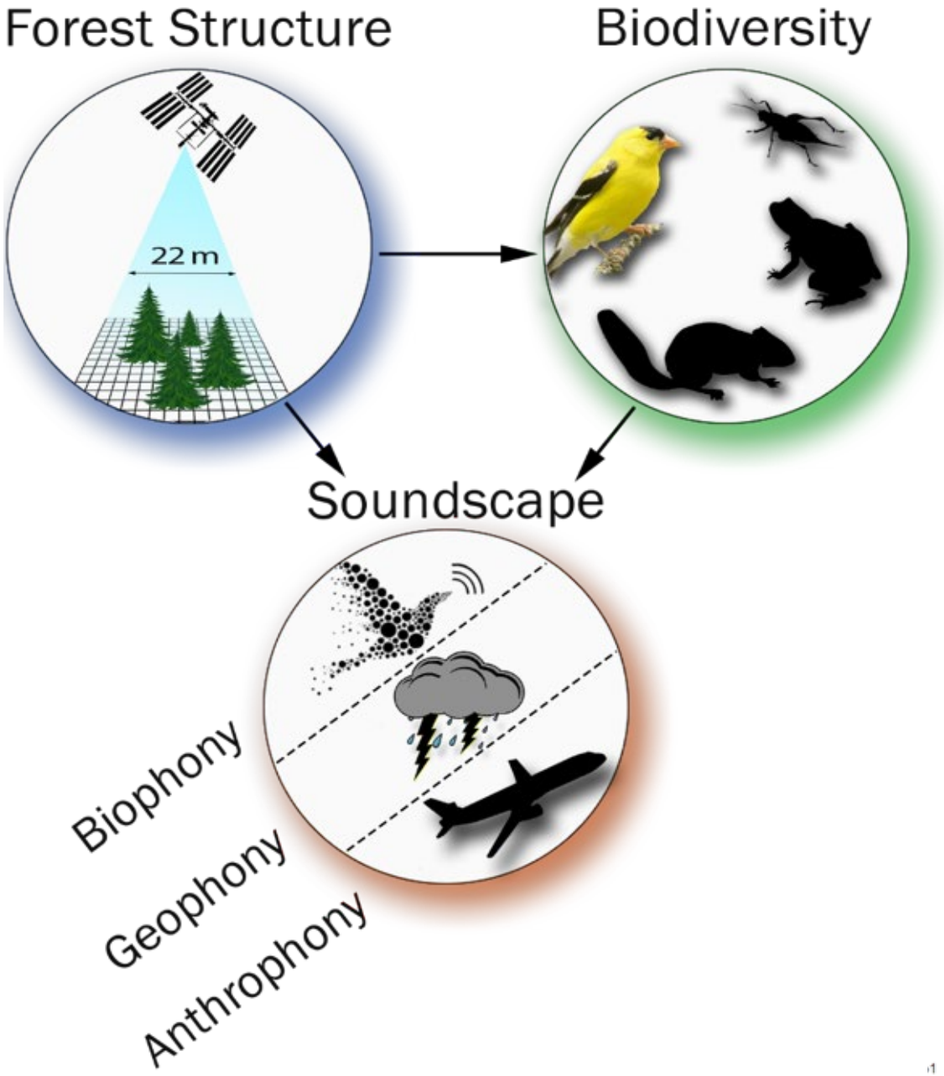
THE LANDING PARK OF THE MID-AMERICAN STEEL

BRIDGING THE PAST AND FUTURE THROUGH SOUNDSCAPE ANALYSIS

Presented by: Ashifur Rahman

What is Soundscape?



Source: Online

Sound in Our Daily Life

Source: Online

Soundscape in Urban Park

Source: Online

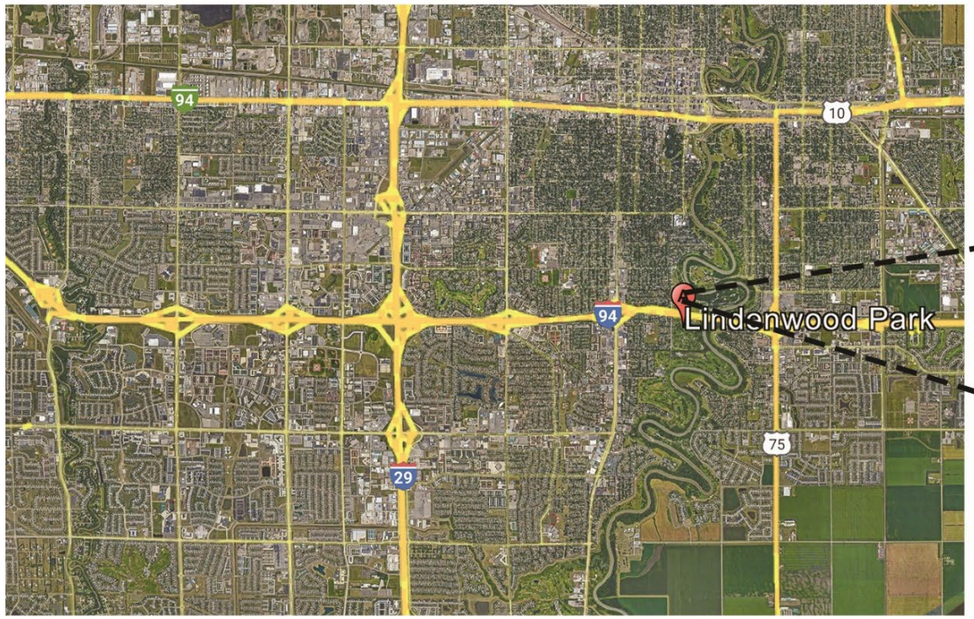
Influence of Soundscape on Park Visitors

- ❑ Stress Reduction and Relaxation.
- ❑ Enhanced Mood and Health.
- ❑ Social Interactions.
- ❑ Wildlife Connection.
- ❑ Aesthetic Appreciation.
- ❑ Noise Mitigation.
- ❑ Visitor Diversity.

