replaced with a mixed-use development. This can assist the pedestrian circulation along the river.

Figure 48, Economic District Opportunities, Michael Walsh

# PIGEON RIVERWALK DISTRICT

The Pigeon Riverwalk currently represents a stretch of sidewalk along the Southwestern side of Pigeon River. It begins at the base of the dam, and terminates at the intersection of Main Street. There is a pedestrian bridge along the riverwalk that leads to a commercial mall Northeast of the river. The existing path is 491 feet.

The space includes charcoal grills, picnic tables, and benches interspersed along the river. Mature trees on this portion of the site are in good condition.

Ample opportunity lies in the expansion of programming within this open space.

The Pigeon River is controlled by 2 dams and a reservoir. As stated earlier, the levels of the river during storm events is a current threat to the Riverwalk space.



Figure 49. Pigeon Riverwalk District Context Aerial, Michael Walsh



Figure 50. Pigeon Riverwalk District Annotated Character Imagery, Michael Walsh

## PIGEON RIVERWALK DISTRICT

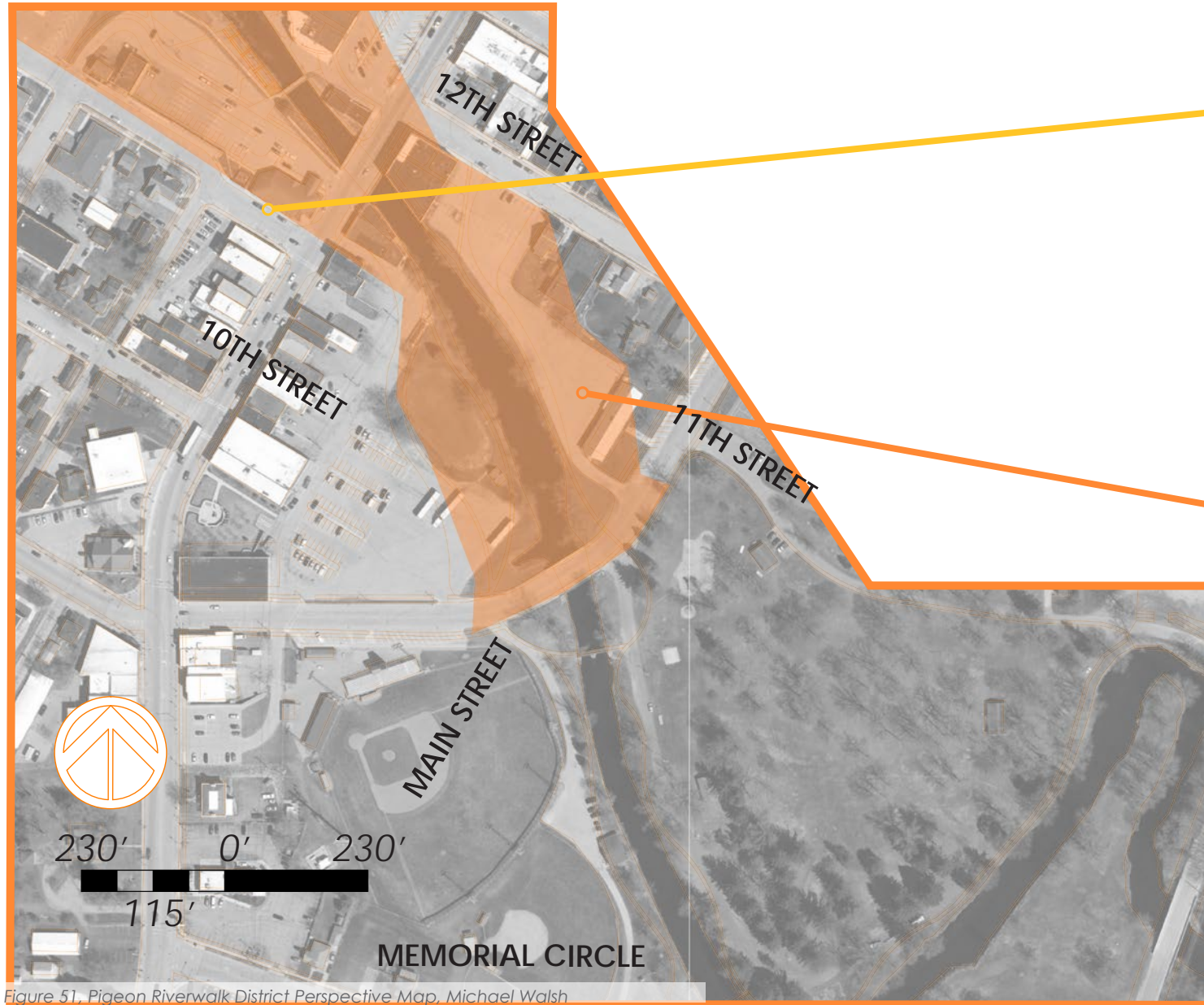


Figure 51, Pigeon Riverwalk District Perspective Map, Michael Walsh



One major issue of this district is the lack of usable open space that is along the River's edge. Overgrown vegetation Northwest of the dam prevents the use of this portion of the river. There is a blatant pedestrian disconnect in this area, as there are guard rails along the forested patch.

North of the dam lies a patch of grasses and forbs that pollinators use, and is a feature of the local ecology that should be protected.

A constraint of the Riverwalk project that should be acknowledged is the land use North of the dam. This area features industrial and commercial use, and has parking that is currently along the Northeast side of the River.

In addition, a building along the river's edge that is adjacent to the River and Main Street junction is another major break in the potential pedestrian circulation along the River.

Fortunately, the City has future plans to remove this building, and this would increase the opportunity for circulation around this portion of the site.

Also, a major threat to the district is high speed vehicular traffic on Main Street, which is often found to be the worst in the downtown. These issues will be important in informing the future redevelopment of the areas.

**overgrown vegetation  
break in riverside  
connection  
pedestrian disconnect**



Figure 52, Pigeon Riverwalk District Annotated Character Imagery, Michael Walsh



# PIGEON RIVERWALK DISTRICT

Figure 45, Pigeon Riverwalk District Perspective Map 2, Michael Walsh

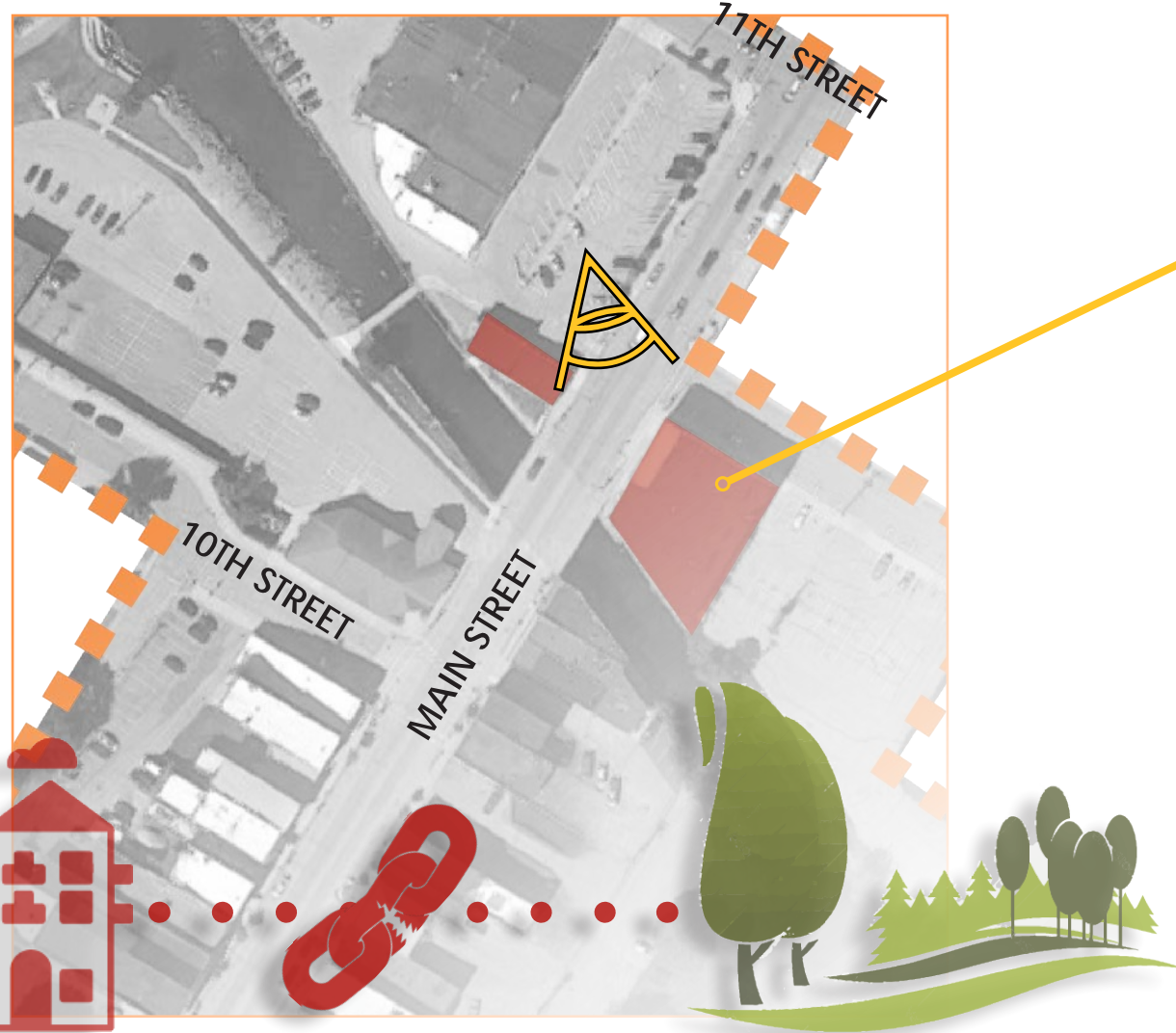


Figure 53, Downtown to Green Space Lack of Connection, Michael Walsh



Figure 54, Mercator Building Annotated Character Imagery, Michael Walsh

There appears to be a trend of land-use obstructing the opportunity for pedestrian connectivity. This is a picture of the Mercator building that was mentioned before. The building hugs the River, and prevents any fluidity for pedestrians. For visitors that are traveling throughout the downtown to Olen Park, they have a very confusing and disconnected path to travel on.

Luckily this building is listed in the Clintonville Comprehensive Plan as planned to be removed in the near future. The mixed-use development is a great opportunity for the Riverwalk to be defined and expanded proficiently.

Because these two buildings adjacent to the River are getting knocked down, there has never been greater opportunity for the City to implement a cohesive plan for the Riverwalk.

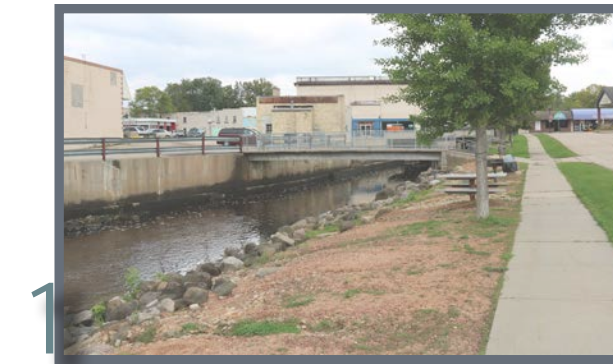
Another site visit will prove helpful in understanding the needs of the community as it pertains to the Riverwalk and the program of the mixed-use building.

Hopefully these future plans will lead to an extensive network of paths that connect the Pigeon Riverwalk District with the Olen Park District.

# PIGEON RIVERWALK DISTRICT



Figure 55, Pigeon Riverwalk District Perspective Map, Michael Walsh



1 potential for designated fishing area



2 expand downtown programming to riverwalk



3 riverwalk connection to mixed-use development

There has been a long history of fishing along the River, which provides demand for designated areas to fish. The places that locals currently utilize for fishing is not protected by any guard rails, and is a public hazard that the community needs to address.

During the warmer months, the City has community events. Two of the largest gatherings are the farmer's market and harvest fest. Both of these events often have entertainment features, and an abundance of vendors.

It is programs like this that have the potential to be expanded to the Riverwalk, and spaces along the River can be designed to accommodate these events.

Figure 56, Event Examples, City of Clintonville, Michael Walsh

# PIGEON RIVERWALK DISTRICT



**\*POTENTIAL LINK BETWEEN BUILDING AND RIVERWALK**

Figure 57, Mercator building, Michael Walsh



Clintonville's future plans to remove the old Mercator and other smaller buildings is a great opportunity to make the Pigeon Riverwalk be the lasting connection to Olen Park. The potential to create a continuous pedestrian path will provide the identity the River and City need.

Figure 58, Downtown to Olen Park Connection Graphic, Michael Walsh

# SOIL ANALYSIS

## Roscommon Mucky Loamy Sand - 0 to 2 percent slopes (58% of site)

### Drainage

- **Natural drainage class:** poorly drained
- **Available water storage in profile:** Low (about 4.0 inches)
- **Frequency of ponding or flooding:** Frequent
- **Depth to restrictive surface:** More than 80 inches

### Building Suitability

- **Dwellings without basements:** Very limited
- **Dwellings with basements:** Very limited
- **Small commercial buildings:** Very limited

### Other Construction

- **Roads and streets:** Very limited
- **Lawns and landscaping:** Very limited
- **Shallow excavations:** Very limited

### Land Management

- **Erosion Hazard (Off-Road, Off-Trail):** Slight
- **Erosion (Road, Trail):** Slight
- **Soil Compactibility Risk:** Low

### Miscellaneous

- **Frost free period:** 80 to 160 days
- **Landform:** drainageways, depressions
- **Parent material:** sandy glaciofluvial deposits and/or sandy glaciolacustrine
- **Forage suitability group:** Low AWC, high water table

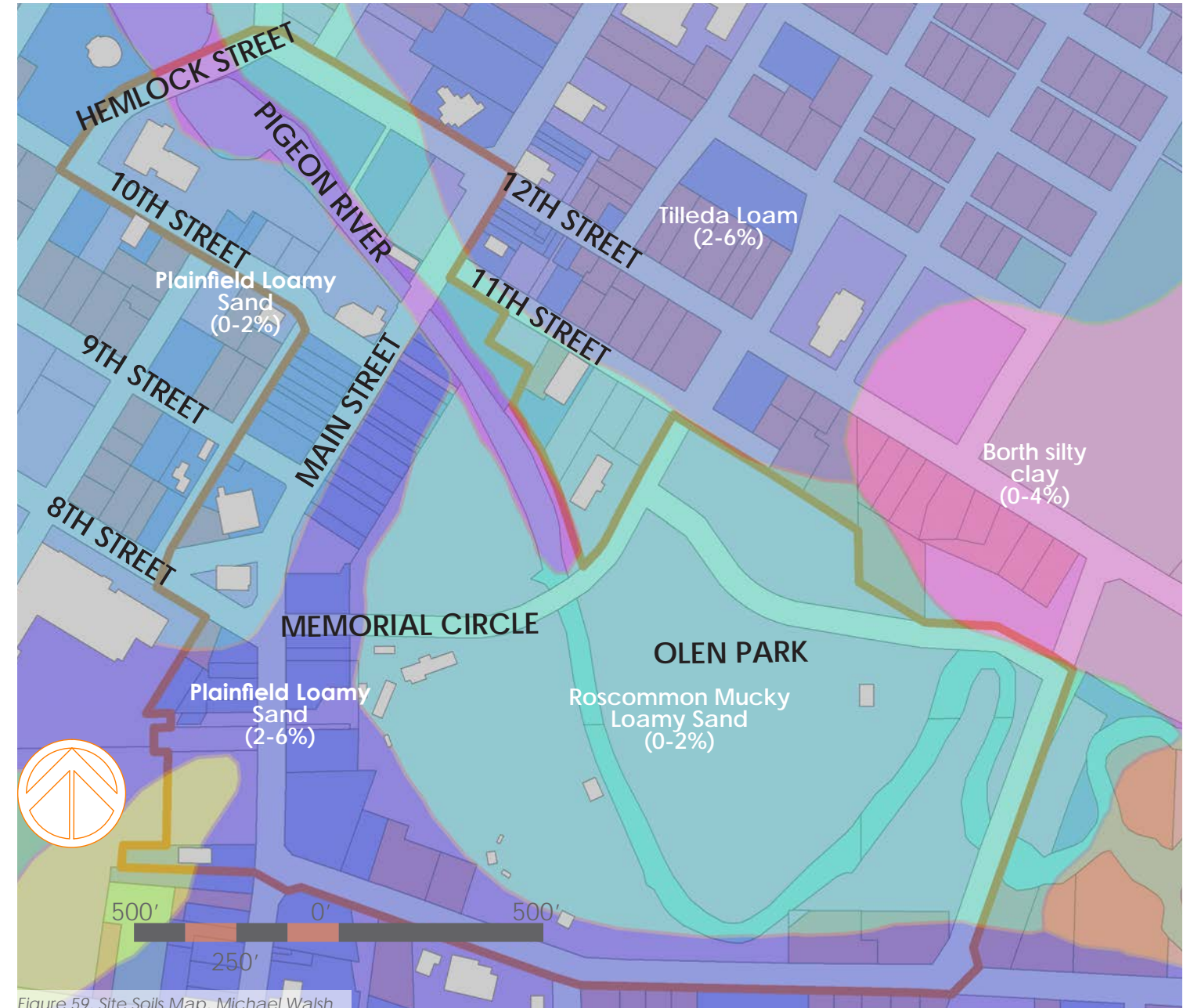


Figure 59, Site Soils Map, Michael Walsh

# LAND USE

Land-use surrounding the site is primarily residential and commercial. A manufacturing plant for Seagrave Fire Apparatus is within the region found Northeast of the site. Main Street is where you find the majority of Commercial use, and the residential areas are found on the surrounding secondary streets.

### Legend

- N/A
- Commercial
- Residential
- Water
- Manufacturing

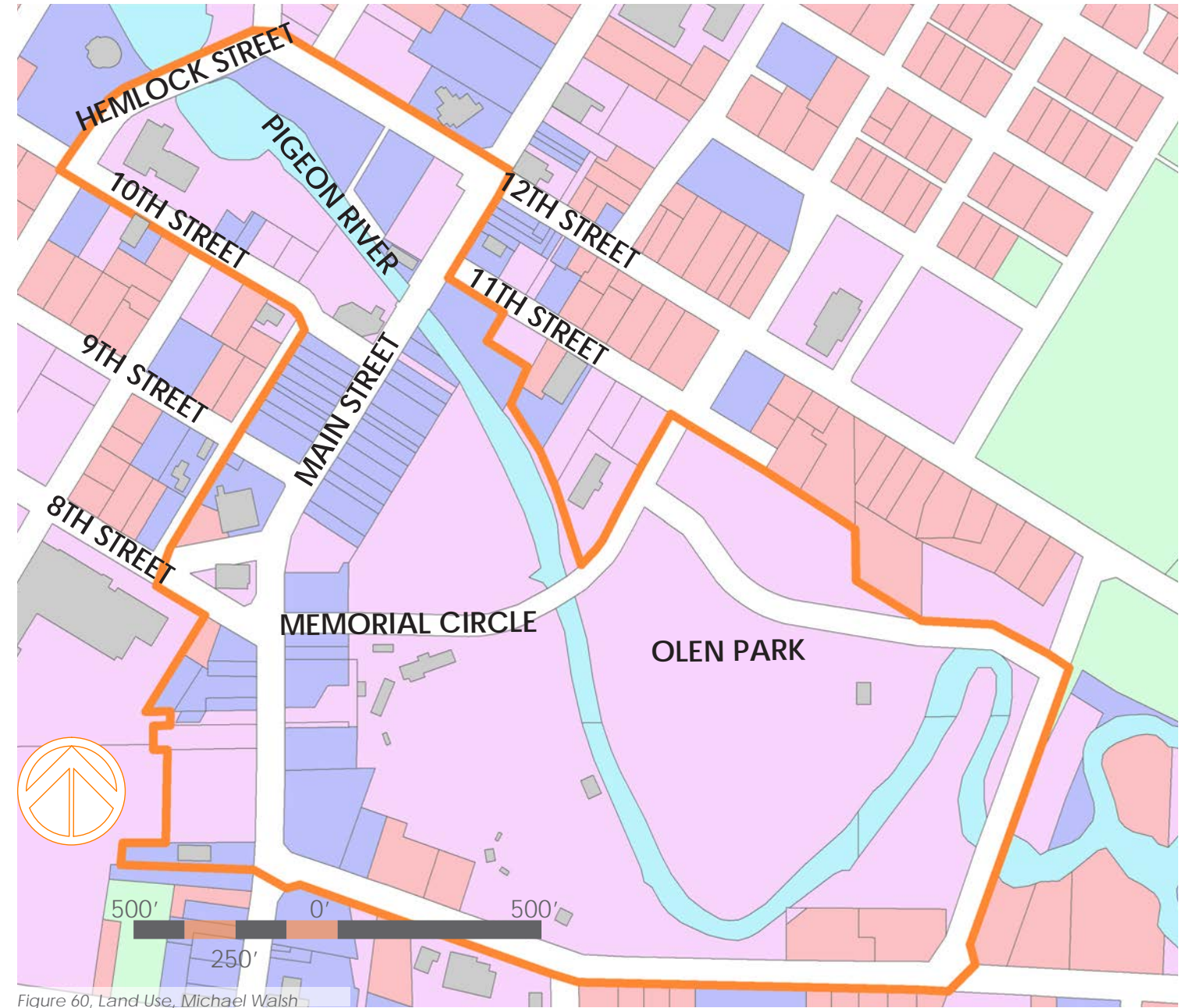


Figure 60, Land-Use, Michael Walsh

# ZONING

## Legend

- C - Conservancy
- B1 - Downtown Business District
- R1 - Residential District
- R2 - Residential District
- R3 - Multifamily District
- I1 - Industrial District
- Multiple Zoning without parcels

The site is zoned as Conservancy within Olen Park, and Downtown Business District for the remaining portions of the site. As mentioned before, there is a recommendation to reconsider some of the Downtown Business District as Mixed-Use.