Research Work
On

MEASURING VISITORS' PERCEPTIONS AND PREFERENCES OF SOUNDSCAPES IN URBAN PARKS

Study Area Lindenwood Park, Fargo, ND

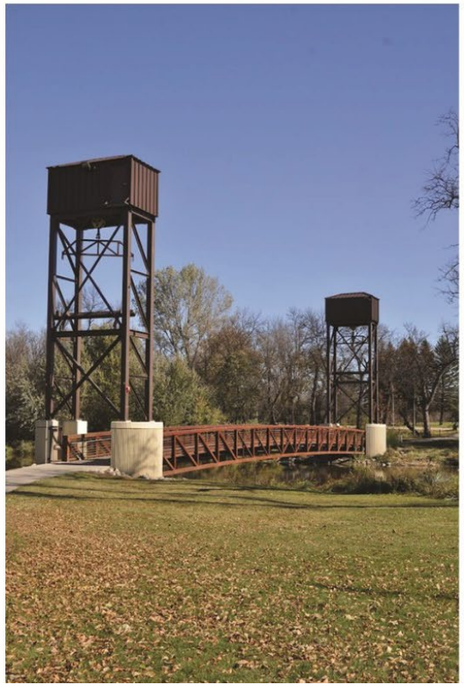


A

B

C

D



(A) Main picnic shelter

(B) RV Campground

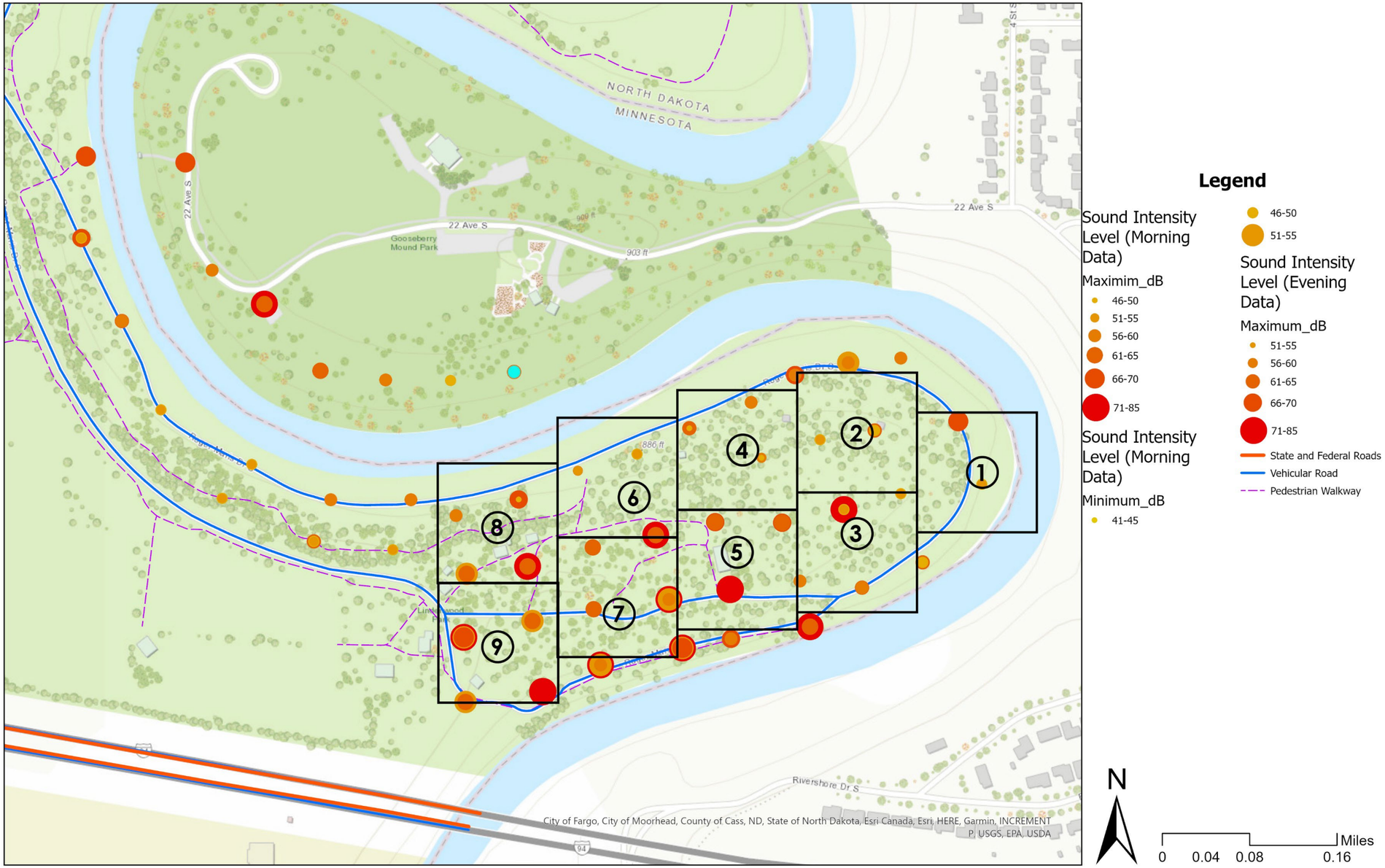
(C) Play area

(D) Bridge connected to Gooseberry Park

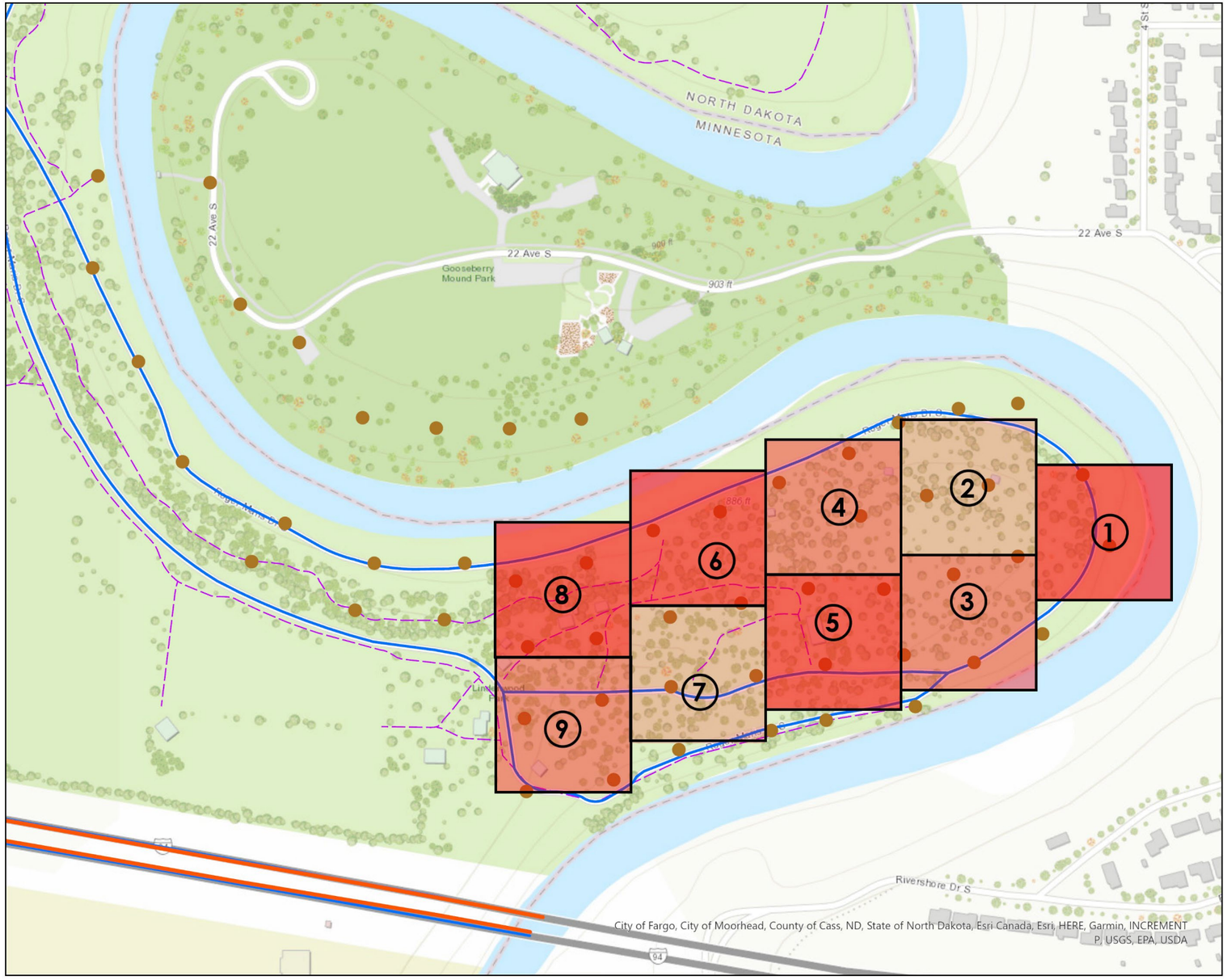
A summary statistic of the personal characteristics of questioner survey 234 respondents

Total Respondent of Questioner Survey -234		
Gender		%
Male		35.27
Female		62.95
An identity not listed		1.79
Age (yr)		
18–25		19.64
26–30		12.95
31–40		20.09
41–65		42.86
Over 65		4.02
Do not want to answer		0.45
Frequency of visiting the park		
Daily		3.57
Weekly		23.21
Monthly		45.54
Rarely		27.68
Purpose of visiting the park		
Walking or jogging		34.23
Exercising		4.56
Picnicking		12.24
Relaxing		28.01
Playing with children		14.11
Others		6.85

Morning and Afternoon Maximum Sound Level Data Analysis



Visitor Preferred Location



Legend

- Sound Level Point Lindenwood Park
- State and Federal Roads
- Vehicular Road
- Pedestrian Walkway
- High Prefered Location
- MediumPrefered Location
- Least Prefered Location

N

0 0.04 0.08 0.16 Miles

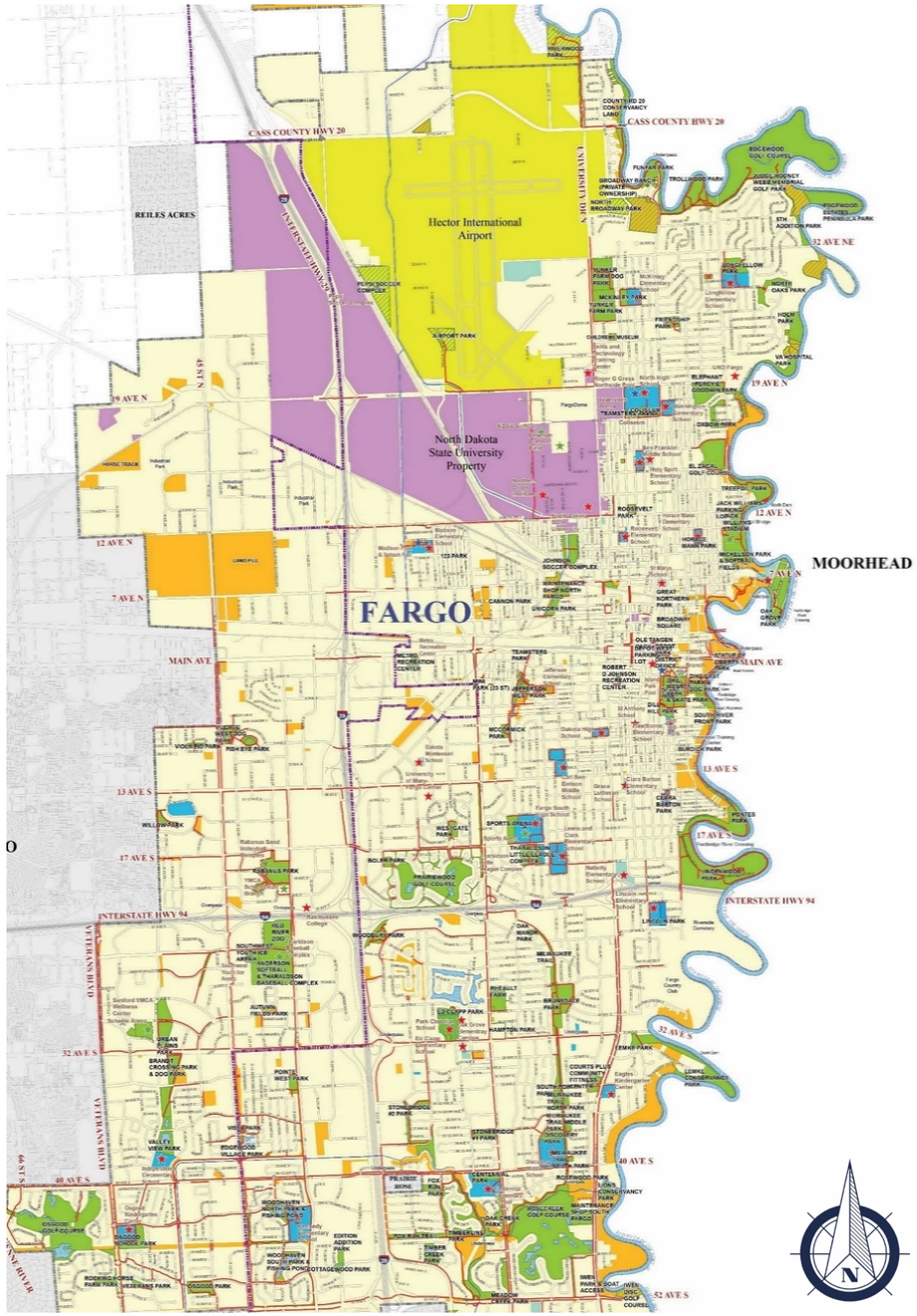
Conclusion of this Research

- The role of acoustic comfort in shaping visitors' perceptions and acceptability of urban park environments, sound levels, and qualities.
- This research provides insight into the relationship between soundscapes and visitor experiences within urban parks.
- The study confirmed that visitors place a high value on the tranquility and quietness of the park's soundscape, with many expressing a preference for areas with minimal human-made noise.
- The quietest areas of the park do not correlate directly with the highest value in preference.

Finding the Project Location

Possible New Urban Park Location in Fargo, ND

Fargo Park District Map



- Public & Private School
- Public Swimming Pool
- Sports Complex
- Recreational Paths
  Including extra-wide Sidewalks
- Water Feature
- Fargo City Limit
- School District Boundary
- Park District Property
- Park Leased from Airport
- Park Leased from Fargo
- City of Fargo Property
- Public School Property
- Private School Property
- Airport Authority Property
- NDSU Property
- Right of Way Property
- Cass County Property

Fargo Zone Map

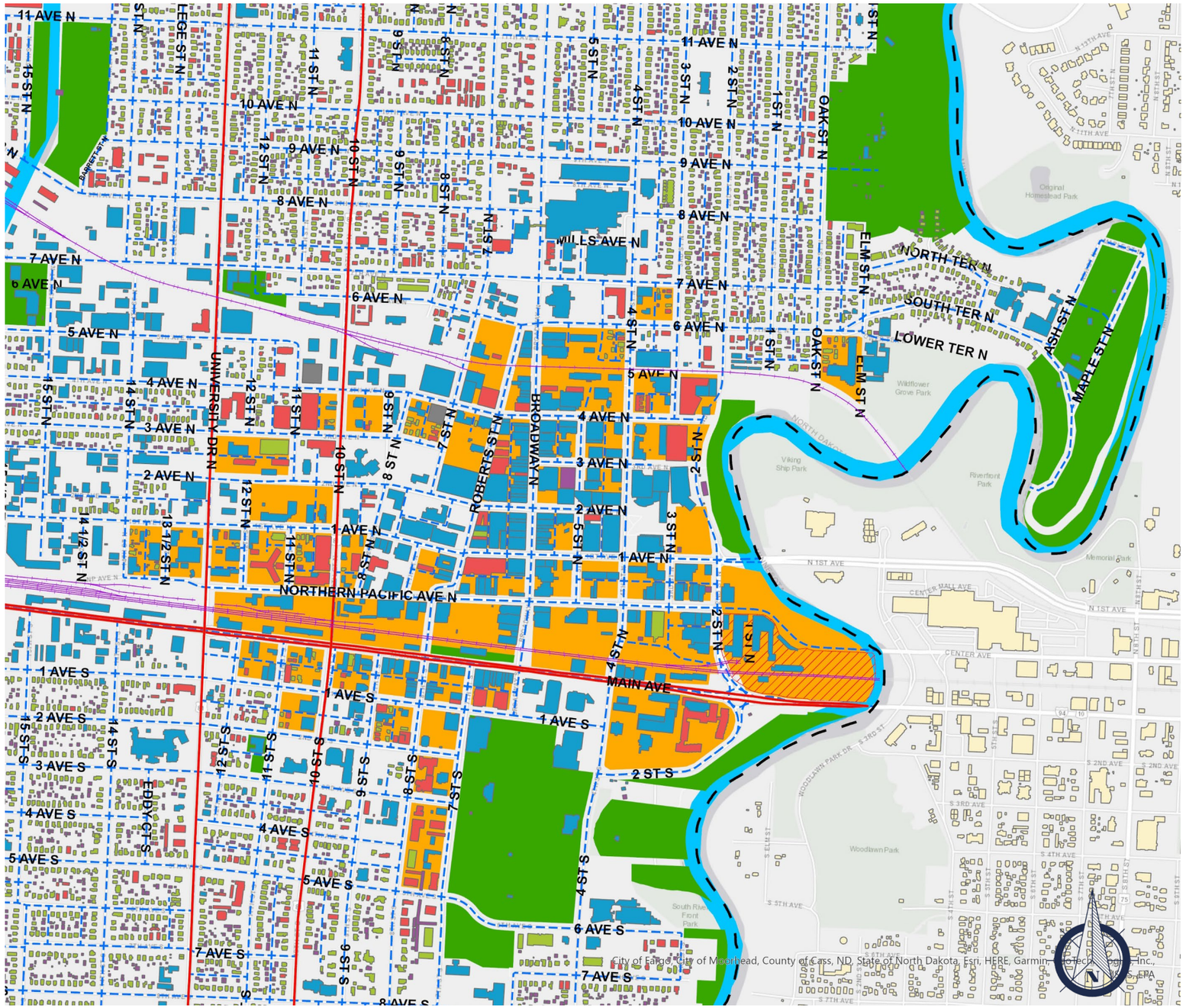
North Zone

Downtown Zone

South Zone

Source: Online

Downtown Fargo



Moorhead Building_Footprints

Building Footprints Fargo

Type

- Apartment
- Commercial
- Dwelling
- Garage/Shed
- <all other values>
- City_Boundaries
- Railroads
- te_and_Federal_Roa
- Road_Centerlines
- Mid American Steel Site
- Parks
- RenaissanceZones
- reams_and_Rivers_100