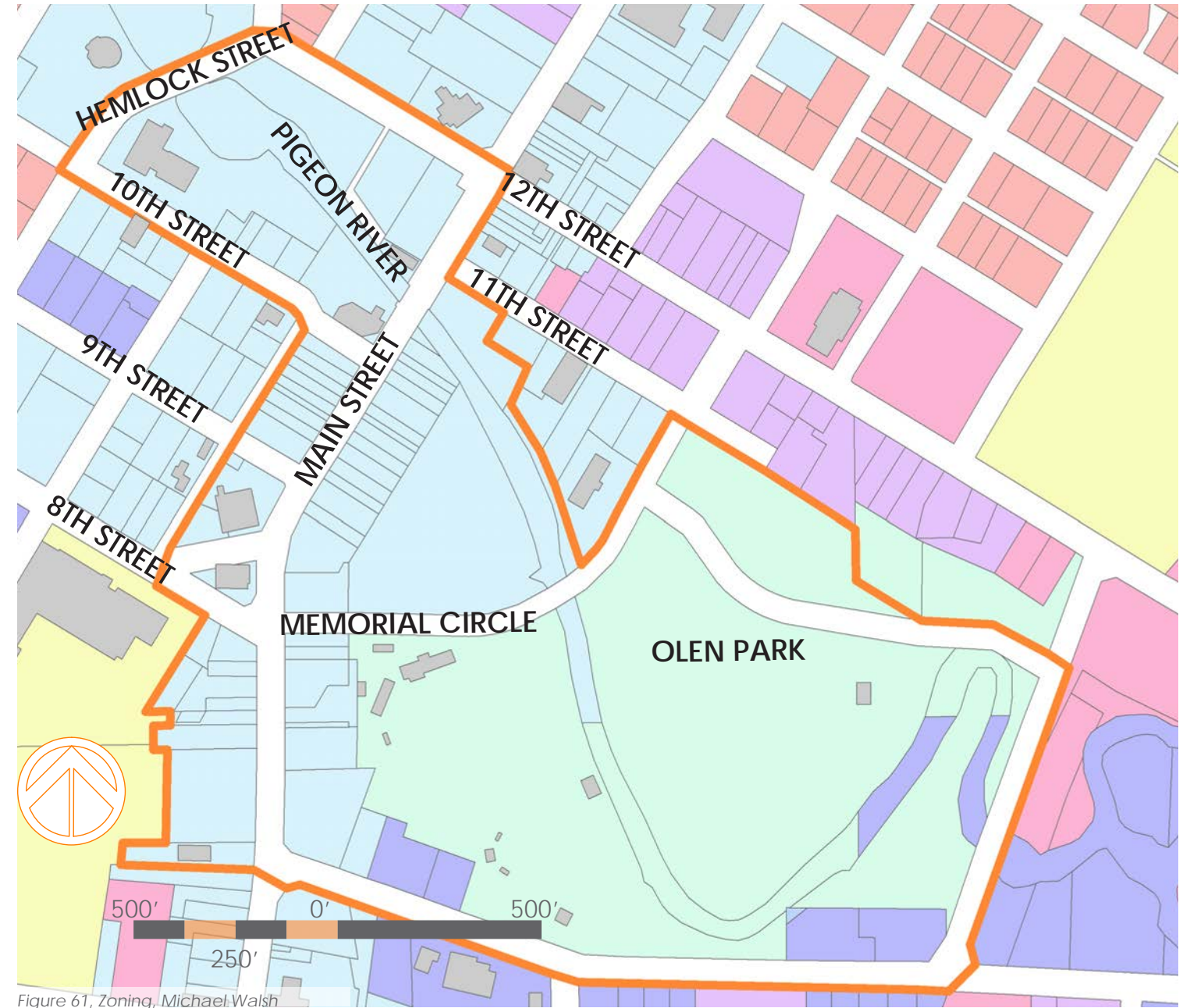
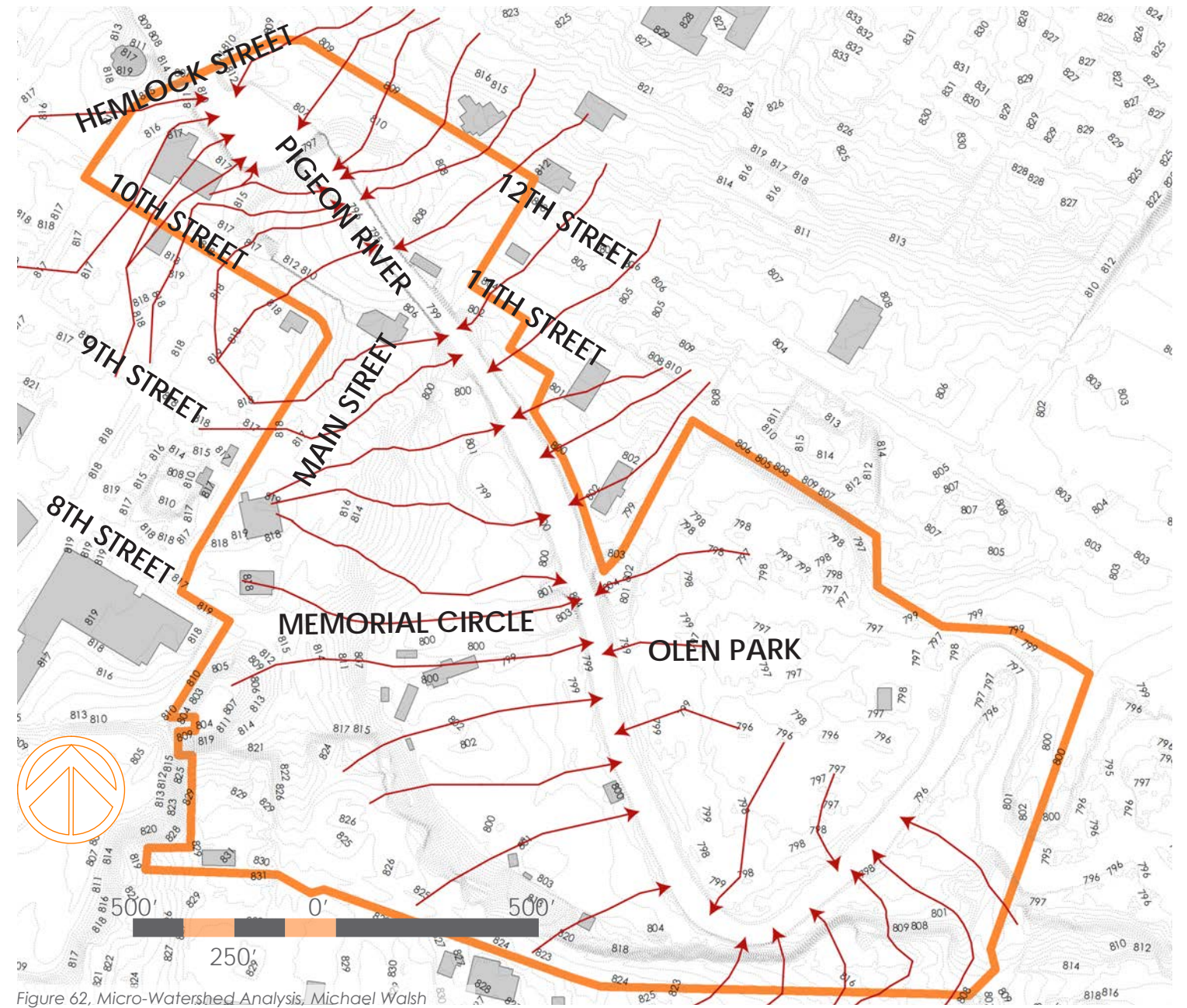


Figure 61, Zoning, Michael Walsh

# MICRO-WATERSHED ANALYSIS

Here is a quick micro-watershed analysis that illustrates how water would travel through the site. It is clear that water on both sides of the river travels towards it.



# SPATIAL DIAGRAMS

Figure 63. Downtown District Context Aerial, Michael Walsh





# OPTION 1



Figure 64, Character Imagery, Spatial Diagram 1, Michael Walsh

In this spatial diagram, the recommendations are more drastic than changes suggested in the second iteration. The parking zones could become transitional spaces, or small parking structures. The vehicular circulation could be improved with the subtraction of parking spaces.

Designated fishing areas would be helpful for the community, and there are suggestions to add a bridge connection just southeast of the Dam. This bridge could have an outlet for fishing as well.

These spatials don't cover the downtown streetscape much, as the improvements necessary are straightforward. This region of the site require an enhanced streetscape that includes wayfinding for vehicles and pedestrians

to the Riverwalk and Olen Park, revitalized storefront facades, and increased vegetative coverage.

The green areas represent an expansion of open space, and this would increase the pervious surface potential.

The portion of the site just South of Hemlock Street can be cleared of invasive species, and include an extension of the Pigeon Riverwalk. This area also has the potential to include a fishing area.

Mixed-use development is in orange, and in this diagram it is hugging the corner of Main & 11th Street, allowing for a riverwalk path to meander through the site.

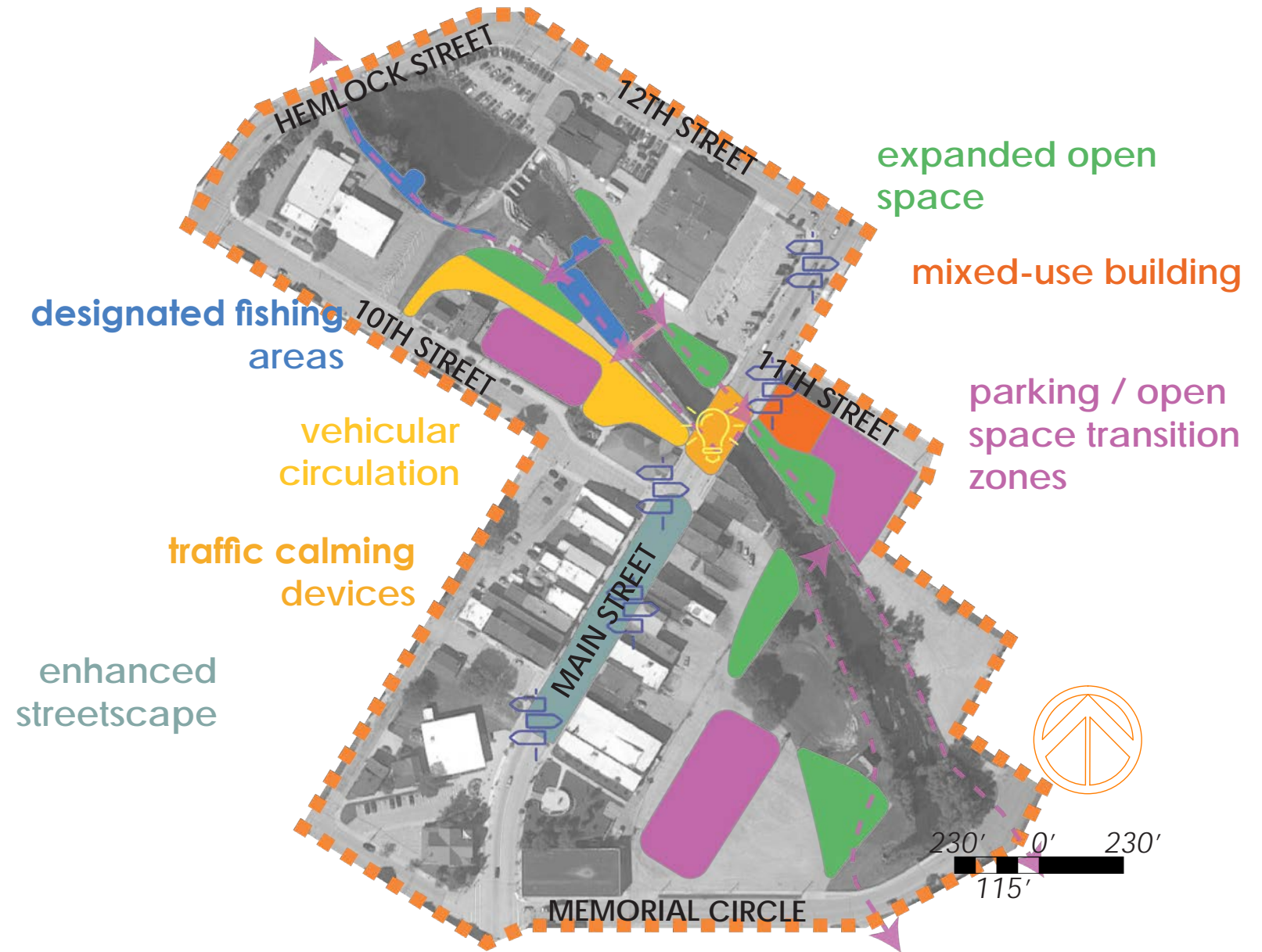


Figure 65, Spatial Recommendation Diagram 1, Michael Walsh

## OPTION 2



Figure 66, Character Imagery, Spatial Diagram 2, Michael Walsh

This spatial diagram has less drastic changes to the overall function of the space. Instead of the pedestrian circulation being extended to Hemlock Street, there would be an entrance to the site a little earlier, at the intersection of 10th street and the community center.

The existing bridge between the dam and Main Street and Pigeon River junction would become the designated fishing area, but the bridge character would have to be renovated.

Parking lots are broken up with planters and other permeable surfaces. Main Street gets

a raised pavement feature along the bridge to slow down high speed traffic.

In this rendition, the building would still hug the river, and the riverwalk path would meander around the building through a programmed entertainment/ open space, and eventually the path would reside back next to the river.

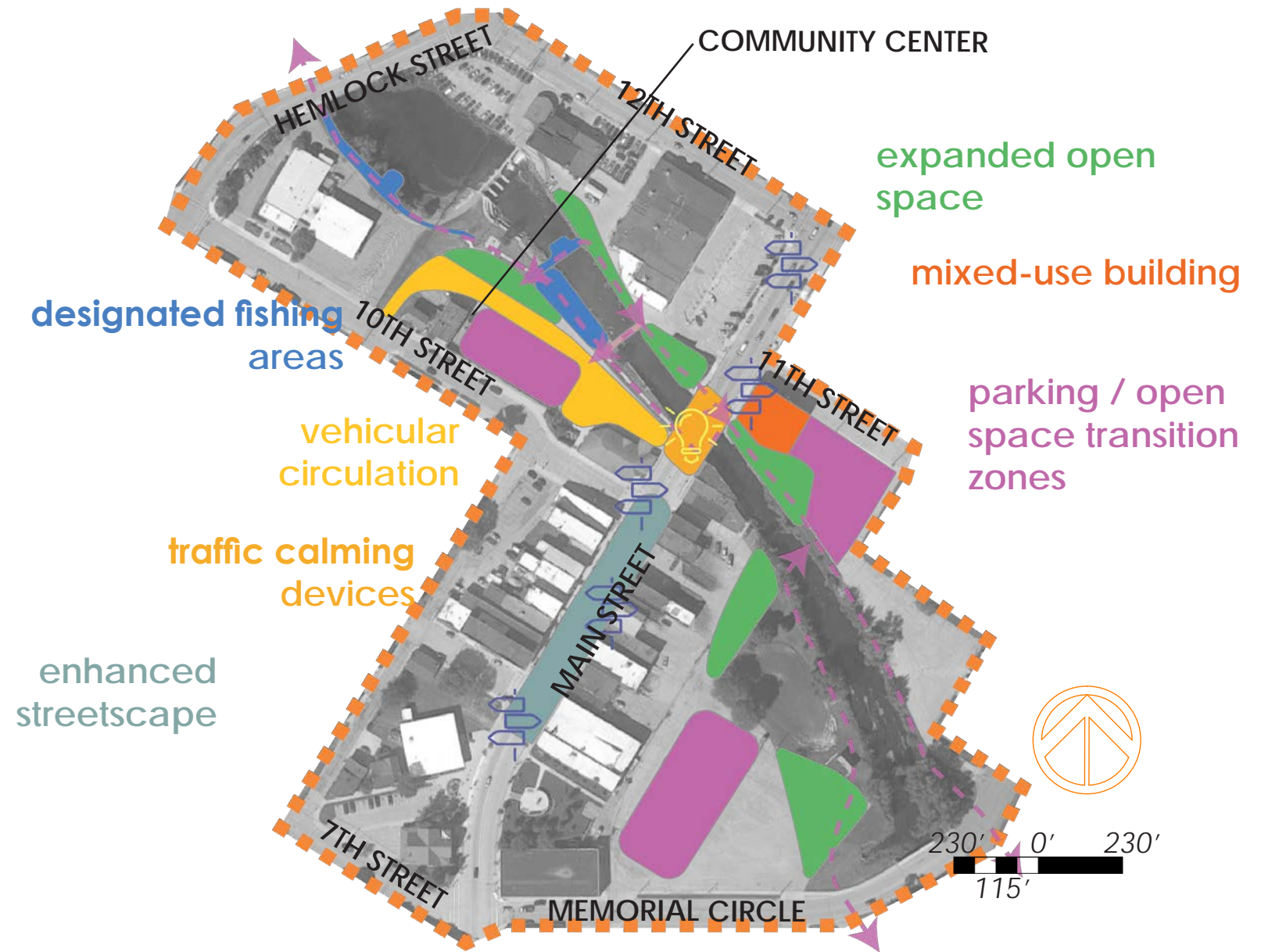


Figure 67, Spatial Recommendation Diagram 2, Michael Walsh

## SPATIAL COMPARISON

### spatial 1

- more drastic change to **parking infrastructure**
- **larger expansion** of open space
- riverwalk is **continuous alongside the river**

### additional programming

- bike path along Main Street, potential for Riverwalk path to accommodate bikers
- designated entertainment space
- updated playground equipment in Olen Park

### spatial 2

- riverwalk path **meanders** on **NE side** of future building
- **enhanced** existing bridge
- **parking lots** feature **stormwater planters** to break up gray space

	Access/ Egress
	Patio/ Lawn Spaces
	New Parking Lot
	Stormwater Retention
	Fishing Area
	Traffic Calming
	Mixed-Use
	Central Riverwalk Node