Focus Area of Downtown Fargo

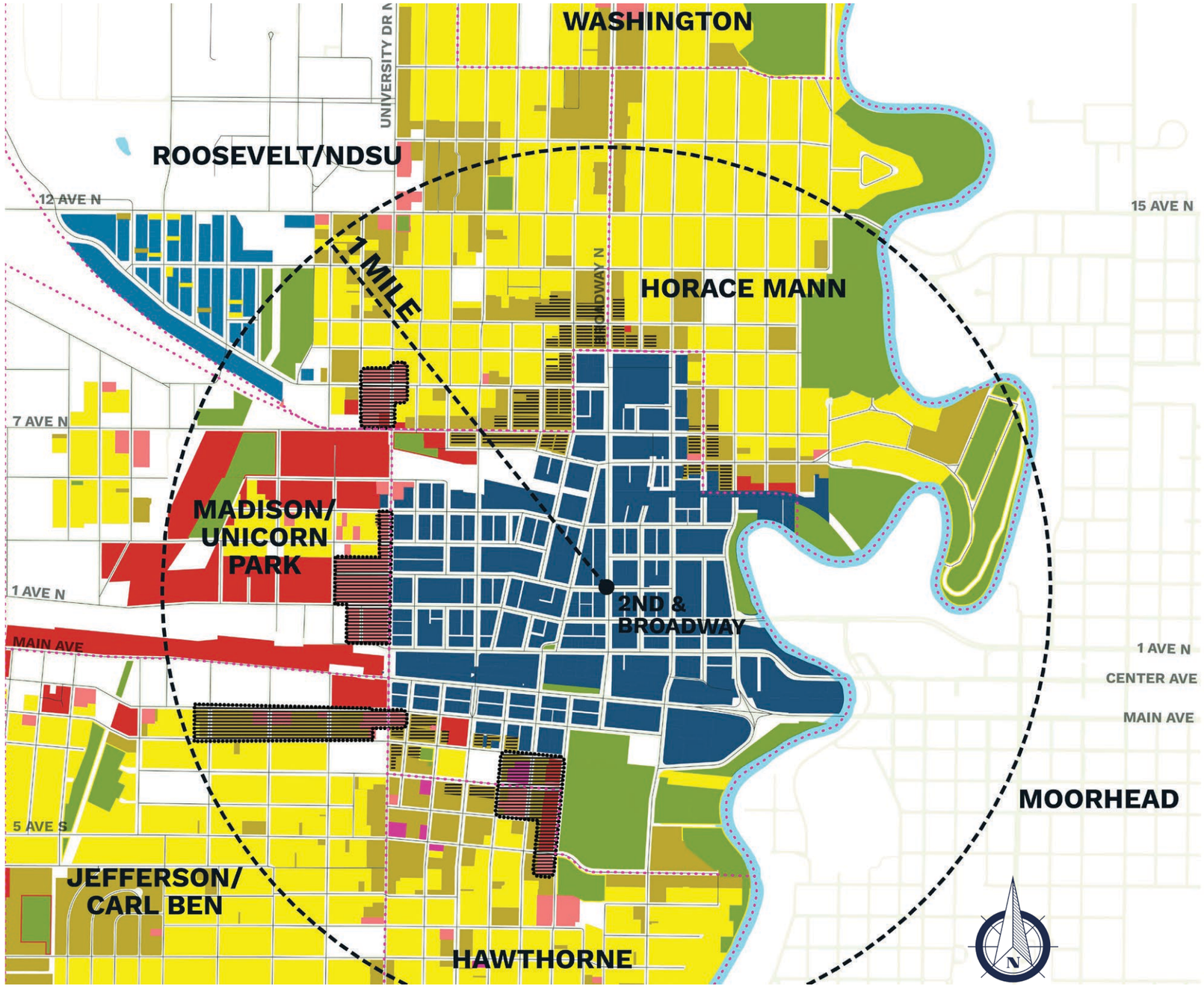
RAIL

OPEN SPACE

DOWNTOWN FOCUS AREA

Source: Interface Studio

Land Use of Fargo



ZONING PERMITS RESIDENTIAL

- DOWNTOWN MIXED USE (DMU)
- UNIVERSITY MIXED USE (UMU)
- SINGLE DWELLINGS (SR 1-4)
- MULTIPLE DWELLINGS (MR 1-3)
- NEIGH. COMMERCIAL (NC/NO)
- DENSITY BONUS WITHIN 600’ of DMU in MR3