## FINAL SPATIAL RELATIONSHIP DIAGRAM

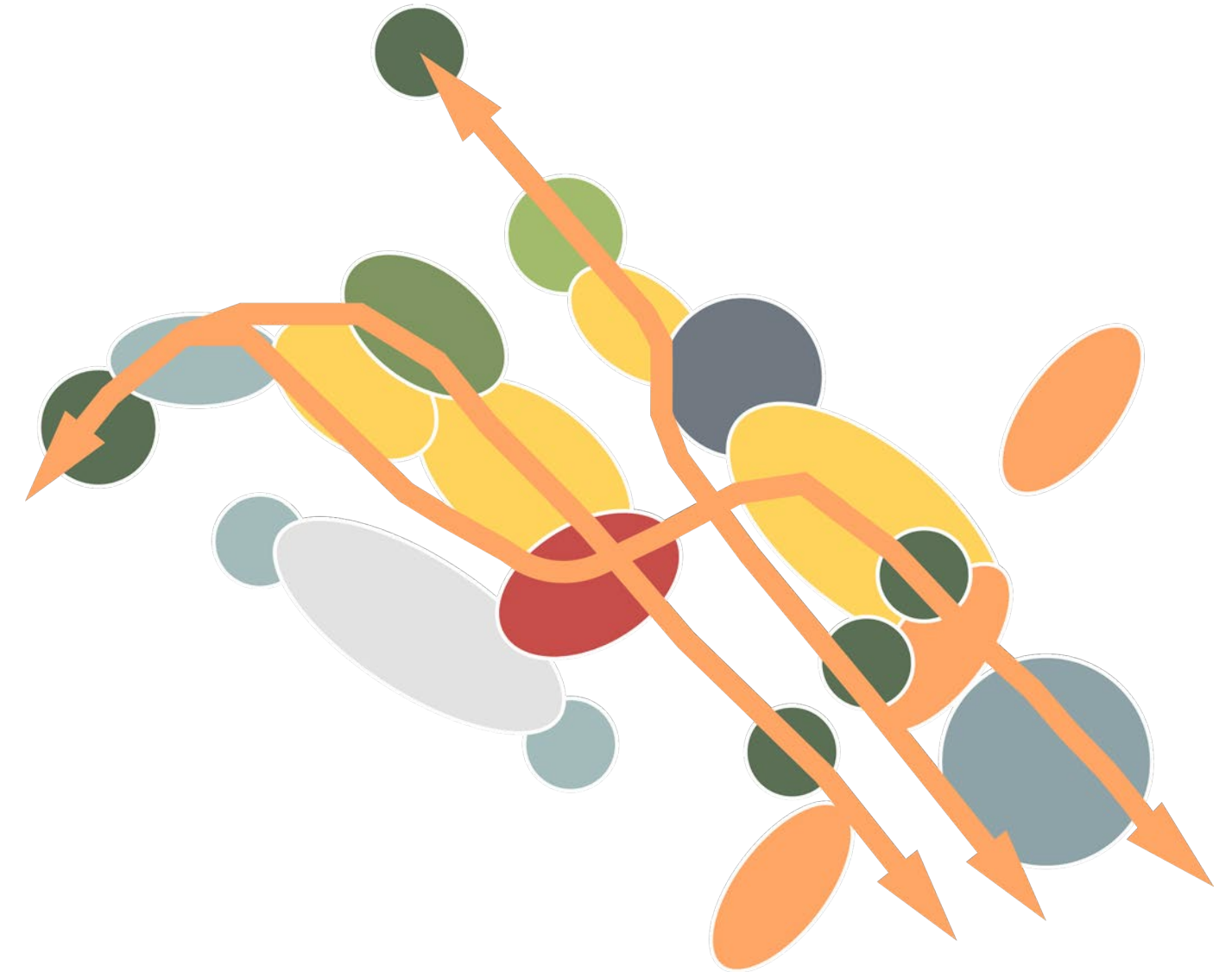


Figure 68, Spatial Recommendation Comparison, Michael Walsh

## MAIN STREET - STREETSCAPE CONCEPT

- 1 median planter to slow traffic
- 2 designate street parking
- 3 designated bike lane
- 4 enhanced street tree, vegetative understory, and lighting fixtures



Figure 69, Streetscape Concept, Michael Walsh

## PROJECT SUMMARY

- NATURAL PRESERVES, AGRICULTURE, AND OUTDOOR RECREATION IS IMPORTANT TO THE WAUPACA REGION
- PEOPLE ARE TRAVELLING THROUGH CLINTONVILLE, BUT NOT NECESSARILY STOPPING
- THERE IS A LACK OF PEDESTRIAN CONNECTION BETWEEN THE DOWNTOWN AND OLEN PARK
- THERE IS A LACK OF CONNECTION BETWEEN EACH SIDE OF THE RIVER
- NATURAL FEATURES AND OPEN SPACE IN CLINTONVILLE HAVE GREAT OPPORTUNITY
- WHAT ARE WAYS WE CAN GET PEOPLE TO STOP IN THE DOWNTOWN?
- CRUCIAL TO IMPROVE STORMWATER MANAGEMENT PRACTICES

## GOALS FOR NEXT SEMESTER:

- GET THE COMMUNITY INVOLVED IN DESIGN DECISIONS
- IMPROVE CONNECTIVITY OF PARKS AND DOWNTOWN
- BRAINSTORM EFFICIENT AND COST EFFECTIVE STORMWATER MANAGEMENT
- DISCOVER HOW WE CAN INCREASE VISITATION TO THE DOWNTOWN AND THE PIGEON RIVERWALK
- COME UP WITH A PLAN TO REVITALIZE ECONOMIC DISTRICT STREETScape
- DESIGN DESIGN DESIGN!

# PART 2

## DESIGN DEVELOPMENT

# COMMUNITY/ CLIENT ENGAGEMENT

## City selected for UW project

© JANUARY 9, 2020 / 0



Clintonville's current riverwalk. Jeff Hoffman Photo

## UW student chose Clintonville

© MARCH 4, 2020 / 0



Michael Walsh, a senior at UW-Madison who is developing a Riverwalk design. Bert Lehman Photo

## UW student to develop riverwalk plan in Clintonville

By Bert Lehman

A University of Wisconsin-Madison student is working with Clintonville to develop a riverwalk plan for the city.

Figure 70, Waupaca County News Article 1, Michael Walsh

My client and I organized a community meeting for the evening of February 25th. A press release by a local news station assisted in getting people to the meeting. It was held at the Clintonville Community Center downtown from 6-8 p.m. Community members were free to come and go as they please.

The night began with a short presentation on focal points of the inventory & analysis, and initial progress on conceptual plans for the site design. It was made clear to the community that any design ideas at that point were not set in stone,

## Walsh sees potential of Riverwalk project

By Bert Lehman

Michael Walsh, a University of Wisconsin-Madison senior who is developing a Riverwalk design, chose the Clintonville project over around 10 other projects.

Figure 71, Waupaca County News Article 2, Michael Walsh

and were presented only to assist the community in idea generation.

After the presentation, the community was asked to share their ideas for the design, and critique the existing ones. Poster sizes of the site were set out with trace overlays for the community to mark up. We also set out sheets of paper for conceptual critiques and additional ideas.

There was an abundance of good feedback from the public, and their ideas were taken into consideration for final design decisions. See

Master Plan program 5 for an example.

Overall, this was a great experience. My client & I were both happy with the turnout of the event. It gave me a new perspective on how design can impact a community, and what your every day pedestrian is looking for.

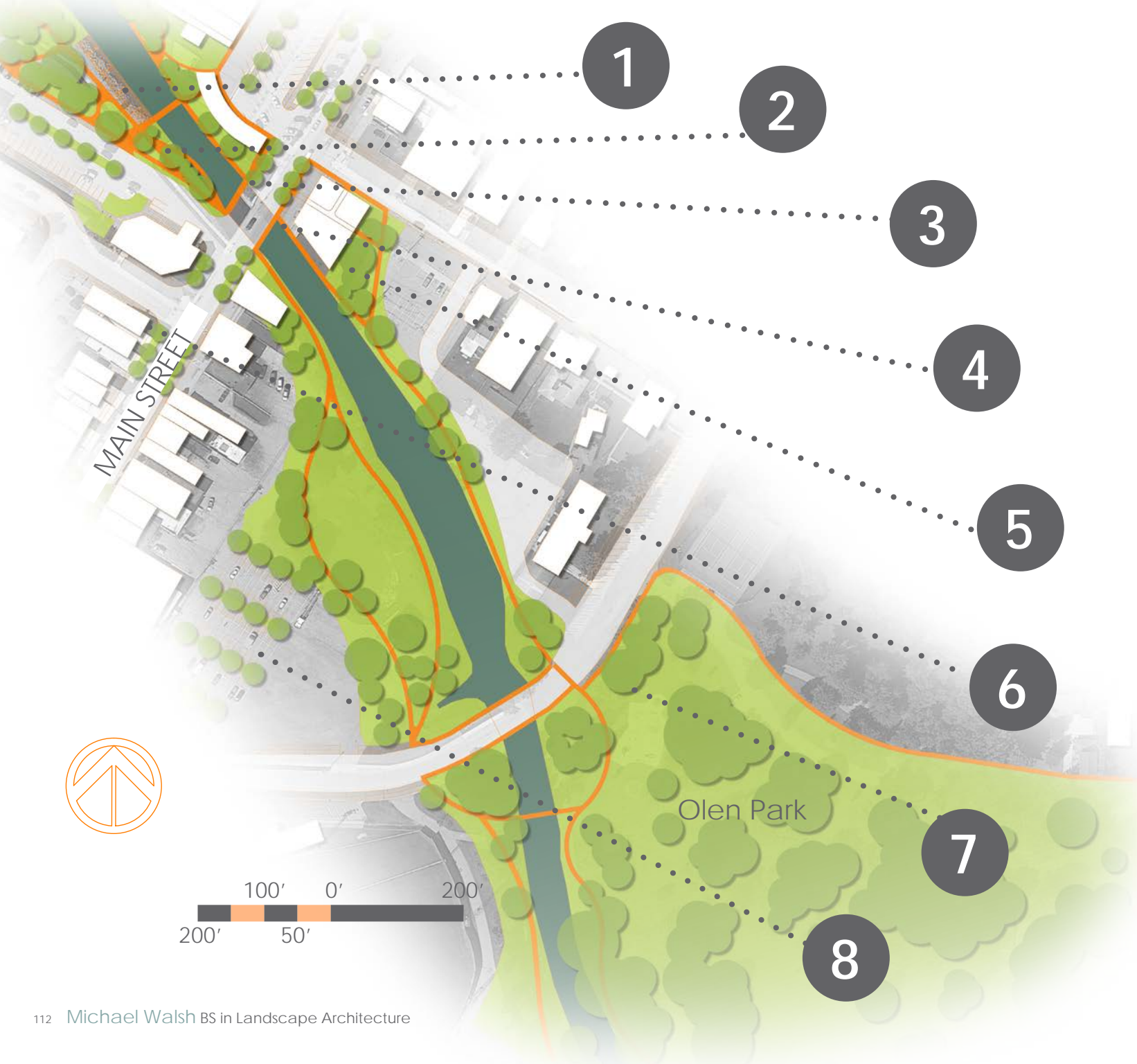


Figure 72, Collection of Community photos, Sharon Eveland

# THE PIGEON RIVERWALK

## MASTER PLAN PROGRAM



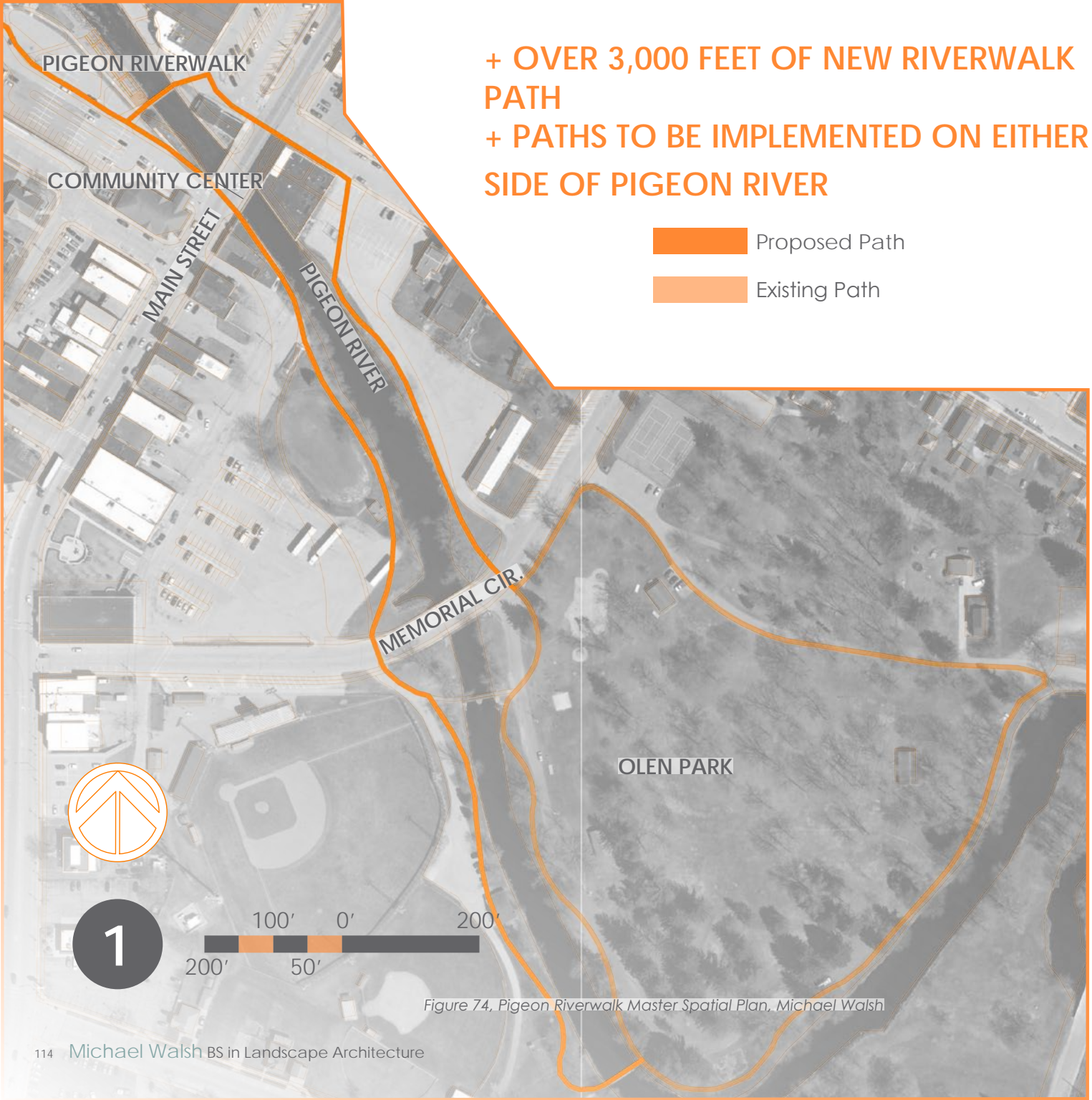


## MASTER PLAN - PROGRAM

1. Pigeon Riverwalk Extension
2. Pigeon Park (Pigeon Riverwalk Entrance)
3. Curb bumpouts for safer pedestrian travel
4. Adaptive Re-use Merc building
5. Opportunity for new skate-park location
6. Improved site furnishings, riverwalk signage
7. Median planters for large parking lot
8. Olen Park Improvements

Figure 73, Master Plan Rendering, Michael Walsh

The primary program of the design include the Pigeon Riverwalk Extension, Pigeon Park (Pigeon Riverwalk Entrance), the Adaptive re-use of the Merc building, and curb bumpouts for pedestrian travel.



+ OVER 3,000 FEET OF NEW RIVERWALK PATH  
 + PATHS TO BE IMPLEMENTED ON EITHER SIDE OF PIGEON RIVER

Proposed Path  
 Existing Path

## PIGEON RIVERWALK EXTENSION

Here is a look at the spatial connection between the downtown region of Clintonville, and the town's major green space, Olen Park.

As mentioned in the analysis portion of the document, Olen Park seems to be an attraction for individuals and groups participating in late-night undesirable activities.

There is an existing path within Olen Park that serves pedestrian and vehicular use. In order to make the park safer for pedestrians, it is recommended that vehicular access is limited in the park.

There are two shelters, two tennis courts, and a disc golf course that require vehicular access and parking. Access should be controlled for other activity.

With the removal of some vehicular paths and implementation of site furniture and light fixtures, the park would be safer after hours.

The client verbalized not wanting to include lighting in the park, so decreasing vehicular access by itself will aid in overall park safety.

**PIGEON PARK**

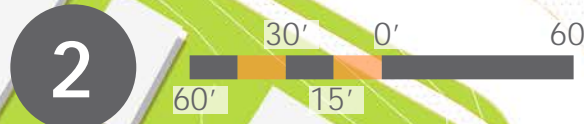


Figure 75, Site Plan Rendering, Michael Walsh

**FOCUSED SITE PLAN**



Figure 76, Focused Site Plan, Michael Walsh

\*\*SEE PAGE 131 FOR DETAILED PROGRAM OF PIGEON PARK

**OVERVIEW**  
 31 NEW CANOPY TREES  
 RE-ORIENTED PARKING LOT

NEW PATIO/ LAWN SPACES  
 SUSPENDED DECK  
 TERRACE STAIRS

# CURB BUMPOUTS FOR RIVERWALK TRAVEL

Figure 77, Curb Bumpout perspective rendering, Michael Walsh



To tie the SE & NW sides of Main Street, curb bumpouts were generated to serve as a traffic calming device. This element will assist in safer travel along the future riverwalk extension.

The intersection of Main Street and Pigeon River has some of the highest daily traffic values in the city.

Strengthening the human scale in this area will decrease the likelihood of speeding, and make the street safer for everyone. Canopy trees, curb bumpouts and site furniture will make Main Street a more walkable path.

# MIXED-USE BUILDING (ADAPTIVELY RE-USED MERC BUILDING)

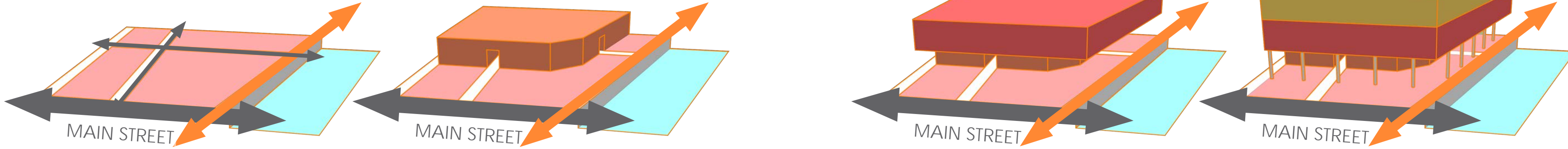


Figure 78, Merc Building System Diagram, Michael Walsh

The Merc Building will incorporate 2 pedestrian axis that divide the first floor into sections, different uses. This will allow for dynamic commercial use

As mentioned before, the first floor will consist of various commercial uses

Second floor has the opportunity to be residential, as well as include a small business or 2

Third floor will be designated as residential. This adaptive re-use provides great opportunity for affordable housing

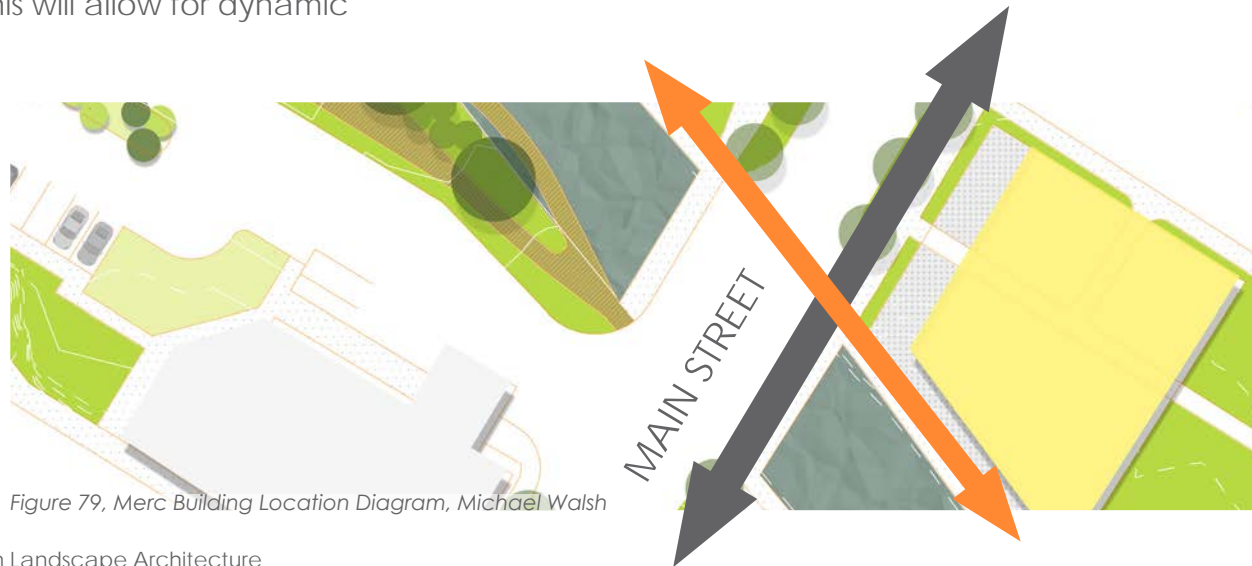


Figure 79, Merc Building Location Diagram, Michael Walsh

The Merc Building holds great opportunity to become a focal point of Clintonville's downtown. The building is oriented adjacent to the river, which small business owners could use to their advantage. Size alone provides units for commercial and residential use.

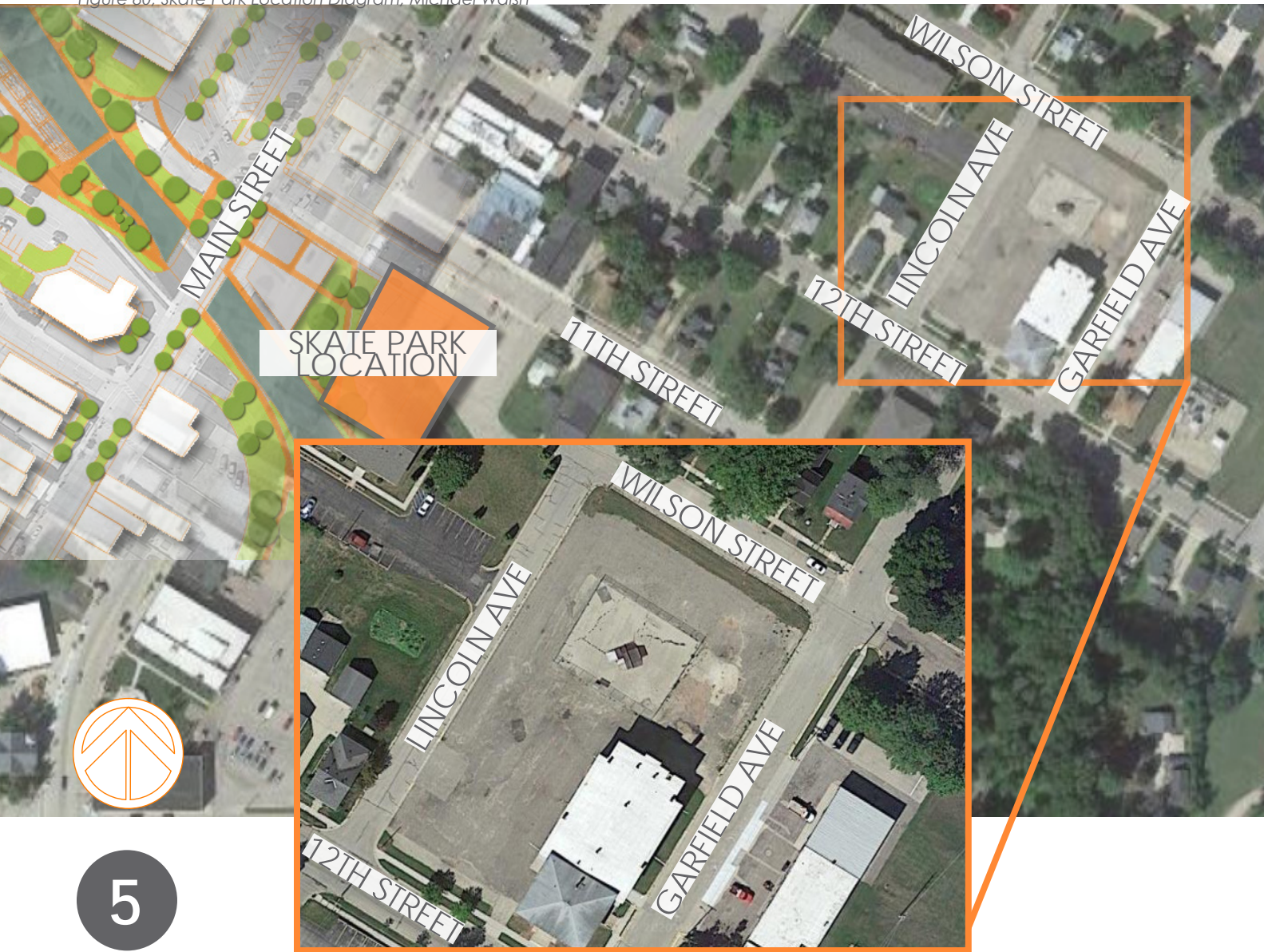
Centered in the heart of downtown, the Merc building can become a destination for pedestrians traveling along the riverwalk, and for individuals that are traveling through Clintonville.

The client was concerned about the possibility of reusing the building, as the basement has been underwater for years. Mold and other bacterial hazards could be remediated if the funding was in place.

Otherwise, the model of the building could be retrofitted to a new development as well. A mix of small businesses and affordable housing would be a great fit for this location regardless.

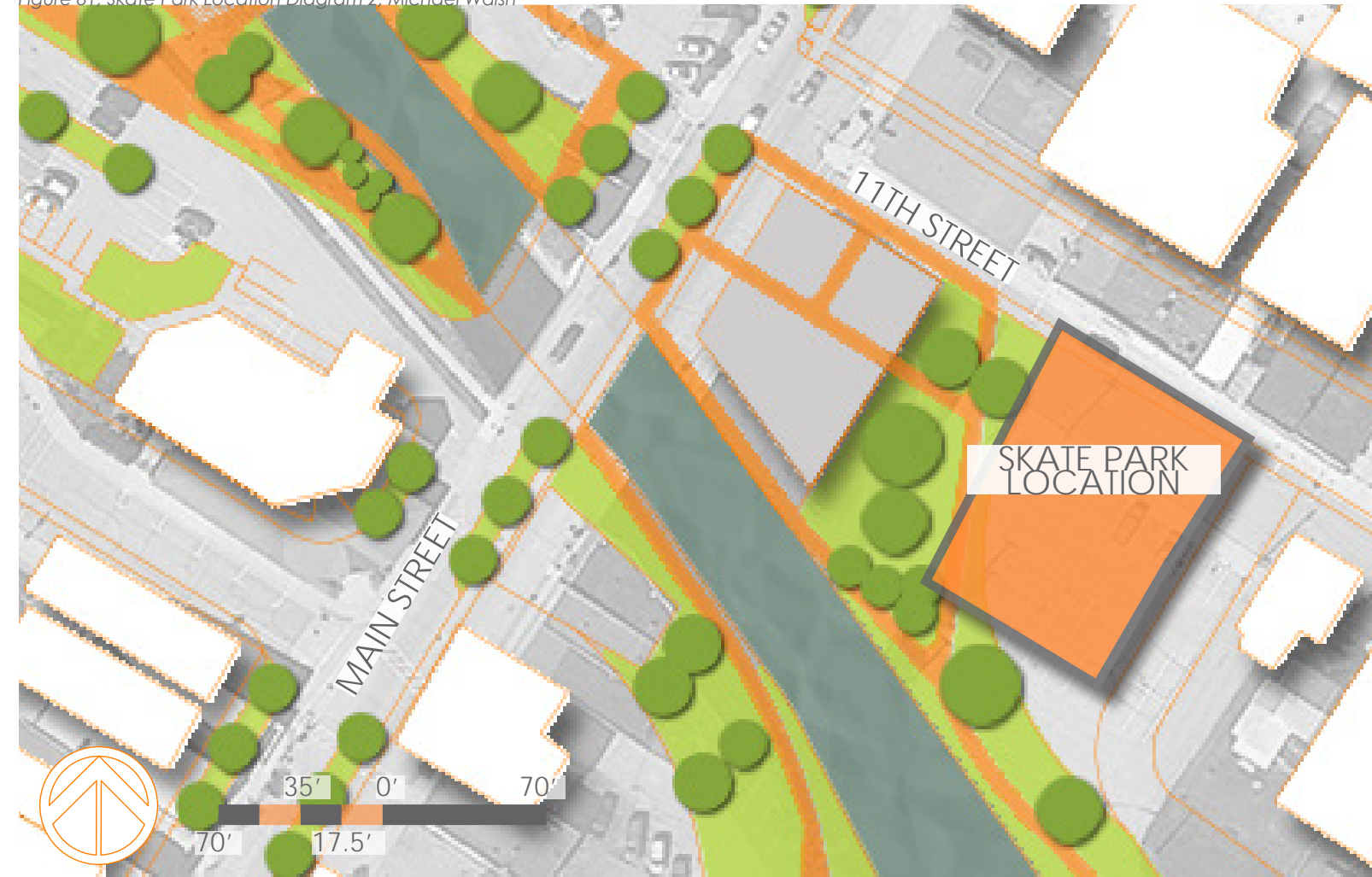
# RE-LOCATION FOR SKATE PARK

Figure 80. Skate Park Location Diagram. Michael Walsh



5

Figure 81. Skate Park Location Diagram 2. Michael Walsh



In late February, my client (Sharon Eveland) and I orchestrated a meeting with the community to discuss potential future design decisions regarding the extension of the riverwalk. One of the community members suggested moving the skate park from its original location (off of Lincoln Ave. & 12th Street), to somewhere in proximity to the Pigeon Riverwalk. The orange region represents the space I chose for the skate park.

# IMPROVED WAYFINDING / STREET FURNISHINGS



MAIN STREET



Figure 83, Site Furniture System Key, [archieexpo.com](http://archieexpo.com), RSM design, bellagio outdoor lantern

In order to further activate the entrance of Pigeon Riverwalk and Olen Park, site furniture and wayfinding elements have been included in the master plan. Displayed to the left are potential orientation for benches, light poles, and wayfinding signs. The client and city can utilize this plan and manipulate it as they please.

The pattern of furniture displayed in Pigeon Park can also be used for Olen Park.

6 7

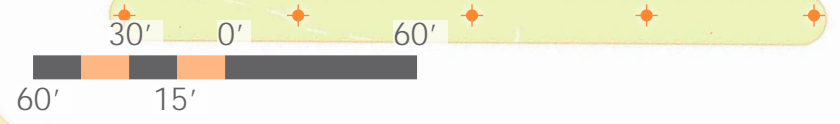


Figure 82, Site Furniture System Diagram, Michael Walsh

# MEDIAN PLANTERS FOR PARKING

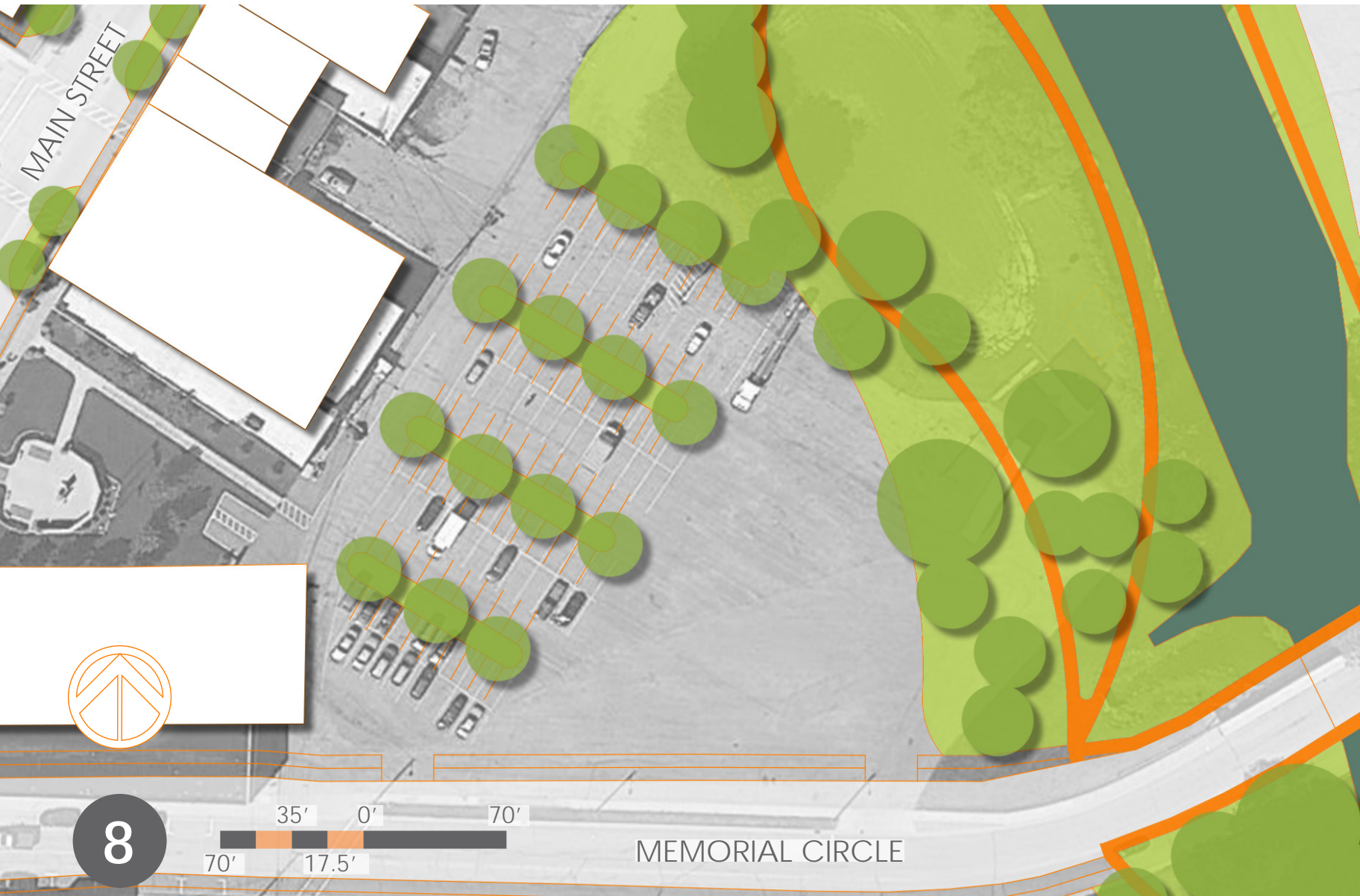


Figure 84, Large Parking Lot Program, Michael Walsh

## END OF MASTER PLAN

The large parking lot E off of Main Street is a giant area of impermeable surface. Instead of getting rid of the parking lot, increasing the amount of water retention devices became the best solution for the area.