RESIDENTIAL AS CONDITIONAL USE

- LIMITED COMMERCIAL (LC)
- GENERAL COMMERCIAL (GC)
- DENSER, MIXED USE, AS-OF-RIGHT TRANSITION ZONE

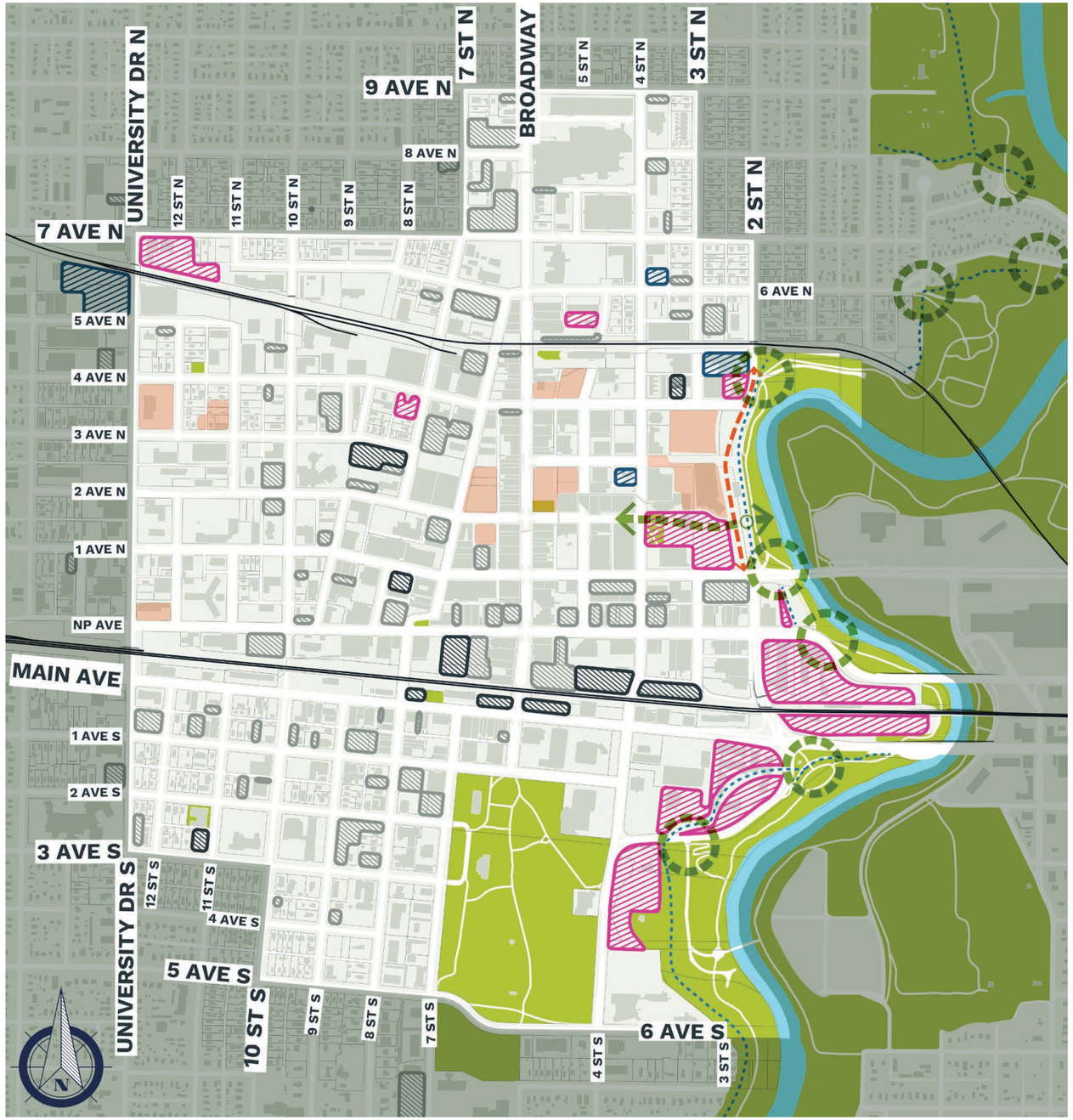
- NEIGHBORHOOD BOUNDARY

Source: Interface Studio

Vacant Land in Downtown Fargo

Source: Interface Studio

Opportunity Site



UNDERUTILIZED SITES

- PUBLICLY OWNED
- PRIVATELY OWNED

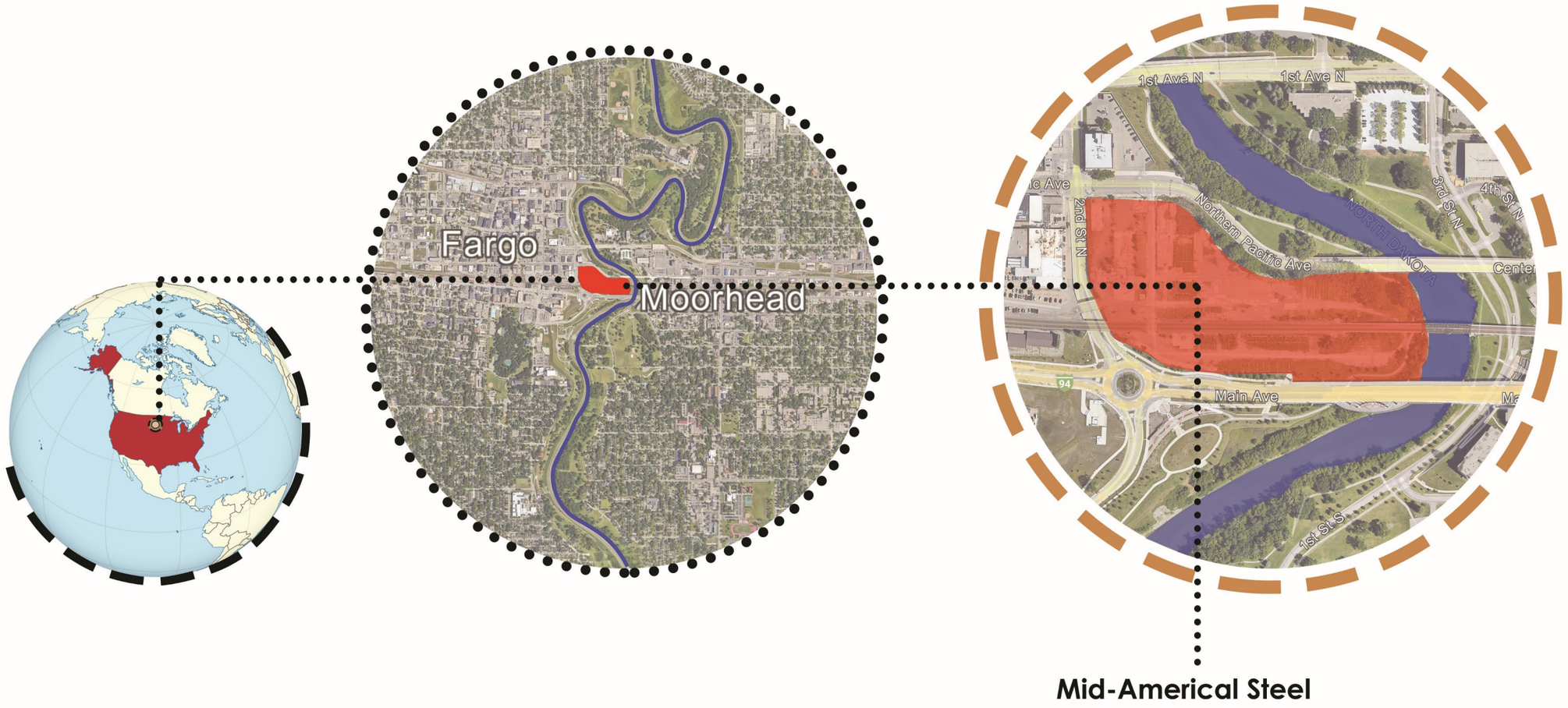
SURFACE PARKING LOTS

- PUBLICLY OWNED
- PRIVATELY OWNED

- RIVER ACCESS POINT
- FLOOD PROTECTION LINE
- FUTURE DEVELOPMENT [COMING SOON]
- OPEN SPACE
- DOWNTOWN FOCUS AREA

Source: Interface Studio

Proposed Design Location



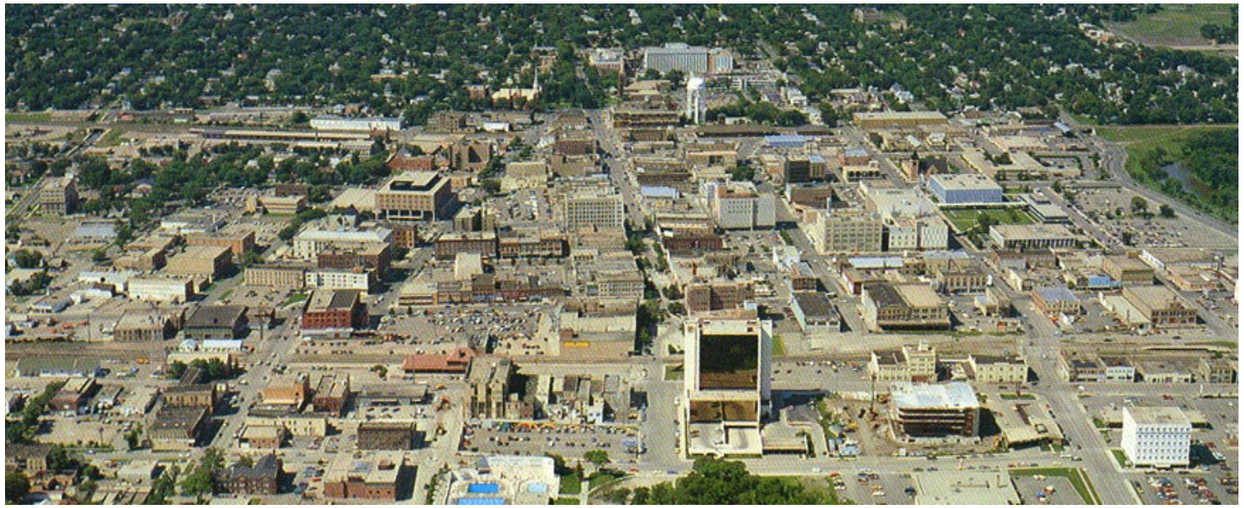
Mid-American Steel site is licated in Fargo, North Dakota, USA.This project site is bounded on the north side by Northern Pacific Avenue, on the east by Red River and Moorhead City, on the south by Main Avenue and Veterans Memorial Bridge, and on the west by 2nd Street North in downtown Fargo.

Current Picture of Project Location

Project Introduction

- The Red River stands as a dynamic testament to the evolution of urban landscapes.
- Fargo is a city where history intersects with innovation.
- This Project is composed to breathe new life into this historically significant location, fostering a harmonious blend of green spaces and modern urban living.