# PIGEON PARK

## SITE PLAN PROGRAM

## PIGEON PARK

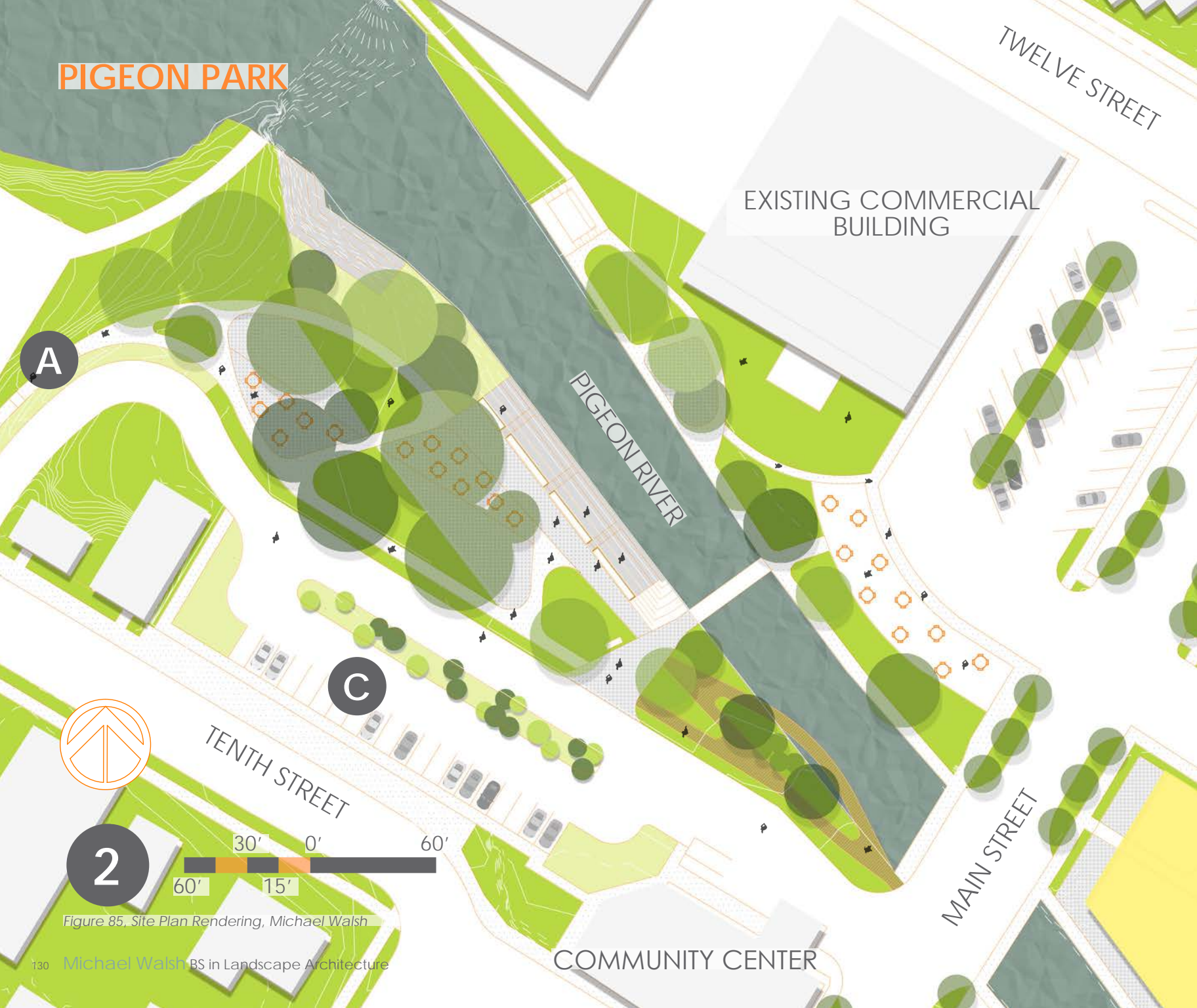


Figure 85. Site Plan Rendering, Michael Walsh

## FOCUSED SITE PLAN

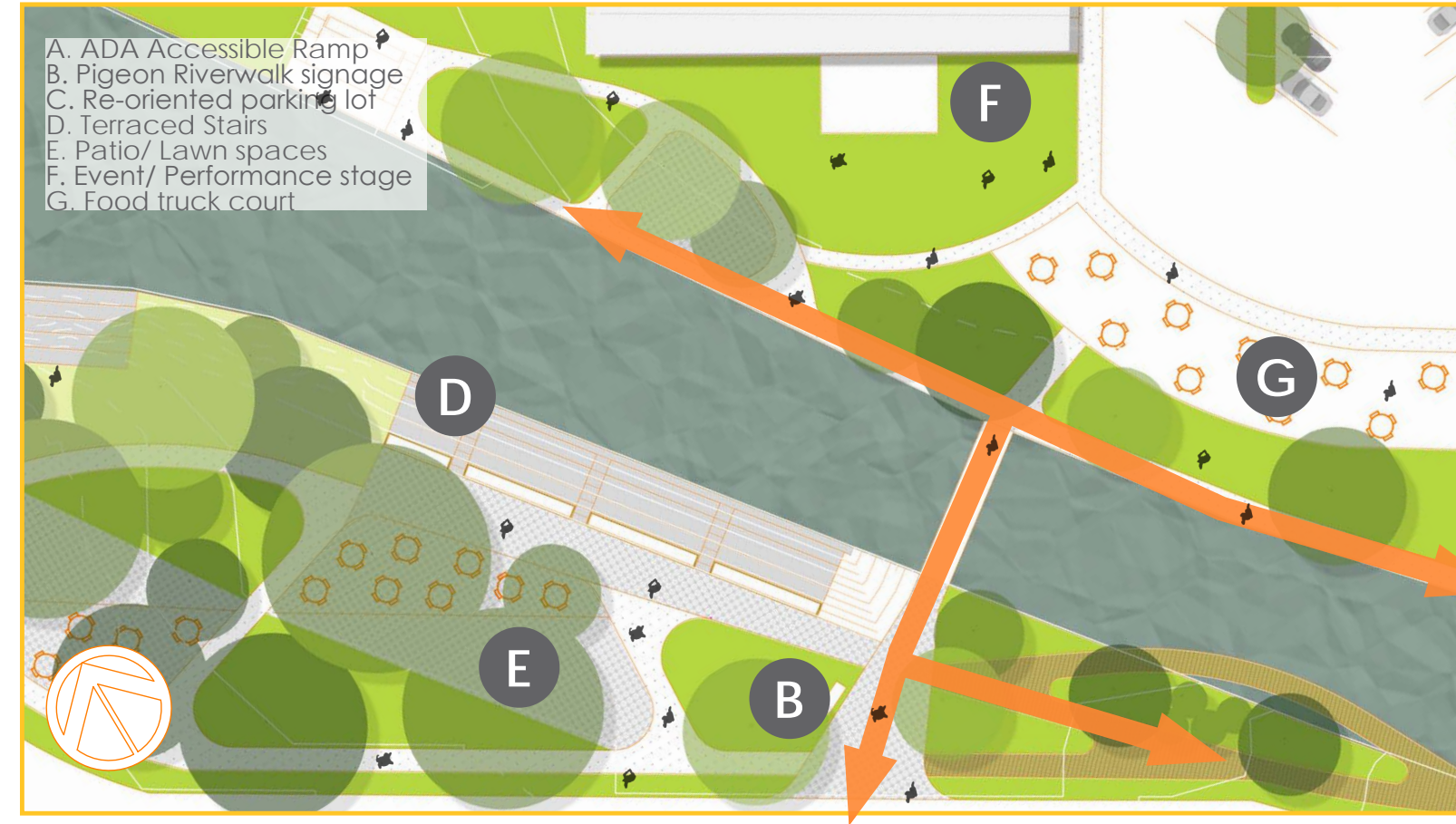


Figure 86. Focused Site Plan Rendering, Michael Walsh

As noted in the early stages of the document, the client and community desire a place for annual festivals, the farmer's market, and other community gatherings. The market occurs in the parking lot for the existing Pigeon Riverwalk, but this way the space can be more of a destination for the market.

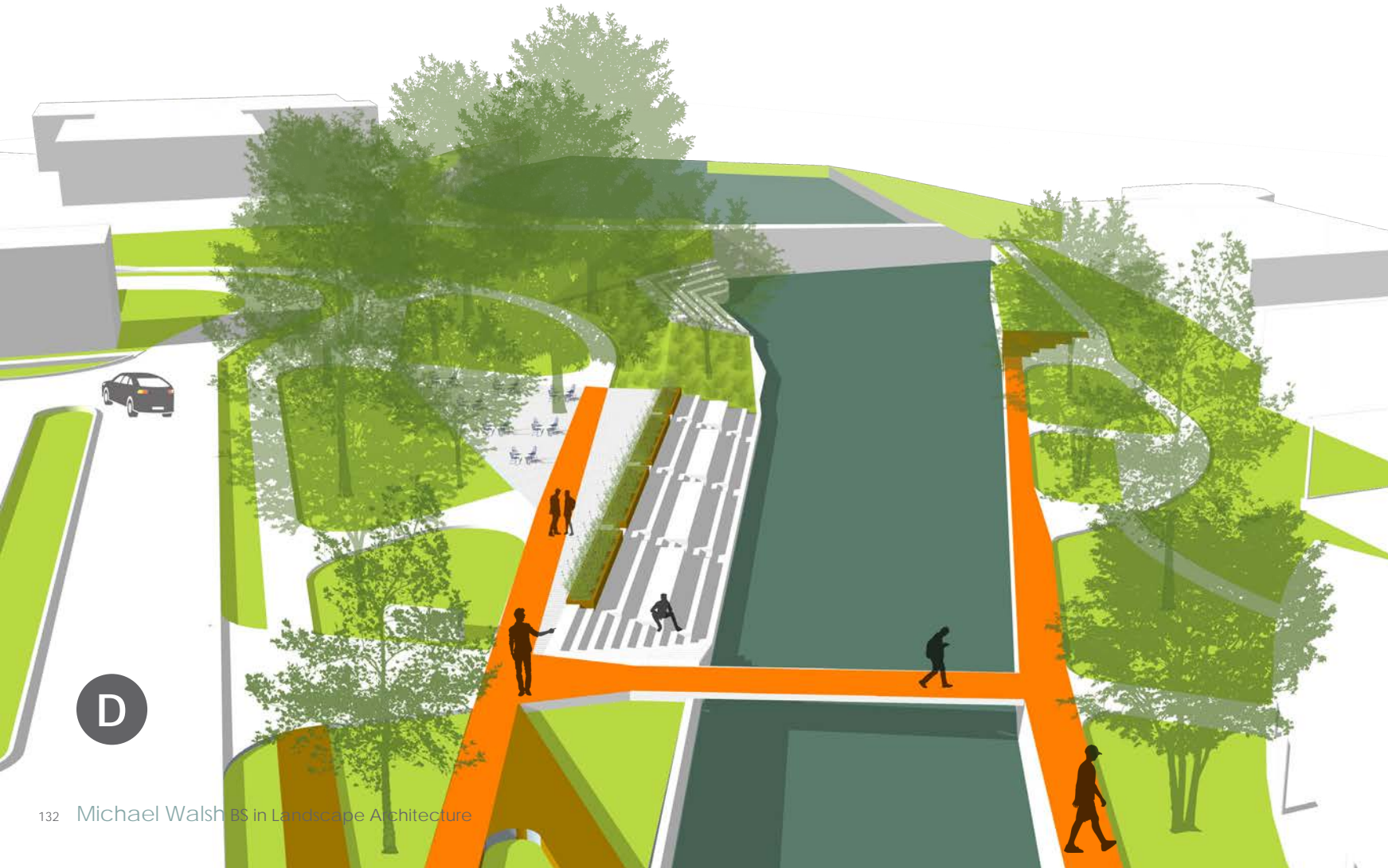
Pigeon Park is the entrance into the riverwalk experience. It includes an abundance of

seating on either side of Pigeon River, and could accommodate a small festival crowd.

As you cross to the northeastern side of the river, you can choose to continue along the extended riverwalk, or relax somewhere in the park.

# PIGEON PARK - TERRACE STAIRS

Figure 87, Terrace Stairs Aerial Rendering, Michael Walsh



D

Located in Pigeon Park, the terrace stairs along Pigeon River serve as a central piece to the project. They provide a surplus of seating, and a space for the community to enjoy the river's edge.

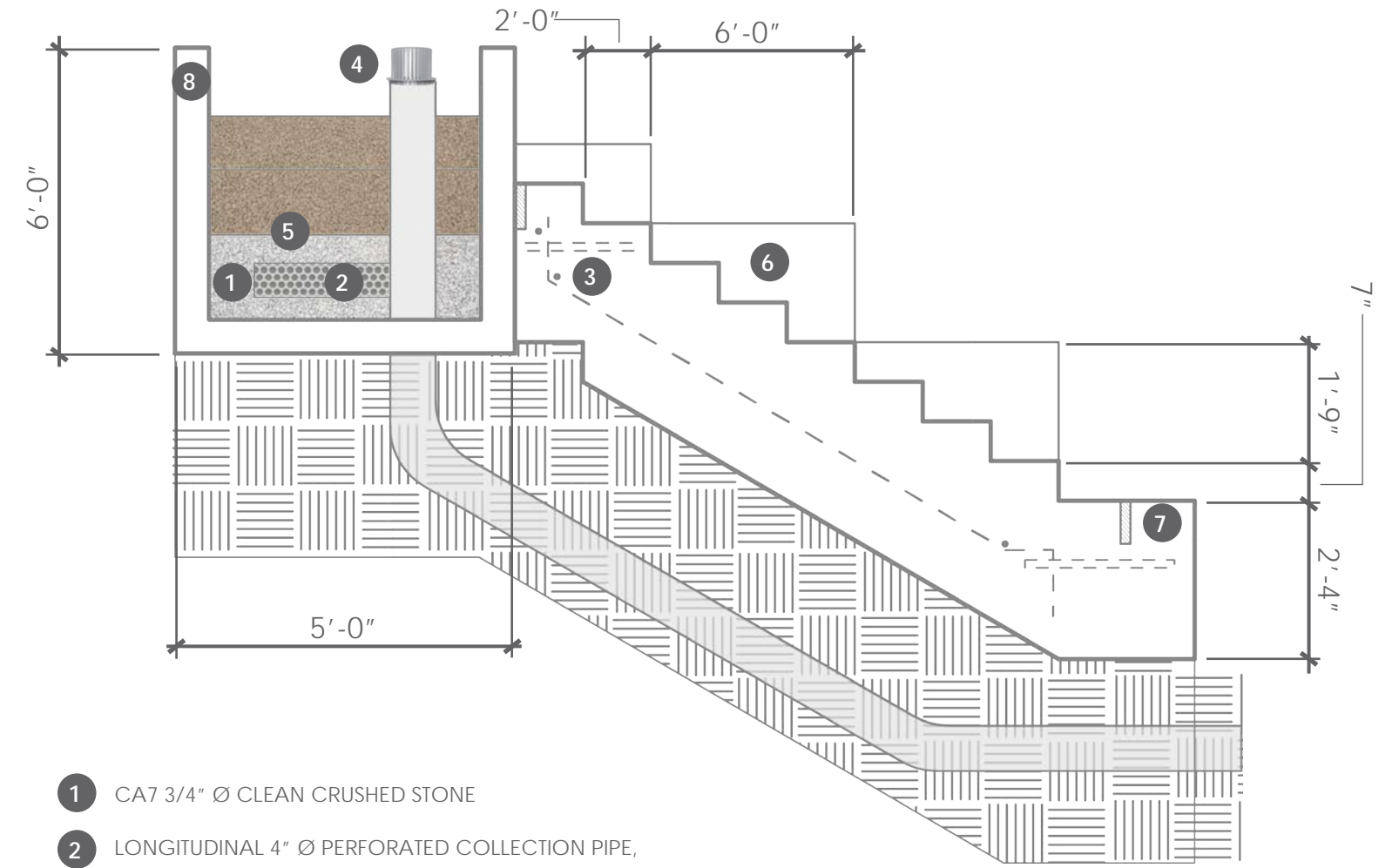
Figure 88, Terrace Stairs Close-up, Michael Walsh



# TERRACE STAIRS CONSTRUCTION DETAIL



Figure 89, Terrace Stairs System, Section view, Michael Walsh



- 1 CA7 3/4" Ø CLEAN CRUSHED STONE
- 2 LONGITUDINAL 4" Ø PERFORATED COLLECTION PIPE, WRAPPED IN NON-WOVEN GEO-TEXTILE
- 3 3/8" Ø HORIZONTAL REBAR, EPOXY COATED, ALL CUT ENDS DIPPED IN EPOXY, 1'-0" MINIMUM LAP JOINTS
- 4 OVERFLOW DRAIN, 6" Ø PVC PIPE WITH ATRIUM GRATE INLET AT 4" ABOVE FINISH GRADE
- 5 NON-WOVEN GEOTEXTILE, 'DUPONT' SF-40 CONTINUOUS 1'-0" MINIMUM LAP JOINTS, TYPICAL

SCALE 1" = 2.5'

- 6 CAST CONCRETE, ASTM C-143, 'SCOFIELD' INTEGRAL MIX, PRAIRIE BEIGE, WOOD FORM FINISH PERPENDICULAR
- 7 'FIBRE LITE' EXPANSION JOINT, ASTM D-175, NON-EXTRUDING, WWW.WEMEADOWS.COM, 800.342.5976
- 8 PRE-CAST CONCRETE, WATERPROOF MEMBRANE

Figure 90, Terrace Stairs Construction Detail, Michael Walsh

# PIGEON PARK - WELCOME SIGN

Figure 91, Welcome Sign perspective, Michael Walsh



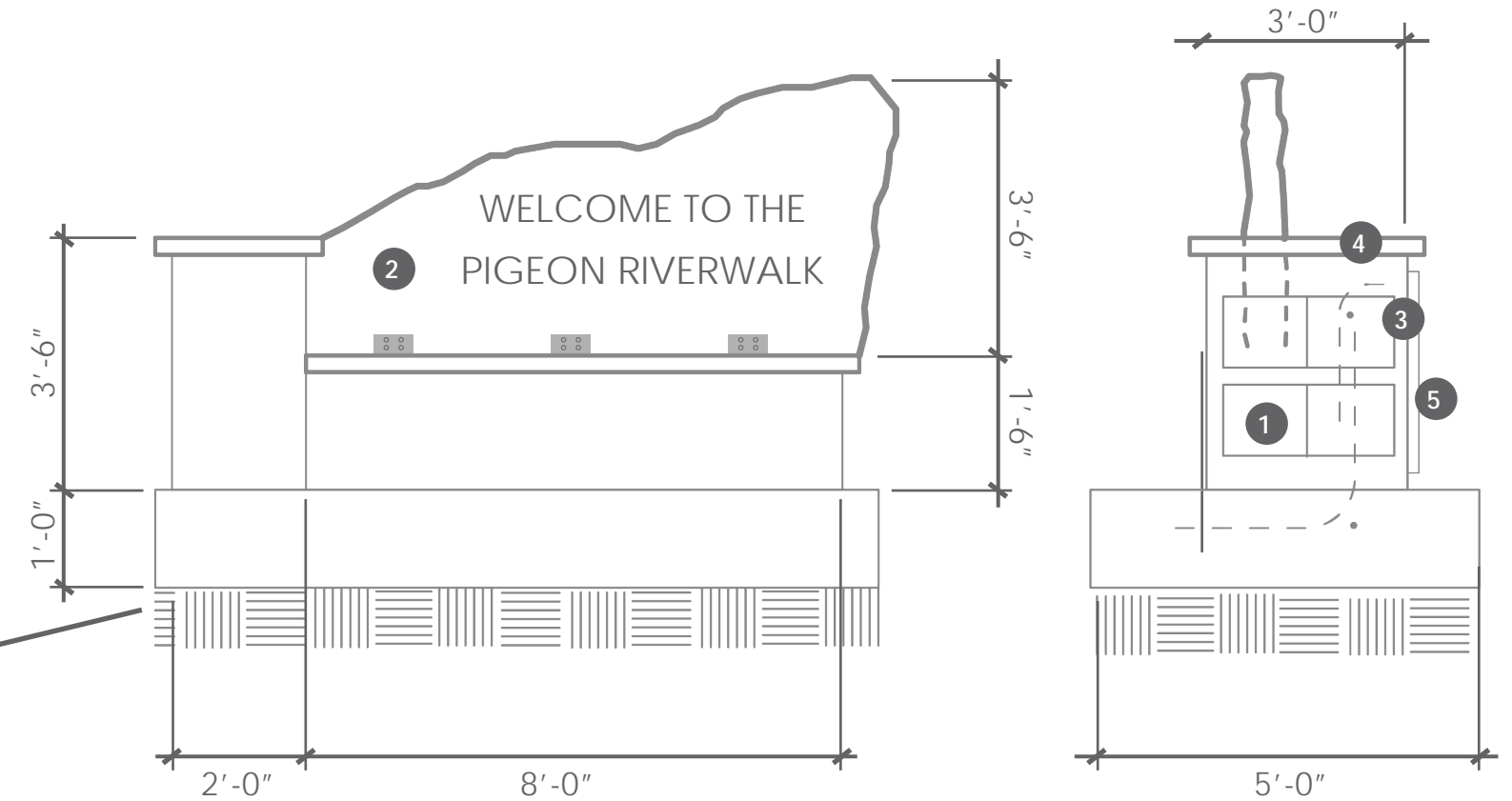
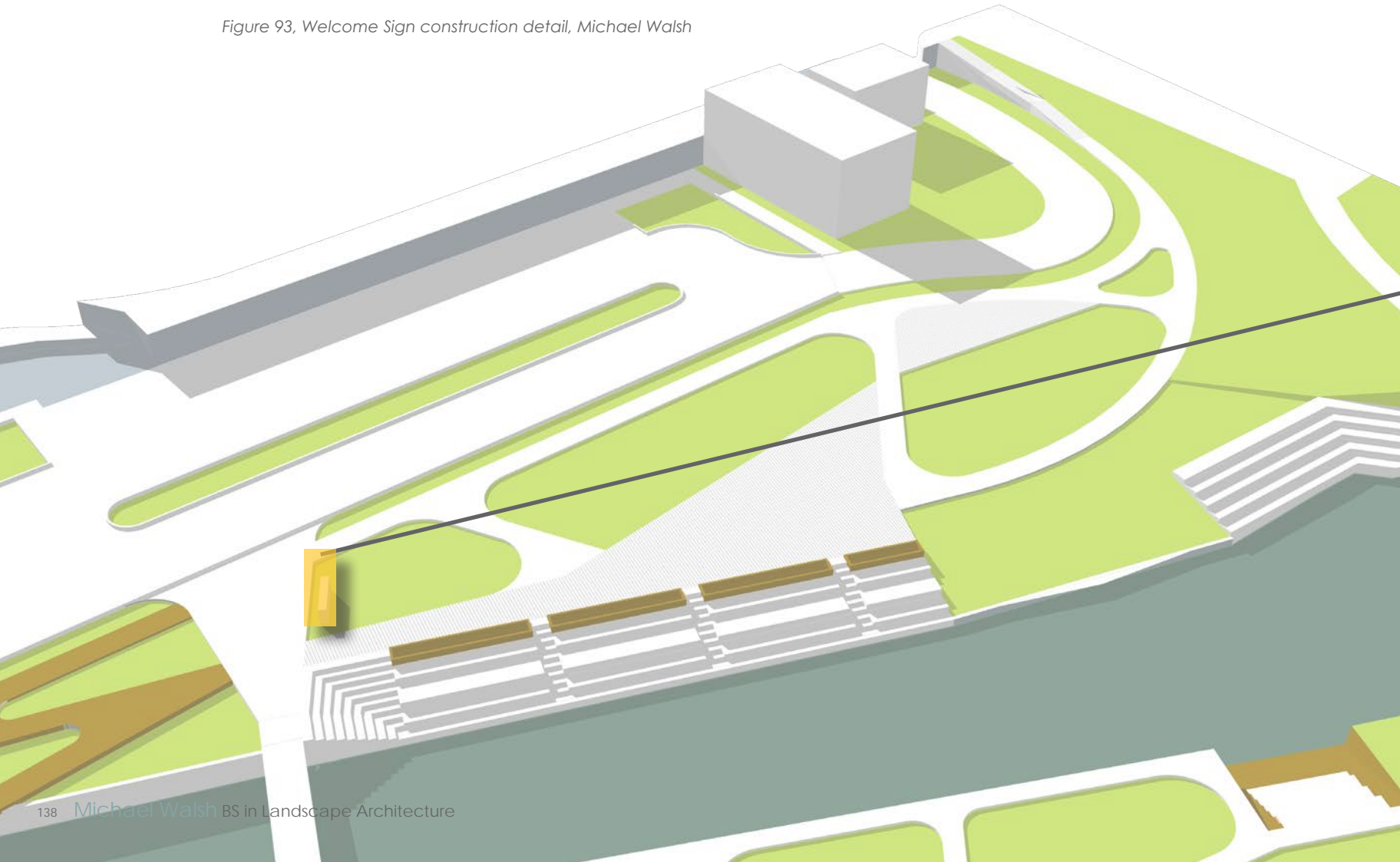
Figure 92, Welcome Sign rendering, Michael Walsh

From this perspective, you can see the viewshed that the sign's axis creates. As one parks and walks towards the riverwalk, one of the first things they see is their welcoming to the riverwalk.