Fargo in 1930



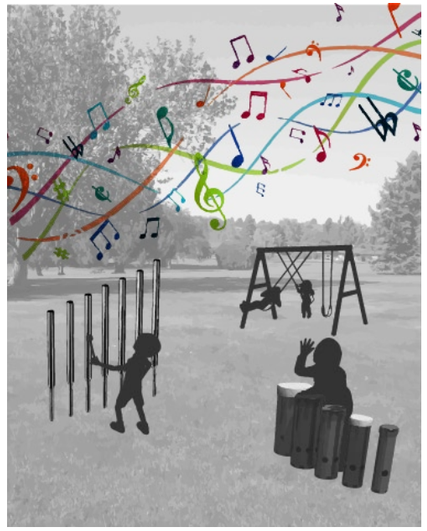
Fargo in 1980

Premise

- ❑ Integrates historical elements.
- ❑ Reflects the industrial past.
- ❑ Urban retreat hub.
- ❑ Urban ecology for post-industrial landscape.

Research

- The redevelopment of historic site into a vibrant and sustainable urban park.
- The transformative potential of soundscape analysis is a space that resonates with both history and modernity.
- To capture the auditory essence of the site and integrate it into a contemporary park setting.
- Commitment to innovative, inclusive, and sustainable urban planning.



Objectives

Objective-1

Cultural history: Incorporate and highlight any remaining industrial structures or artifacts, turning them into focal points or integrating them into the landscape.

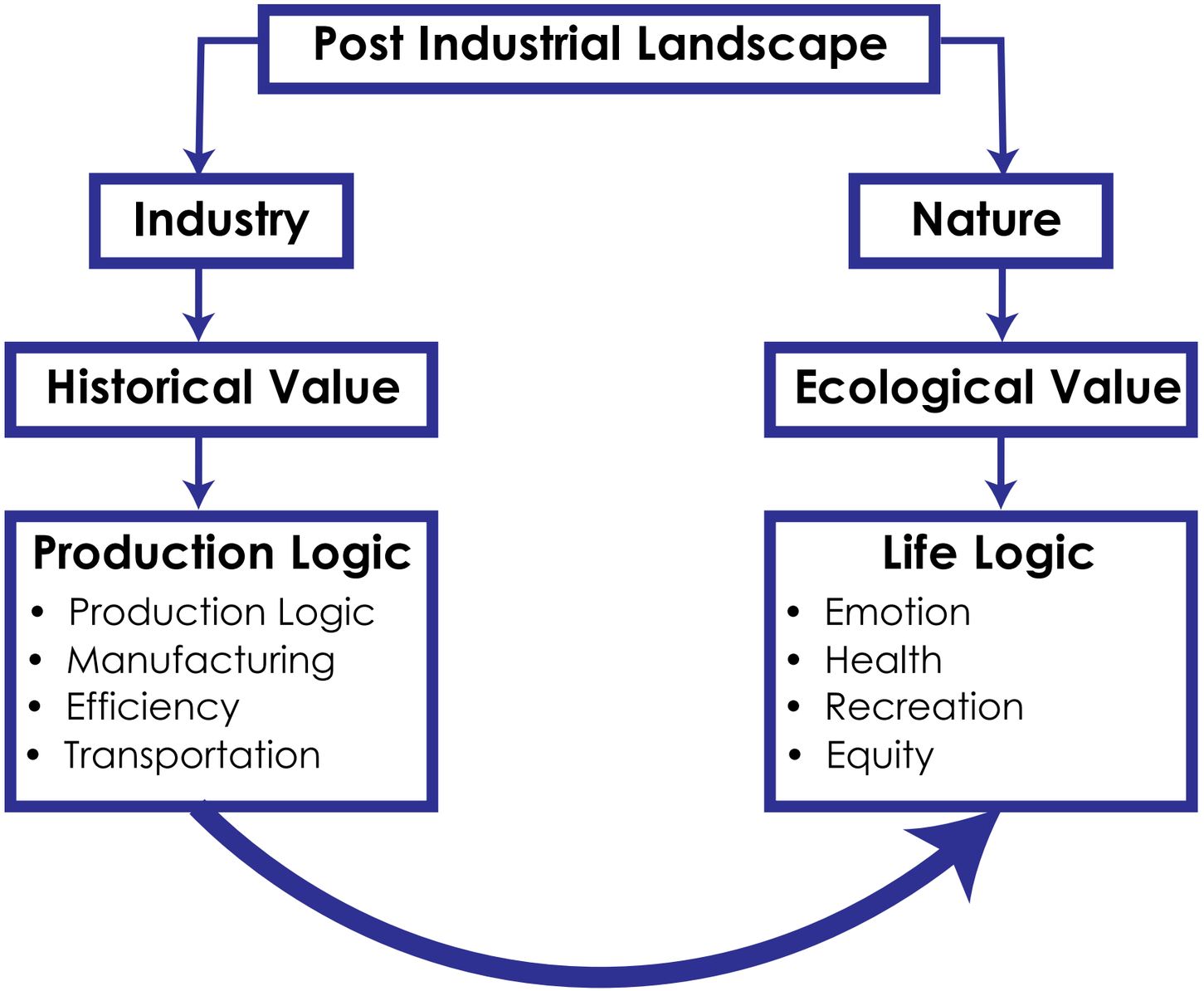
Objective-2

Soundscape quality: The track is passed through the design site, and soundscape is a vital consideration that needs to be minimized by testing different landscape components such as plantation and berm.

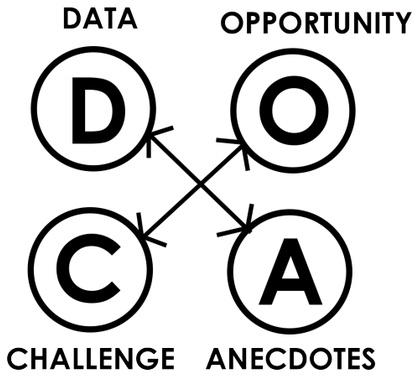
Objective-3

Ecological processes: Linking historical events with the harmony of landscape elements and blending traditional landscaping with modern design elements to create a unique aesthetic that acknowledges the past while looking forward.

Vision Plan


Post Industrial Landscape
Industry
Nature
Historical Value
Ecological Value
Production Logic
• Production Logic
• Manufacturing
• Efficiency
• Transportation
Life Logic
• Emotion
• Health
• Recreation
• Equity

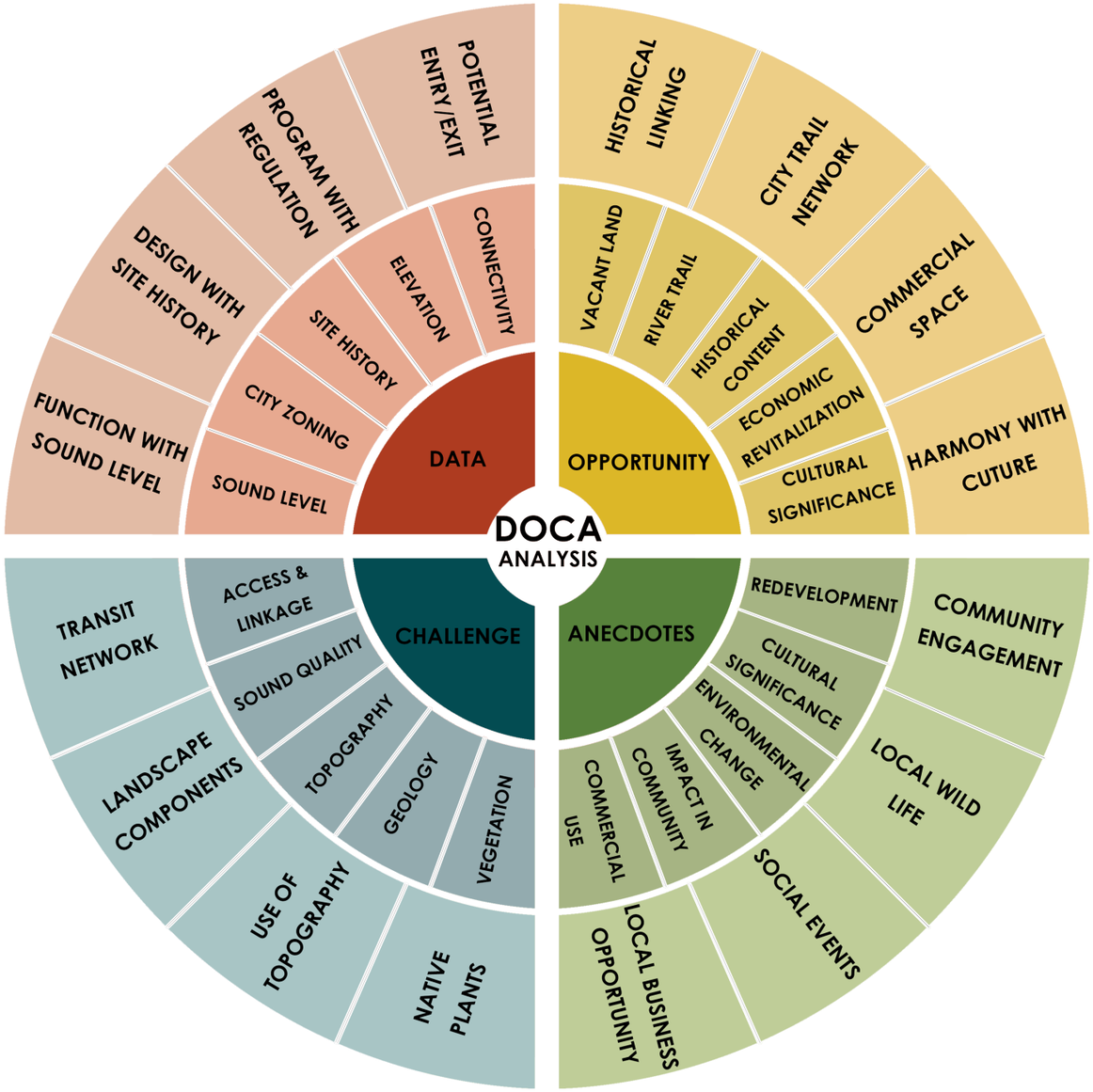
DOCA Analysis



KEY ATTRIBUTES

INTANGIBLES

MEASUREMENTS



Inventory and Analysis of Cultural History

History of Mid-American Steel

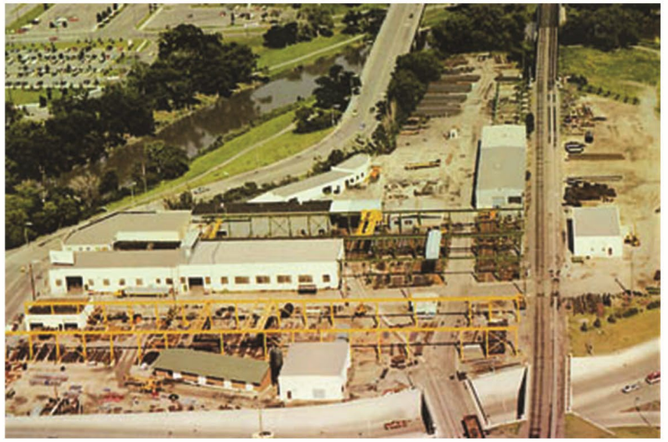
-The Fargo Foundry, established in 1905.

-Located near the Red River at 92 N.P. Avenue.

-The firm was started by Kalmen and Parsons as a machine shop at the corner of N.P. Avenue and 1st Avenue North.

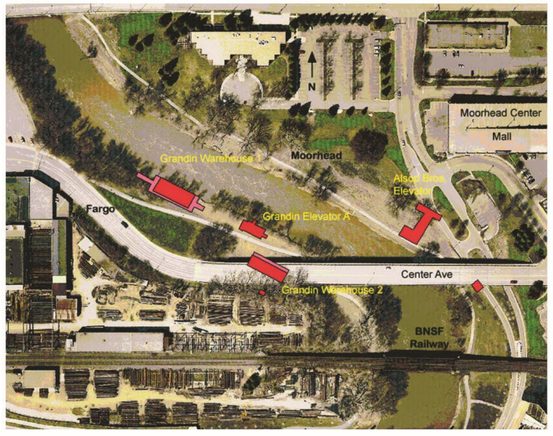
-About 1973-74, the Foundry changed its name to Mid America Steel to reflect its own change from a foundry (which it closed in 1978) to a steel fabrication company.

Fargo Foundry Company, 92 N.P. Avenue, 1911


Aerial over Mid America Steel

Fargo-Moorhead Steamboat Landing

Grandin Line's Operations, about 1880

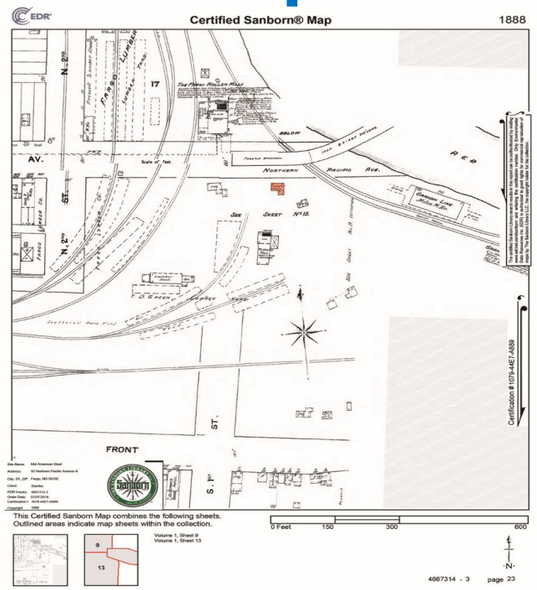


The Fargo-Moorhead waterfront

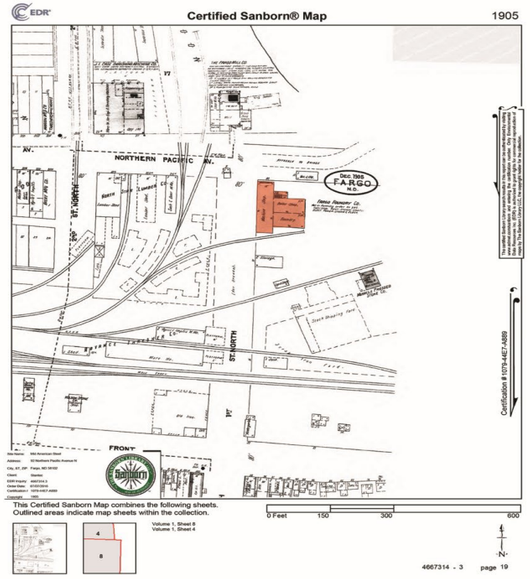
-In the 1870s and 1880s steamboats plying the Red River.

-The waterfront was located between today's Center Avenue and 1st Avenue North bridges. It was a very busy place 130 years ago.

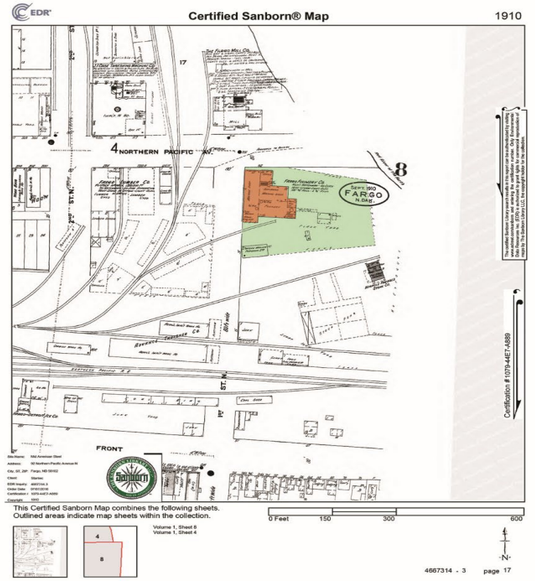
Development Map of Fargo Foundry Steel and MEG. CO.