The sign looks over the river and stairs, making it a kodak opportunity for all visitors.

# WELCOME SIGN CONSTRUCTION DETAIL

Figure 93, Welcome Sign construction detail, Michael Walsh



- 1 8"x16" CMU, ASTM C-90-70 GRADE, HOLLOW LOAD BEARING, STANDARD LIGHTWEIGHT UNITS, BOND BEAM, GROUT SOLID ALL CELLS WITH IRON
  - 2 'BOUQUET CANYON' STONE, 5" SPLITS, CHAMFERED EDGES, SAND BLASTED, 2' MINIMUM VERTICAL, 3'-6" MAX HEIGHT
  - 3 TYPE S MORTAR, ASTM C-270, STANDARD COLOR, FLUSH JOINT FINISH
  - 4 3' PRECAST CONCRETE SLAB, ASTM C-143, 'SCOFIELD' INTEGRAL COLOR AD MIX, SCHOONER BEIGE, WITH SHORT STRAND FIBERGLASS PER MFG. RECOMMENDATIONS, TROWEL FINISH, CHAMFERED EDGE
  - 5 STONE VENEER, 'HALQUIST STONE', BLEND COLLECTION, KINGSTON, ATTACH WITH TYPE S MORTAR, STANDARD COLOR, DEEP RAKED
  - 6 GALVANIZED STEEL L BRACKETS, POWDER COATED
- SCALE 1" = 2.5'

# ADDITIONAL PROGRAM

Pigeon Park has the ability to become an entertainment hub. The program can accommodate for concerts, festivals, the farmer's market, and maybe room for some more events!

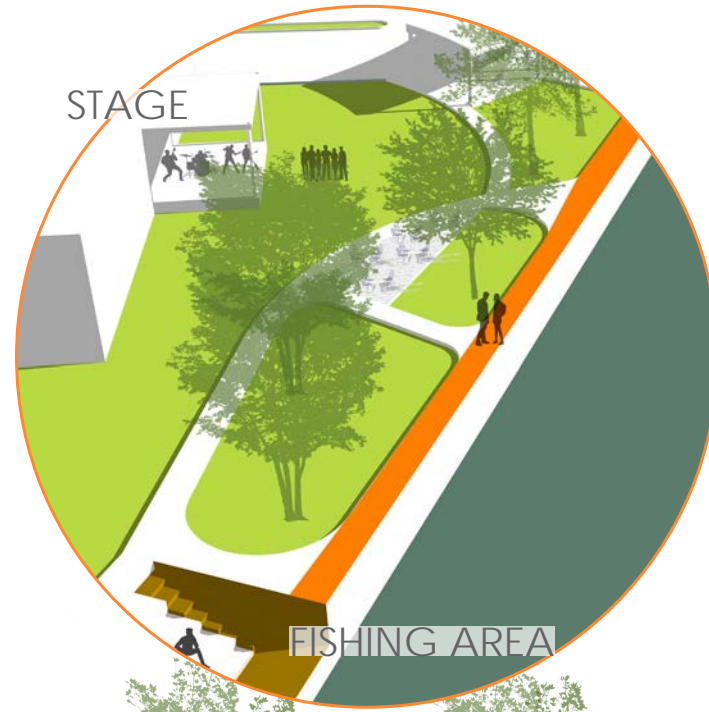
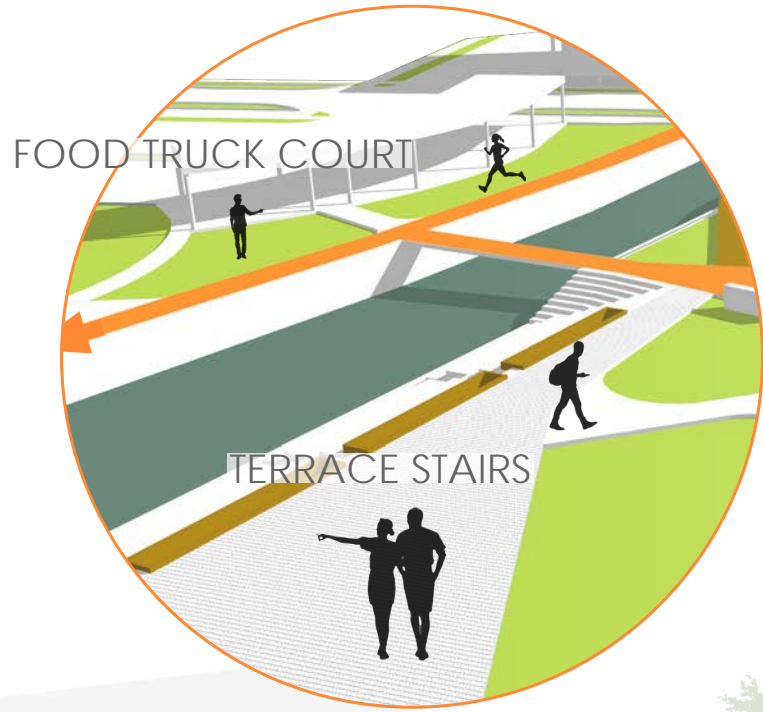
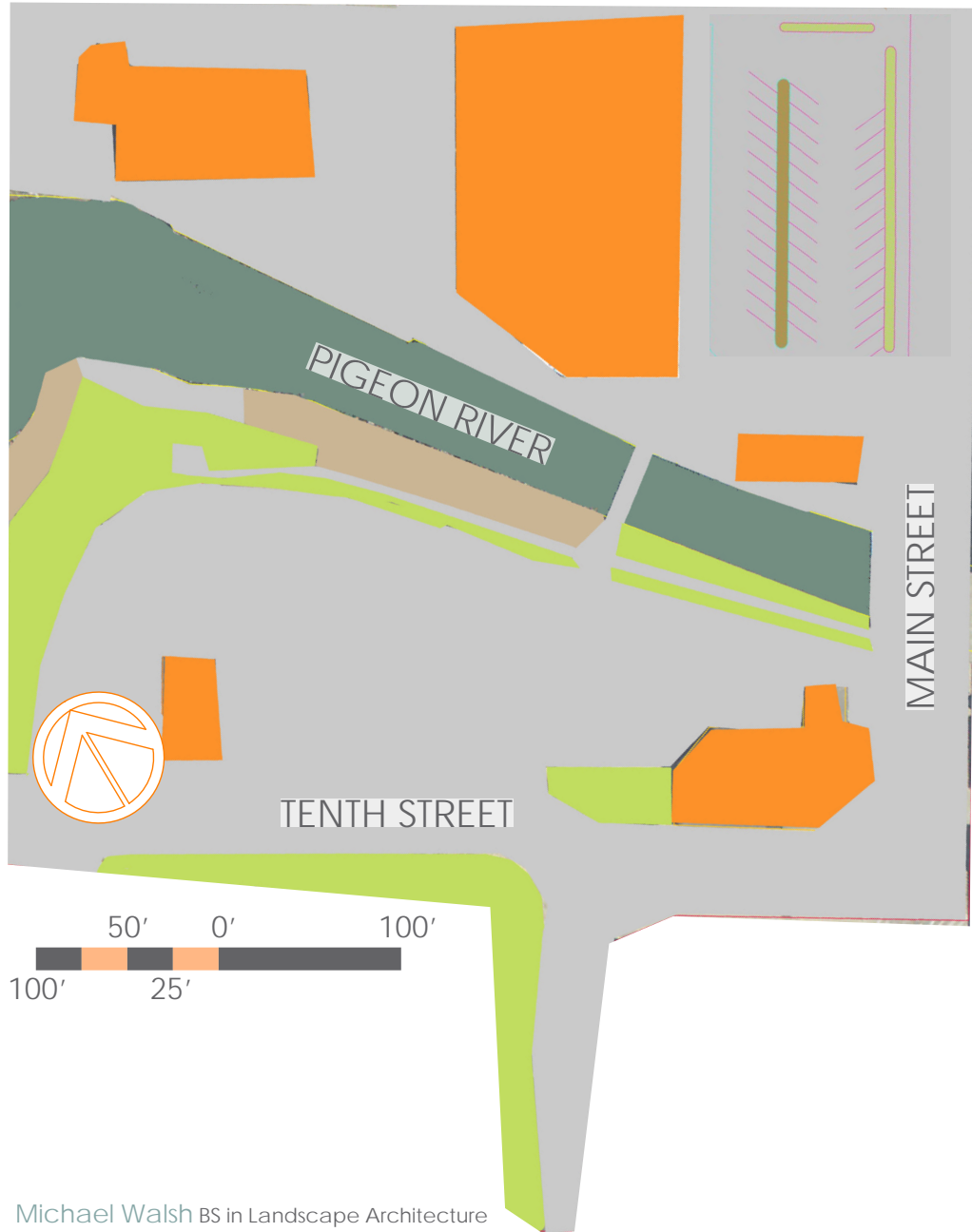


Figure 94. Additional Program diagram, Michael Walsh

# PREQ

Figure 95, preQ diagram, Michael Walsh



As you can see, the existing site is primarily asphalt and/or impermeable material. As Pigeon River is impaired due to its phosphorous level, decreasing the amount of sediment-ridden runoff was an important consideration for the design.

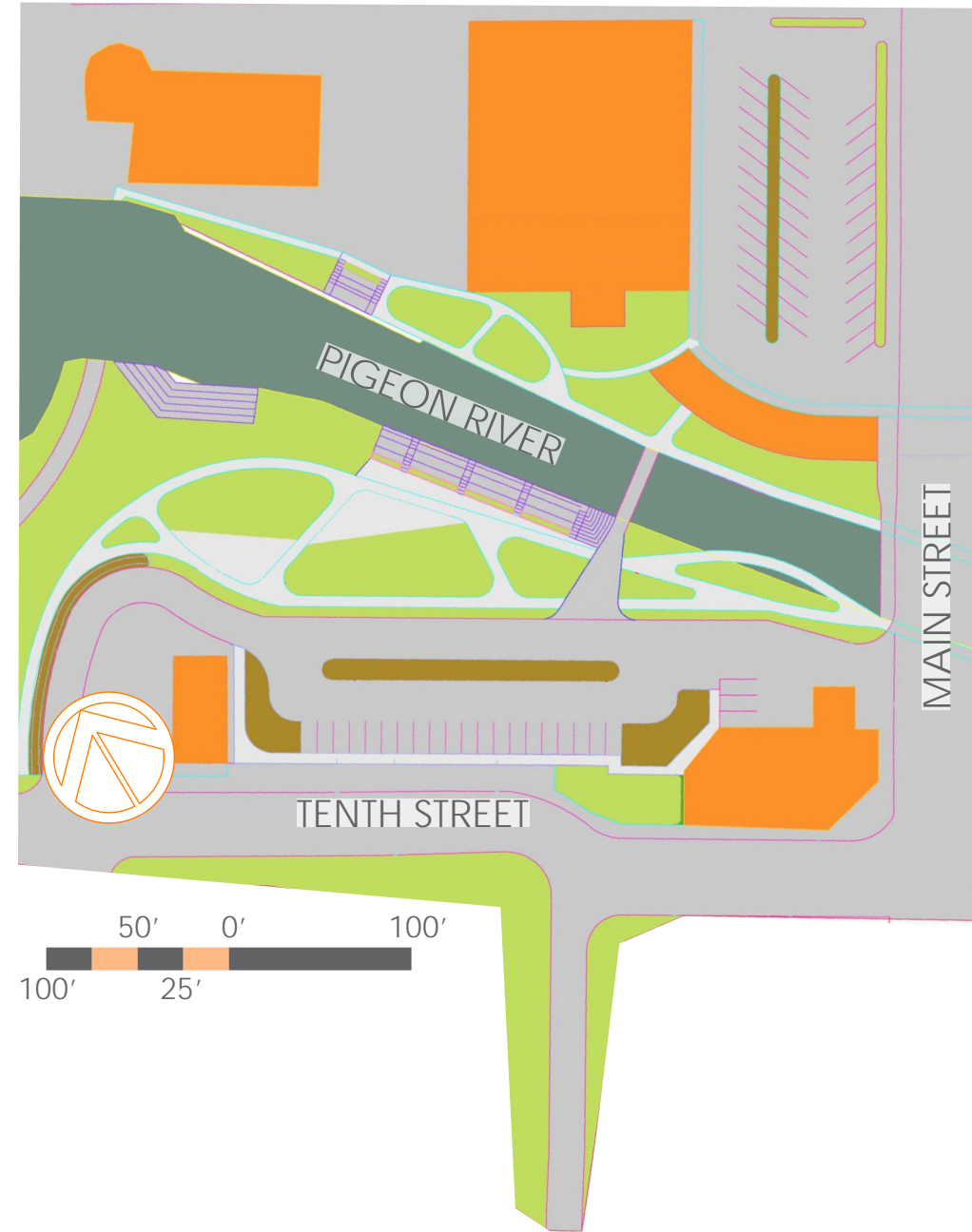
**180,000 ft<sup>2</sup> of asphalt**  
**27,500 ft<sup>2</sup> of lawn**  
**42,000 ft<sup>2</sup> impermeable structure**

- Asphalt
- Gravel
- Buildings
- Lawn

Asphalt : 21.66 cfs  
 Gravel : .2066 cfs  
 Buildings : 5.48 cfs  
 Lawn (loamy sand) : .299 cfs  
 Total preQ : 27.65 cfs

# POSTQ

Figure 96, postQ diagram, Michael Walsh



The final Pigeon Park site design includes permeable material, and stormwater capturing devices that drastically reduce the amount of polluted runoff.

**139,000 ft<sup>2</sup> of asphalt**  
**48,750 ft<sup>2</sup> of lawn**  
**22,500 ft<sup>2</sup> permeable pavement/ material**  
**39,475 ft<sup>2</sup> impermeable structure**

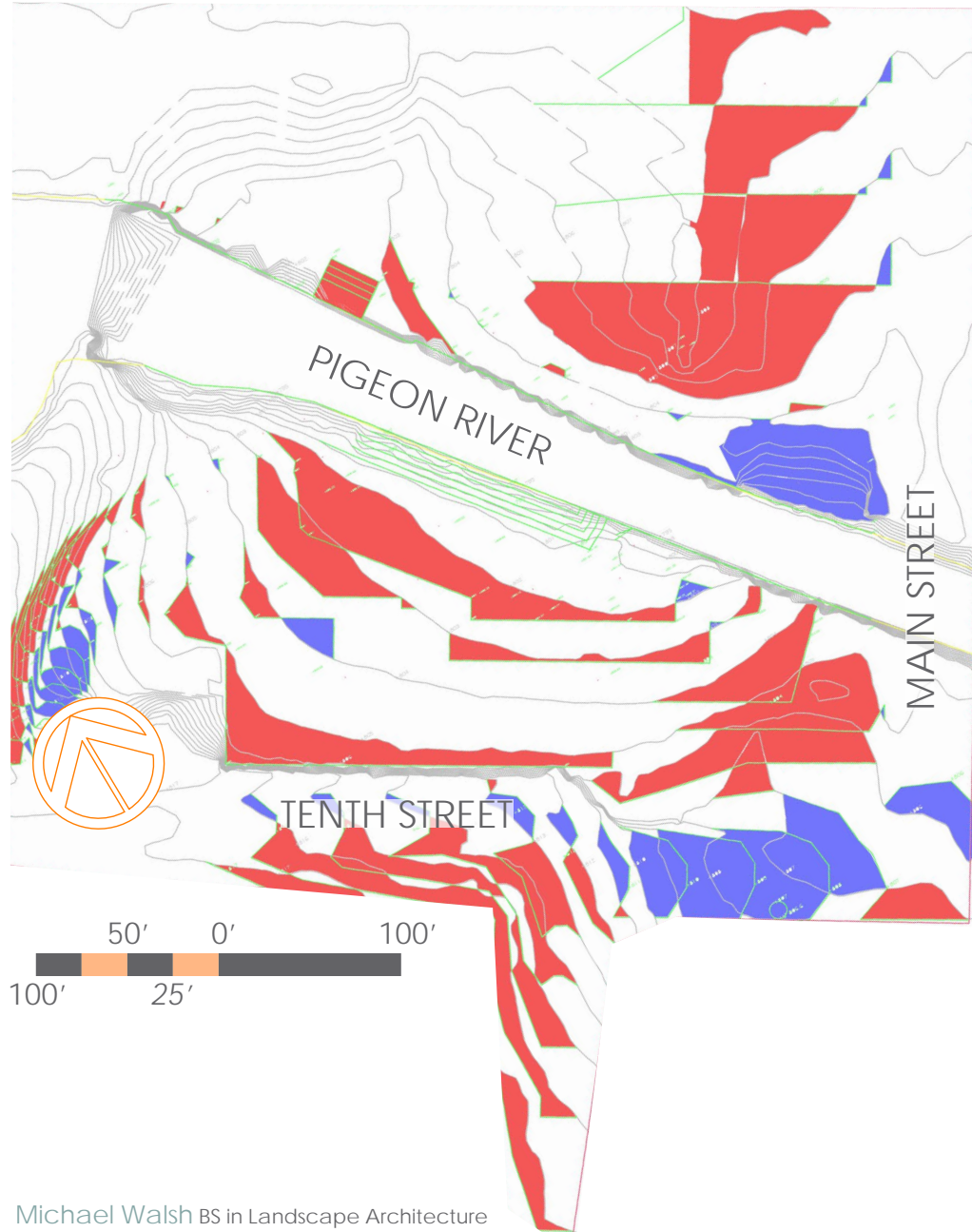
- Asphalt
- Permeable pavement
- Buildings
- Lawn
- Bioswale

Asphalt : 13.39 cfs  
 Permeable pavement : .470 cfs  
 Buildings : 4.2 cfs  
 Lawn (loamy sand) : .945 cfs  
 Bioswale : 1.31 cfs  
 Total preQ : 27.65 cfs



# CUT/FILL

Figure 97, cut & fill diagram, Michael Walsh



■ Cut  
■ Fill

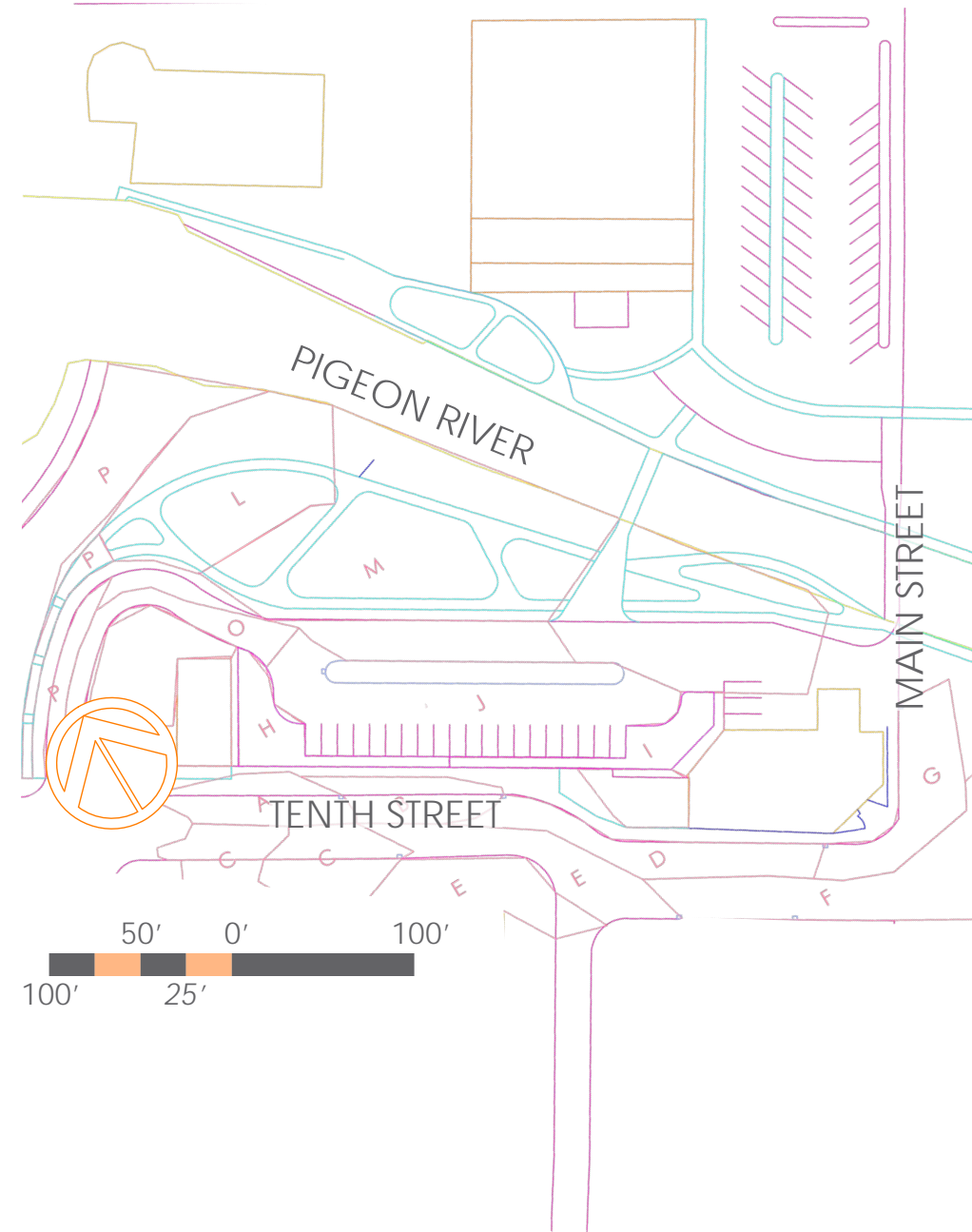
Total cut : 60,698 ft<sup>2</sup>  
 Total fill : 17,810 ft<sup>2</sup>

After I figured the grade that needed to be manipulated for the design, I calculated the total cut and fill. The major points of change were:

- commercial building NE of river
- small business building NE of river
- the large parking lot by the community center
- NW portion of the site to accommodate for the ADA ramp

# MICROWATERSHEDS

Figure 98, microwatershed diagram, Michael Walsh



## Microwatershed Values

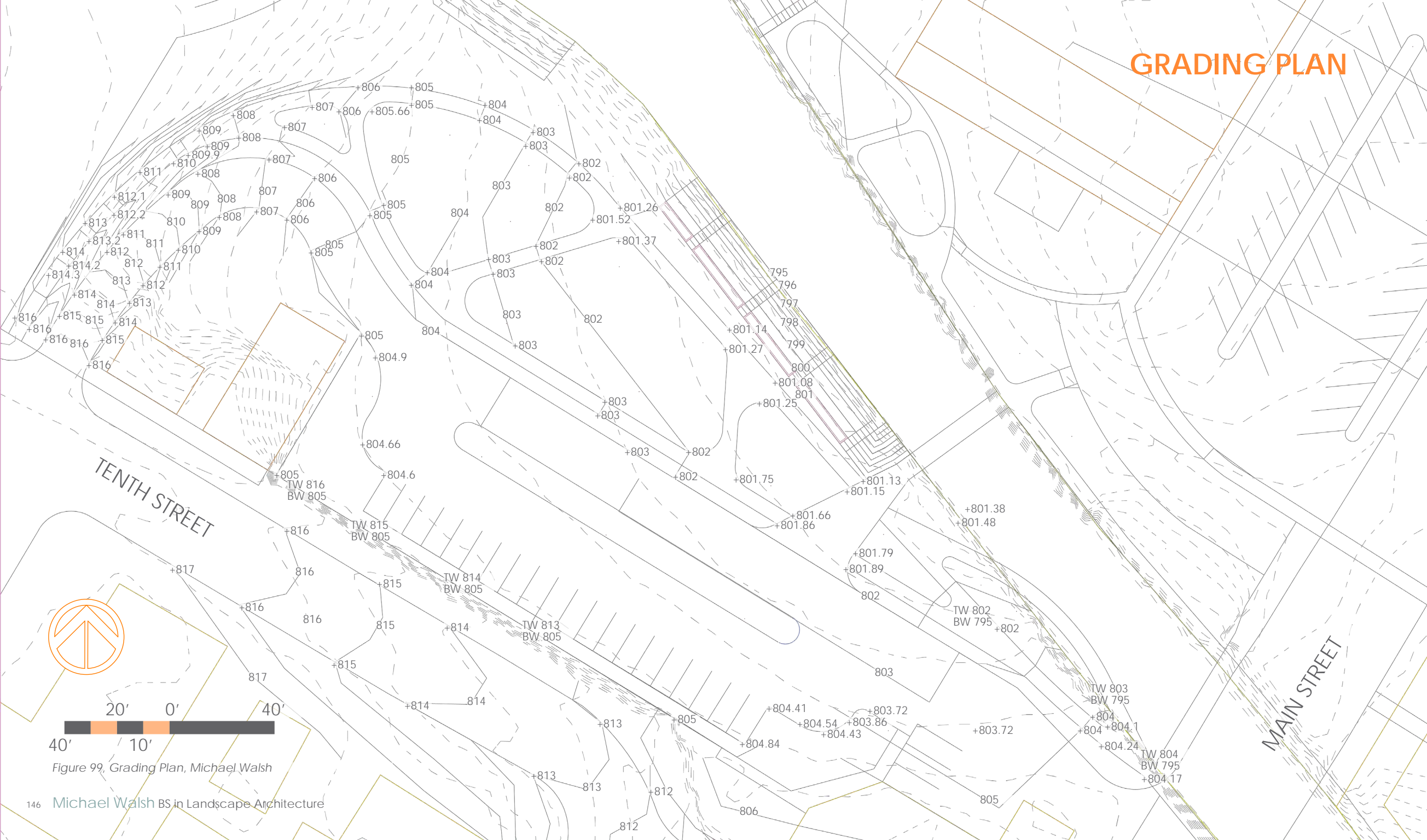
- A. .33 cfs
- B. .28 cfs
- C. .31 cfs
- D. .43 cfs
- E. .46 cfs
- F. .76 cfs
- G. .52 cfs
- H. .05 cfs
- I. .15 cfs
- J. .53 cfs
- K. .18 cfs
- L. .46 cfs
- M. .50 cfs
- P. .33 cfs

I separately calculated the Q value within the microwatersheds on-site. Once those values were attained, they were taken and converted into volumes, which could then be used to decipher the amount of pipes and storage vessels would be required on-site.

# GRADING PLAN

## Key

- - - Existing
- Proposed
- 803 Contour value
- +805.46 Spot Elevation
- TW 803 Top of Wall
- BW 801 Bottom of Wall



Contour Interval = 1'-0"

This grading plan includes top of wall (TW), bottom of wall (BW), existing and proposed contours, and spot elevations at major points of construction

Figure 99, Grading Plan, Michael Walsh

# STORMWATER MANAGEMENT PLAN

## Key

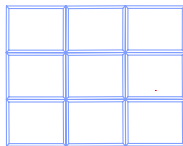
- RE 805 Rim elevation
- IE 802 Invert elevation
- ø 8" Ø Pipe diameter
- ~795 Daylight elevation



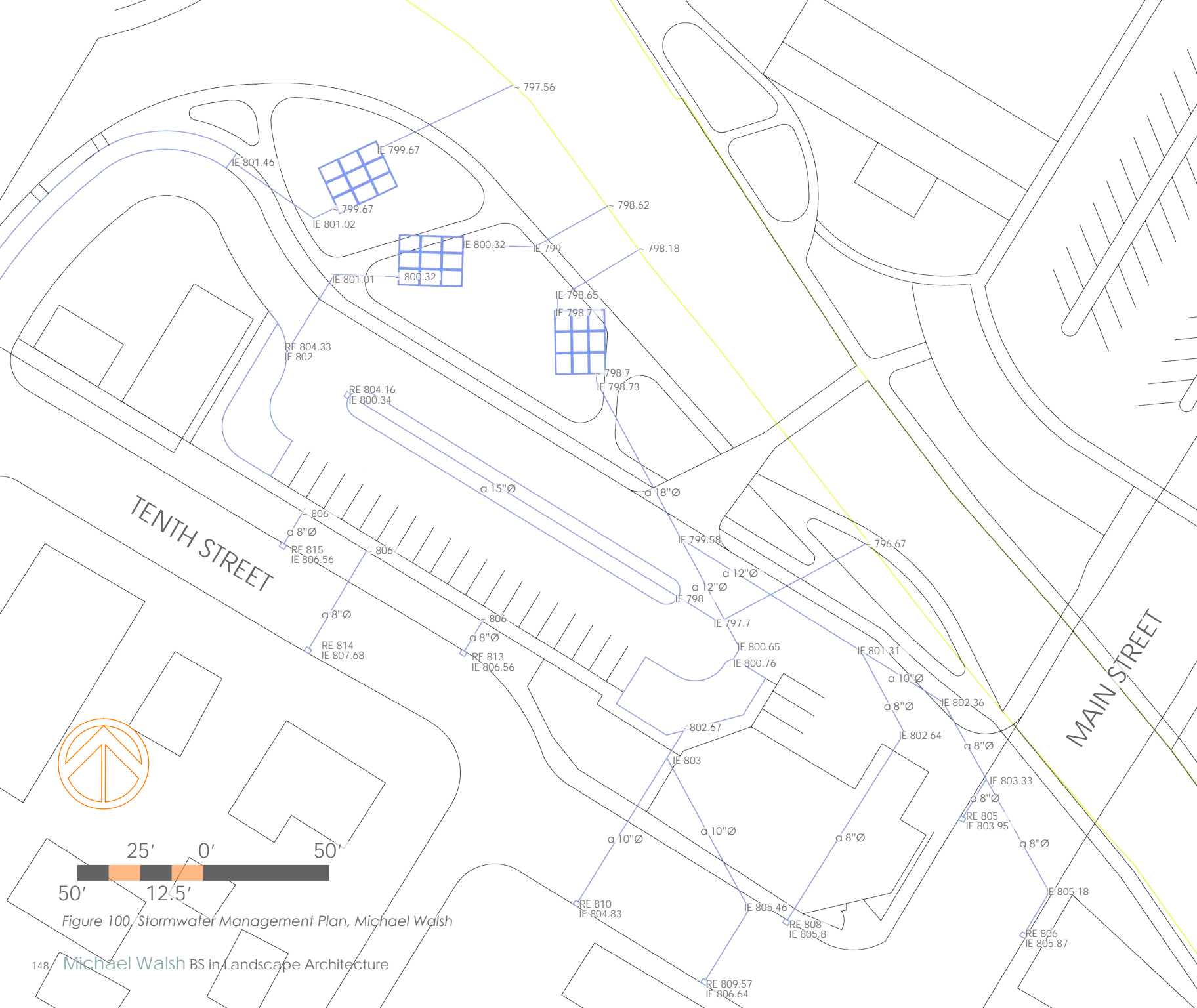
Level Spreader #1:  
3,330 ft<sup>3</sup> max volume



Level Spreader #2:  
3,018 ft<sup>3</sup> max volume



(3) SC-34 Stormchamber:  
675 ft<sup>3</sup> volume per stormchamber



The site has 3 SC-34 stormchambers that are below some of the patio spaces in Pigeon Park. In addition, level spreaders and bioswales assist in the amount of water that can be retained on site.

Figure 100 Stormwater Management Plan, Michael Walsh



## PLANTING PLAN - TREES & SHRUBS

Qty.	Key	Symbol	Scientific/Common name	Condition
(3)	CC		<i>Cercis Canadensis</i> Eastern redbud	5' , 5 gal container
(14)	AWR		<i>Acer 'Warrenred'</i> Pacific Sunset maple	5' , 5 gal container
(5)	AR		<i>Acer rubrum</i> Red maple	5' , 5 gal container
(4)	CS		<i>Cornus sericea</i> Red-twig dogwood	5' , 5 gal container
(4)	BN		<i>Betula nigra</i> River birch	4" caliper, b&b
(2)	PO		<i>Platanus occidentalis</i> American sycamore	4" caliper, b&b
(2)	AS		<i>Acer saccharum</i> Sugar maple	4" caliper, b&b
(13)	RG		<i>Rhus glabra</i> Smooth sumac	5' , 5 gal container
(8)	RA		<i>Rhus aromatica</i> fragrant sumac	5' , 5 gal container

Displayed to the left is the planting plan for Pigeon Park. The plan utilizes large specimen trees, shrubs, and smaller canopy trees. In addition, a riparian buffer mix was created to assist in retaining water on-site, and remediate some flooding issues.

Figure 101, Planting Plan - trees & shrubs, Michael Walsh



## PLANTING PLAN - RIPARIAN MIX / POTTED PLANTS

Key	Scientific/Common name	Ratio/ Condition	Height	Blooms
Riparian buffer/ Bioswale mix	<i>Andropogon gerardi</i> big bluestem	.30 of mix	6-7'	n/a
	<i>Schizachyrium scoparium</i> little bluestem	.10 of mix	1-2'	n/a
	<i>Sorghastrum scoparium</i> indiangrass	.20 of mix	3-5'	late summer - early fall
	<i>Panicum virgatum</i> switchgrass	.20 of mix	6-8'	fall/ summer
	<i>Phalans arundinacea</i> reed canarygrass	.20 of mix	2-6'	summer
Potted plants	<i>Lolium perenne</i> perennial ryegrass	use seed	??'	n/a
	<i>Schizachyrium scoparium</i> little bluestem	1 gal container	1-2'	n/a
	<i>Aquilegia</i> columbine	#2 container	1-3'	mid-spring - early summer
	<i>Carex hystericina</i> bottlebrush sedge	#2 container	2-4'	summer

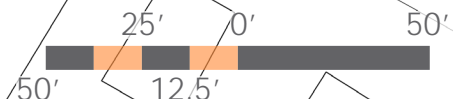
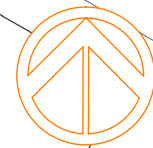
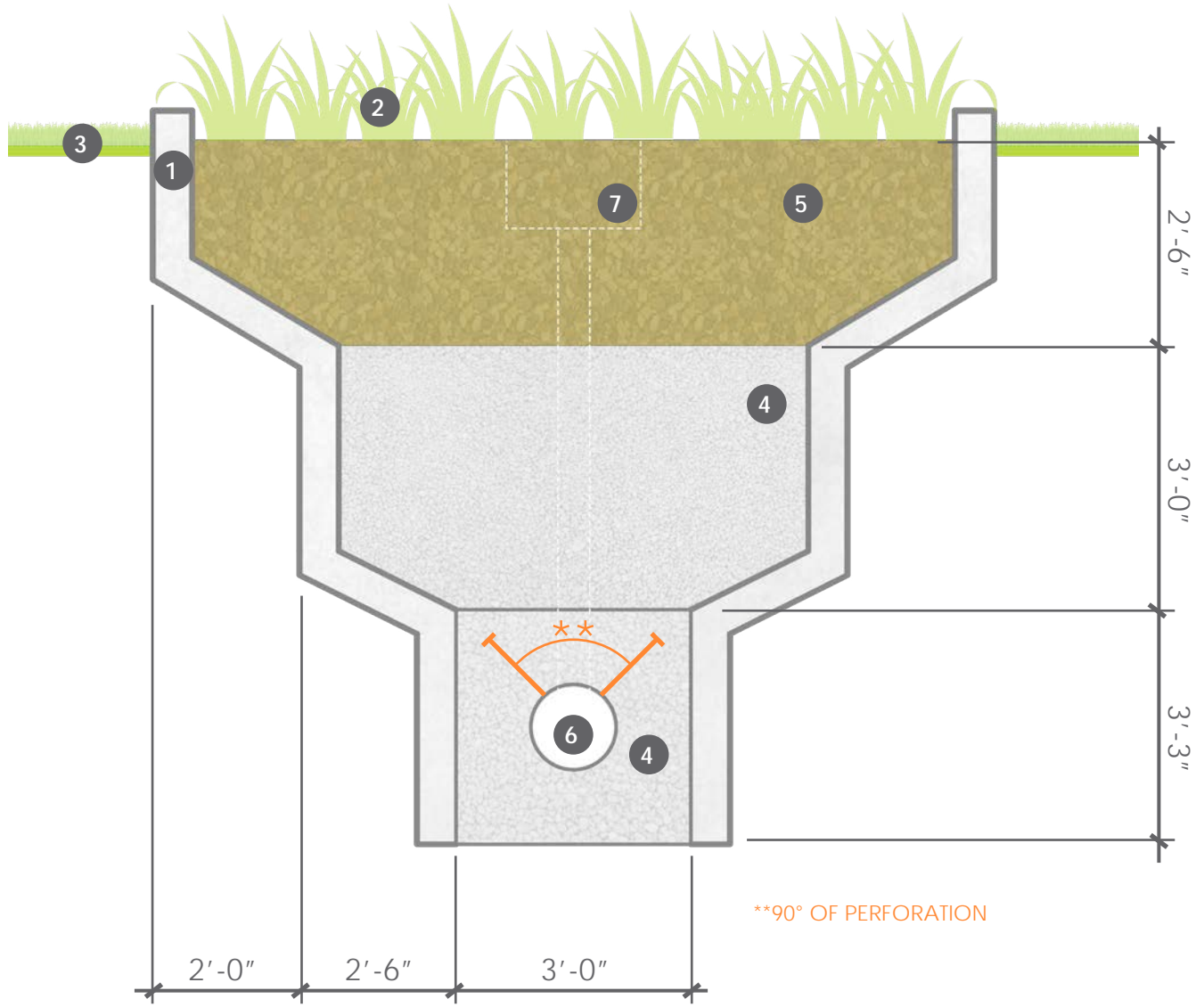


Figure 102, Planting Plan - forbs, Michael Walsh

# BIOSWALE CONSTRUCTION DETAIL



\*\*90° OF PERFORATION

SCALE 1" = 2'

- 1 CONCRETE EDGE, ASTM C-143, SMOOTH TROWEL FINISH TOP
- 2 FORBS, SEE PAGE (BLANK) FOR MIX
- 3 FINISH GRADE
- 4 3/4" Ø CLEAN CRUSHED STONE, COMPACT TO 95% IN 3" LIFTS
- 5 STRUCTURAL SOIL, 20% COMPOST, 30% TOPSOIL, 25% SAND, 25% CRUSHED GRANITE
- 6 15" Ø PVC SCH-40, PERFORATED PVC, SEE \*\* FOR PERFORATION, INSTALL WITH 2% SLOPE
- 7 12" X 12" CATCH BASIN, SCH-40, WWW.DRAINAGEDIRECT.COM

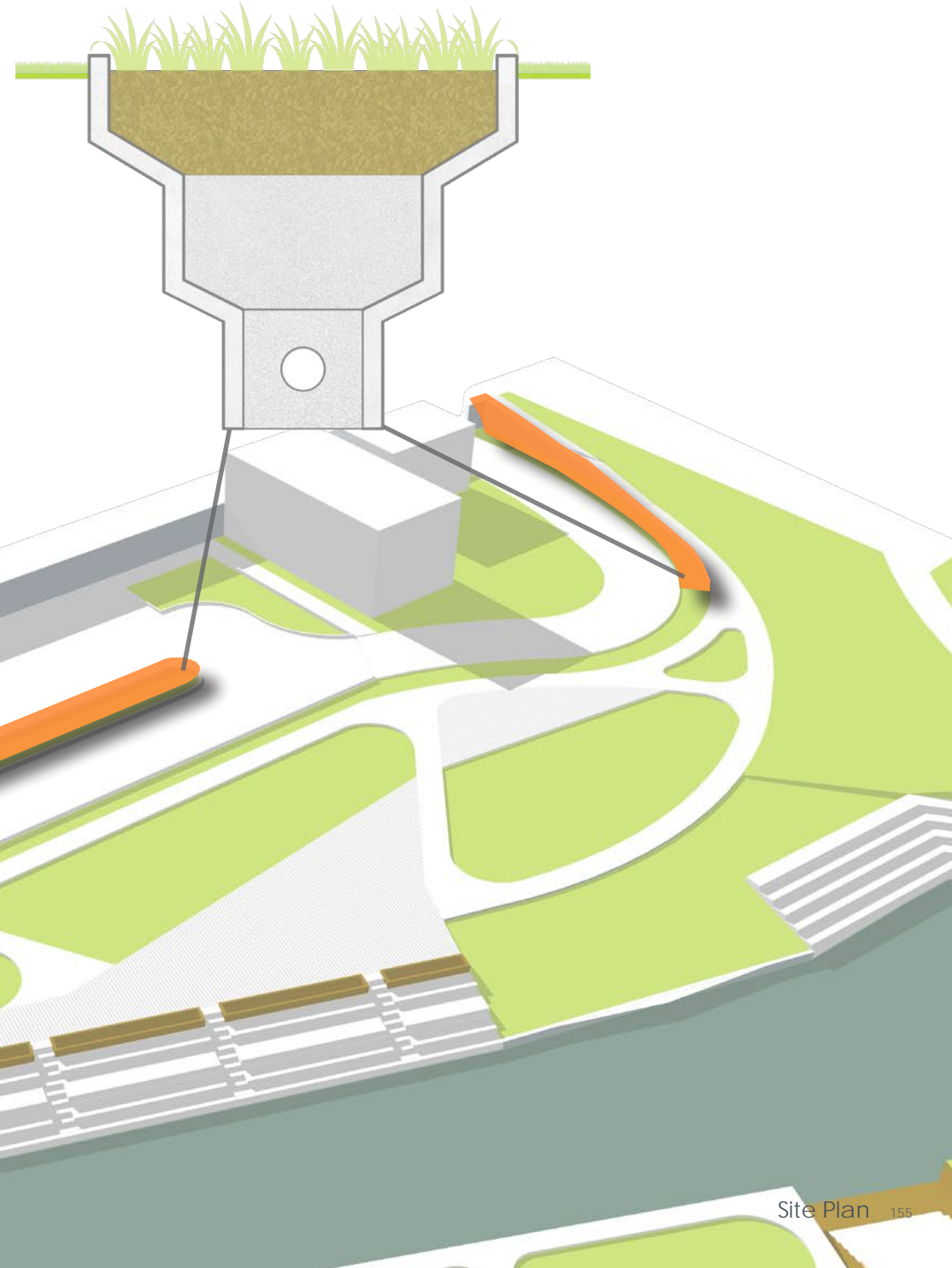


Figure 103, Bioswale construction detail, Michael Walsh



## PHASING STRATEGY

In order to make this project more feasible, the program was divided into different phases that could be completed over the next couple decades.

1

Phase 1 includes the re-oriented parking lot, the level spreader and bioswale systems, the welcome sign, lawn/patio spaces/ paths SW of river, forbs plantings, and half of the trees SW of river (reccomendation to plant large canopy/ specimen trees first).

2

Phase 2 includes the terrace stairs adjacent to Pigeon River, the suspended deck, remaining plantings on the SW side of the river.

3

Phase 3 includes the rest of the tree plantings, path system NE of river, and the designated fishing area.

4

Phase 4 shall develop the entertainment stage/ lawn space, the food truck court area with tables and chairs, and the demolition of 1 or 2 of the units in the existing commercial building to accomodate for the stage space. As it is the end of development for the park, this phase shall also include other site furniture (benches and lighting elements).

5

Phase 5 is making Main Street safer with the curb bumpouts, trees, and other plantings. Painted crosswalks, wayfinding along Main Street, and renovated storefronts are part of this stage.

6

Phase 6 includes the adaptive re-use of the Merc building, or the demolition and redevelopment of the mixed-use building. Once the building is complete, the rest of the Pigeon Riverwalk shall be implemented in order to link with Olen Park. In addition, the skate park should be moved to its appropriate location.

Figure 104, Site Plan - Phasing Strategy, Michael Walsh

# LOOKING FORWARD

## Future Design and Planning Impacts

The Downtown Open Space Master Plan for the City of Clintonville can assist in strengthening the destination of the downtown. The Pigeon Riverwalk will aid in decreasing the amount of travelers that pass through the town, and get people to stop and enjoy the park and downtown Clintonville.

The project will connect to Olen Park, and maybe influence more community members to get outside and enjoy nature. The riverwalk encourages fitness by generating a path for running or walking, as well as creating a safer place for kids to play.

The Merc Building can become a precedent for mixed-use development or renovation. In the future, I can see more affordable housing projects implemented in small town Wisconsin, especially because many people are beginning to migrate to urban areas.

When there is great reason provided to visit the downtown region of where you live, there is more opportunity for small business to flourish.

In addition, I hope this project can aid in the importance of having human scale in an urban area. Places that don't have benches, outdoor seating, lighting fixtures, tree canopy, pedestrian crosswalks, are more intimidating for your average pedestrian, and discourage walking.

## Grant and Funding Opportunities

The Clintonville Comprehensive Plan 2040 mentions a number of ways the city can acquire funding for future development.

Grant programs for updated signage, facade renovation, and structural repairs were discussed in the document. Acquiring funding for the Downtown Clintonville streetscape will be important for the project.

The Wisconsin Department of Administration developed a consolidated housing plan for the state specifically for use within the division of housing. This is good news for the Merc building proposal. The fact that an adaptive re-use building in the heart of the city provides great economic opportunity for the region, and surrounding urban centers.

The city should inquire about multi-family and affordable housing funding through the Department of Housing & Urban Development as the renovated Merc Building is a great location for affordable housing.

WI-22 State highway runs straight through downtown Clintonville. The riverwalk project generates potential for more visitors to stop in the city, as oppose to just traveling through. The Department of Transportation may also see this as opportunity.

The National Housing Trust Fund is a program designed to complement existing state and local efforts to fund the increase of affordable housing. This fund could be applied to the Merc building as well as other potential buildings along Main Street.

## Conclusion and Critical Reflection

The information in the inventory and analysis remains valid, as all maps and graphics were generated using ArcGIS, the Clintonville Comprehensive Plan 2040, data from up to date US Census databases, among other reputable sources. Client and community feedback was an important aspect of design.

This year has been a fantastic time of learning. Working with a small community and a real client afforded me a perspective of design, information gathering, synthesizing, and community engagement that I have not experienced before. It was most definitely a great challenge, but I would not have had it any other way.

After having gone through capstone, there are aspects of my research, analysis, and graphic communication that I would have done differently or more proficiently. For example, some of the renderings I created first semester do not look as visually pleasing as I thought they looked at the end of last semester. This proves that this year has been the most rapid environment of learning I have ever been a part of. By the end of the year, my visual eye has changed immensely and improved.

I did my best to accommodate the client and communities' needs in the program, while maintaining a level of design, technicality, and standard that my professors want to see. The extent of the project is thorough and large enough that maybe only aspects of the program will be taken into consideration for the future.

As the year went on, the extent/ scale of my project changed drastically. Initially, I thought I

would be able to include a long-term economic plan for the Main Street downtown district, but this became too hefty of an issue to be able to generate a thorough plan. In addition, Olen Park was a large part of the project at first, but realizing how regional the stormwater management issues were, it was clear that it would have been too difficult and time consuming to include a regional management plan. Instead, I thought my time was better spent on focusing on the downtown, and how we could reactivate the riverwalk, in order to further the economic potential in Clintonville.

A visual communication issue I found late in the game was the orientation of all my site plan renderings. In retrospect, my site plan would have communicated better if the vertical and horizontal axis of the river and park were perpendiculars the landscape orientation of the document. That way the plans were not a parallelogram, but a rectangle.

Overall, this was a fantastic finale to my college career, and I look forward to how the skills I've learned assist me in the professional world.



**APPENDIX**  
**CALCULATIONS**  
**TIME LOGS**  
**LIST OF FIGURES**  
**LITERATURE REFERENCES**

# STORMWATER MANAGEMENT CALCULATIONS

Q = (Runoff Coefficient) (Intensity) (Area)

## PreQ

*asphalt*

$$66.2 \text{ in}^2 \times 50 \times 50 = 165,000 \text{ ft}^2 / 43,560 \text{ ft}^2 = (3.79) \\ (6)(.95) = 21.66 \text{ cfs}$$

*gravel*

$$3 \text{ in}^2 \times 50 \times 50 = 7,500 \text{ ft}^2 / 43,560 \text{ ft}^2 = (.172)(6)(.7) \\ = .2066 \text{ cfs}$$

*buildings*

$$16.75 \text{ in}^2 \times 50 \times 50 = 41,875 \text{ ft}^2 / 43,560 \text{ ft}^2 = (.96)(6) \\ (.95) = 5.48 \text{ cfs}$$

*lawn*

$$5.79 \text{ in}^2 \times 50 \times 50 = 14,475 \text{ ft}^2 / 43,560 \text{ ft}^2 = (.332)(6) \\ (.15) = .299 \text{ cfs}$$

**PreQ = 27.65 cfs**

## PostQ

*asphalt*

$$40.92 \text{ in}^2 \times 50 \times 50 = 102,300 \text{ ft}^2 / 43,560 \text{ ft}^2 = (2.35) \\ (6)(.95) = 13.39 \text{ cfs}$$

*buildings*

$$11.4 \text{ in}^2 \times 50 \times 50 = 28,500 \text{ ft}^2 / 43,560 \text{ ft}^2 = (.654)(6) \\ (.95) = 3.729 \text{ cfs}$$

*lawn*

$$18.3 \text{ in}^2 \times 50 \times 50 = 45,750 \text{ ft}^2 / 43,560 \text{ ft}^2 = (1.05)(6) \\ (.15) = .945 \text{ cfs}$$

*permeable pavers*

$$1.75 \text{ in}^2 \times 50 \times 50 = 4,375 \text{ ft}^2 / 43,560 \text{ ft}^2 = (.1004)(6) \\ (.2) = .120 \text{ cfs}$$

*bioswale*

$$1.59 \text{ in}^2 \times 50 \times 50 = 3,975 \text{ ft}^2 / 43,560 \text{ ft}^2 = (.091)(6) \\ (.2) = .1095 \text{ cfs}$$

*permeable concrete*

$$5.183 \text{ in}^2 \times 50 \times 50 = 12,957 \text{ ft}^2 / 43,560 \text{ ft}^2 = (.297) \\ (6)(.2) = .357 \text{ cfs}$$

*level spreader*

$$.899 \text{ in}^2 \times 50 \times 50 = 2,247 \text{ ft}^2 / 43,560 \text{ ft}^2 = (.052)(6) \\ (.2) = 1.20 \text{ cfs}$$

**PostQ = 19.85 cfs**

# GRADING CALCULATIONS

(volume in<sup>2</sup>) (50 x 50 [ft<sup>2</sup>]) = cut or fill

## Cut

*NE of River*

$$1.56 \text{ in}^2 \times 50 \times 50 = 3,900 \text{ ft}^2 \\ .938 \text{ in}^2 \times 50 \times 50 = 2,345 \times 2 = 4,690 \text{ ft}^2 \\ .63 \text{ in}^2 \times 50 \times 50 = 1,575 \times 3 = 4,725 \text{ ft}^2 \\ .214 \text{ in}^2 \times 50 \times 50 = 535 \times 4 = 2,140 \text{ ft}^2 \\ .88 \text{ in}^2 \times 50 \times 50 = 2,200 \text{ ft}^2 \\ .433 \text{ in}^2 \times 50 \times 50 = 1,082 \times 2 = 3900 \text{ ft}^2 \\ .989 \text{ in}^2 \times 50 \times 50 = 2,472 \text{ ft}^2 \\ .655 \text{ in}^2 \times 50 \times 50 = 1,637.5 \text{ ft}^2 \\ .022 \text{ in}^2 \times 50 \times 50 = 55 \text{ ft}^2 \\ .0156 \text{ in}^2 \times 50 \times 50 = 39 \text{ ft}^2 \\ .253 \text{ in}^2 \times 50 \times 50 = 632 \text{ ft}^2 \\ .242 \text{ in}^2 \times 50 \times 50 = 605 \text{ ft}^2 \\ .201 \text{ in}^2 \times 50 \times 50 = 502 \times 2 = 1,005 \text{ ft}^2 \\ .16 \text{ in}^2 \times 50 \times 50 = 400 \times 3 = 1,200 \text{ ft}^2 \\ .119 \text{ in}^2 \times 50 \times 50 = 297.5 \times 4 = 1,190 \text{ ft}^2 \\ .006 \times 50 \times 50 = 15 \text{ ft}^2$$

**Cut = 28,670 ft<sup>2</sup> NE of River**

## Fill

*NE of River*

$$.106 \text{ in}^2 \times 50 \times 50 = 265 \text{ ft}^2 \\ .538 \text{ in}^2 \times 50 \times 50 = 1,345 \text{ ft}^2 \\ .202 \text{ in}^2 \times 50 \times 50 = 505 \times 4 = 2,020 \text{ ft}^2 \\ .14 \text{ in}^2 \times 50 \times 50 = 350 \times 3 = 1,050 \text{ ft}^2 \\ .208 \text{ in}^2 \times 50 \times 50 = 520 \times 2 = 1,040 \text{ ft}^2 \\ .16 \text{ in}^2 \times 50 \times 50 = 400 \text{ ft}^2$$

**Fill = 6,120 ft<sup>2</sup> NE of River**





## Graphic Figures

Figure 1- Michael Walsh  
Figure 2- Waupaca County Location Map, Michael Walsh  
Figure 3- Workflow Diagram, Michael Walsh  
Figure 4- Waupaca County Regional Context Map, Google Earth  
Figure 5- Waupaca County Context Map, Michael Walsh  
Figure 6- Wisconsin Historical Society  
Figure 7- The Nature Conservancy  
Figure 8- Northwest Railway Museum  
Figure 9- East Central Wisconsin Regional Planning Commission Cover Page  
Figure 10- East Central Wisconsin Regional Planning Commission Logo  
Figure 11- Downtown Streetscape  
Figure 12- Traffic Calming  
Figure 13- Stormwater Systems  
Figure 14- Event Programming  
Figure 15- Activated Riverwalk  
Figure 16- Pine Forest Enclosure  
Figure 17- San Antonio Riverwalk  
Figure 18- Mill River Park, Olin Studios  
Figure 19- Hudson River Park, Olin Studios  
Figure 20- San Antonio Riverwalk Design Diagrams  
Figure 21- Mill River Park, Olin Studios  
Figure 22- Hudson River Park, Olin Studios  
Figure 23- Land Use Map, Michael Walsh  
Figure 24- Parks and Recreation Map, Michael Walsh  
Figure 25- Population Density Map, Michael Walsh  
Figure 26- Population and Population Density Graphs, US Census  
Figure 27- Groundwater Management - Permeability, Wisconsin DNR  
Figure 28- Seven Maples Area, City of Clintonville  
Figure 29- Pigeon Riverwalk, Michael Walsh  
Figure 30- Bucholtz Park, Michael Walsh  
Figure 31- Walter A. Olen Park, Michael Walsh  
Figure 32- Green Space - City of Clintonville Map, Michael Walsh

Figure 33- Park Proximity Map, Michael Walsh  
Figure 34- Zoning Map, City of Clintonville  
Figure 35- Circulation Map, Department of Transportation  
Figure 36- FEMA Floodway Map, Michael Walsh (FEMA)  
Figure 37- Canopy Cover Diagram, Michael Walsh  
Figure 38- Parking Lot Diagram  
Figure 39- Impervious vs. Pervious Diagram, Michael Walsh  
Figure 40- Usable Open Space Diagram, Michael Walsh  
Figure 41- District Map, Michael Walsh  
Figure 42- Olen Park Context Aerial, Michael Walsh  
Figure 43- Olen Park Bridge, Michael Walsh  
Figure 44- Flooded Olen Park Bridge, City of Clintonville  
Figure 45- Economic District Context Aerial, Michael Walsh  
Figure 46- Economic District Issues, Michael Walsh  
Figure 47- Economic District Annotated Character Imagery, Michael Walsh  
Figure 48- Economic District Opportunities, Michael Walsh  
Figure 49- Pigeon Riverwalk District Context Aerial, Michael Walsh  
Figure 50- Pigeon Riverwalk District Annotated Character Imagery, Michael Walsh  
Figure 51- Pigeon Riverwalk District Perspective Map, Michael Walsh  
Figure 52- Pigeon Riverwalk District Annotated Character Imagery, Michael Walsh  
Figure 53- Downtown to Green Space Lack of Connection, Michael Walsh  
Figure 54- Mercator Building Annotated Character Imagery, Michael Walsh  
Figure 55- Pigeon Riverwalk District Perspective Map, Michael Walsh  
Figure 56- Event Examples, City of Clintonville, Michael Walsh  
Figure 57- Mercator Building, Michael Walsh  
Figure 58- Downtown to Olen Park Connection Graphic, Michael Walsh  
Figure 59- Site Soils Map, Michael Walsh  
Figure 60- Land Use, Michael Walsh  
Figure 61- Zoning, Michael Walsh  
Figure 62- Micro-Watershed Analysis, Michael Walsh  
Figure 63- Downtown District Context Aerial, Michael Walsh

Figure 64- Character Imagery, Spatial Diagram 1, Michael Walsh  
Figure 65- Spatial Recommendation Diagram 1, Michael Walsh  
Figure 66- Character Imagery, Spatial Diagram 2, Michael Walsh  
Figure 67- Spatial Recommendation Diagram 2, Michael Walsh  
Figure 68- Spatial Recommendation Comparison, Michael Walsh  
Figure 69- Streetscape concept, Michael Walsh  
Figure 70- Waupaca County News Article 1  
Figure 71- Waupaca County News Article 2  
Figure 72- Collection of Community Photos, Sharon Eveland  
Figure 73- Master Plan Rendering, Michael Walsh  
Figure 74- Pigeon Riverwalk Master Spatial Plan, Michael Walsh  
Figure 75- Site Plan Rendering, Michael Walsh  
Figure 76- Focused Site Plan, Michael Walsh  
Figure 77- Curb Bumpout Perspective Rendering, Michael Walsh  
Figure 78- Merc Building System Diagram, Michael Walsh  
Figure 79- Merc Building Location Diagram, Michael Walsh  
Figure 80- Skate Park Location Diagram, Michael Walsh  
Figure 81- Skate Park Location Diagram 2, Michael Walsh  
Figure 82- Site Furniture System Diagram, Michael Walsh  
Figure 83- Site Furniture System Key, archieexpo.com, RSM design, bellagio outdoor lantern  
Figure 84- Large Parking Lot Program, Michael Walsh  
Figure 85- Site Plan Rendering, Michael Walsh  
Figure 86- Focused Site Plan, Michael Walsh  
Figure 87- Terrace Stairs Aerial Rendering, Michael Walsh  
Figure 88- Terrace Stairs Close-Up, Michael Walsh  
Figure 89- Terrace Stairs System, Section view, Michael Walsh  
Figure 90- Terrace Stairs Construction Detail, Michael Walsh  
Figure 91- Welcome Sign Perspective, Michael Walsh  
Figure 92- Welcome Sign Rendering, Michael Walsh  
Figure 93- Welcome Sign Construction Detail, Michael Walsh  
Figure 94- Additional Program Diagram, Michael Walsh  
Figure 95- preQ Diagram, Michael Walsh

Figure 96- postQ Diagram, Michael Walsh  
Figure 97- Cut & Fill Diagram, Michael Walsh  
Figure 98- Microwatershed Diagram, Michael Walsh  
Figure 99- Grading Plan, Michael Walsh  
Figure 100- Stormwater Management Plan, Michael Walsh  
Figure 101- Planting Plan - trees & shrubs, Michael Walsh  
Figure 102- Planting Plan - forbs, Michael Walsh  
Figure 103- Bioswale Construction Detail, Michael Walsh  
Figure 104- Site Plan - Phasing Strategy, Michael Walsh

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