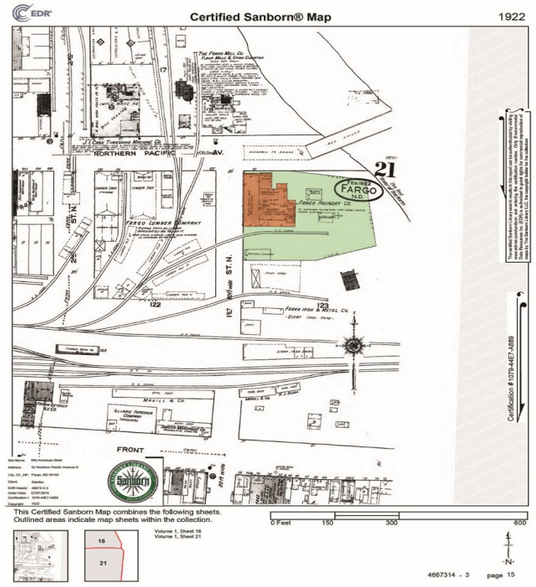
1888



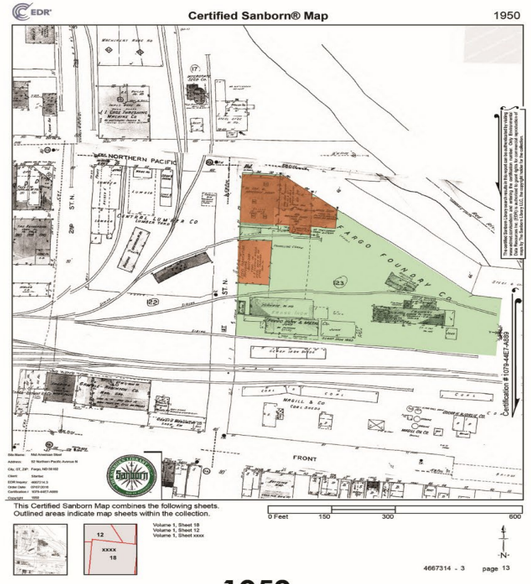
1905



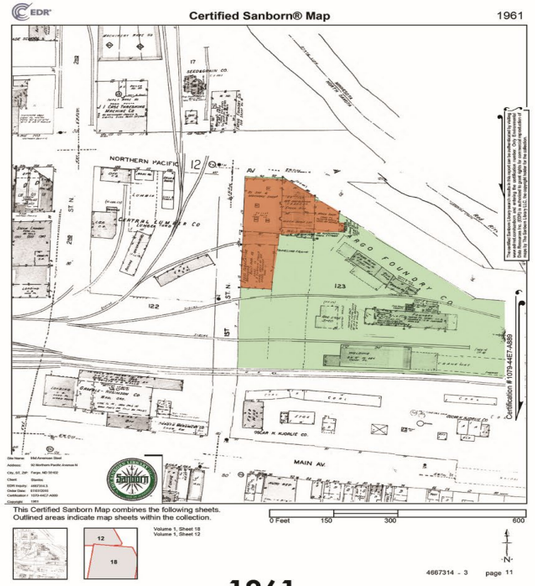
1910



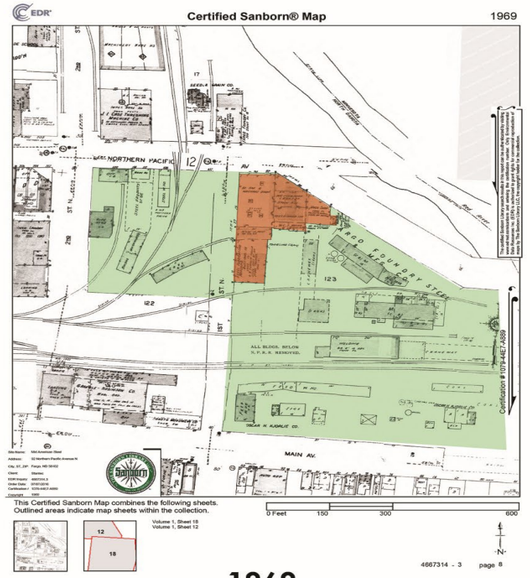
1922



1950



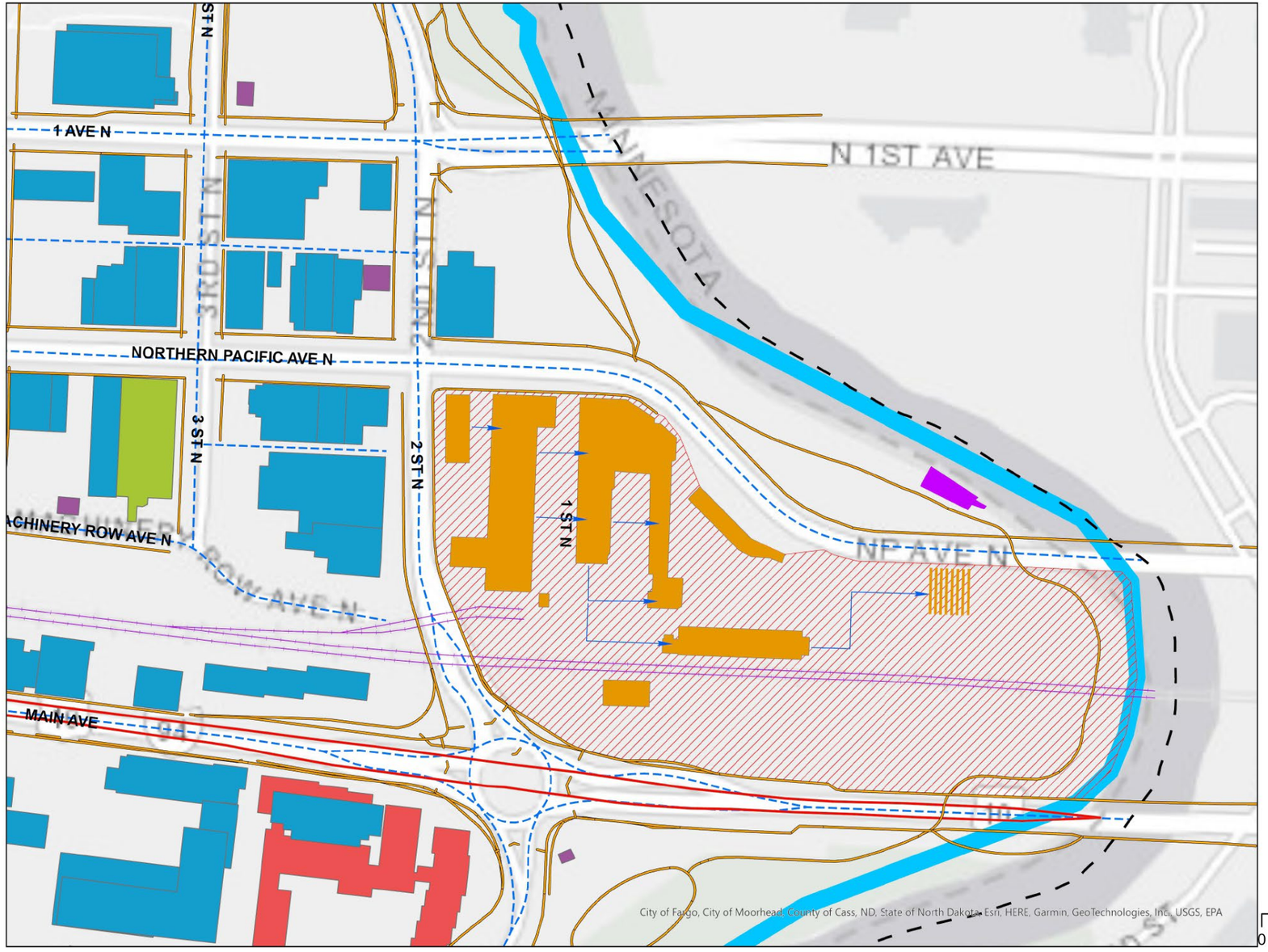
1961



1969

Source: Stantec Consulting Services Inc.

Cultural History Inventory



Legend

- MAS Work Flow
- SidewalksAndRecPaths
- Steamboat Landing Spot
- MAS Layout

Building Footprints Fargo

Type

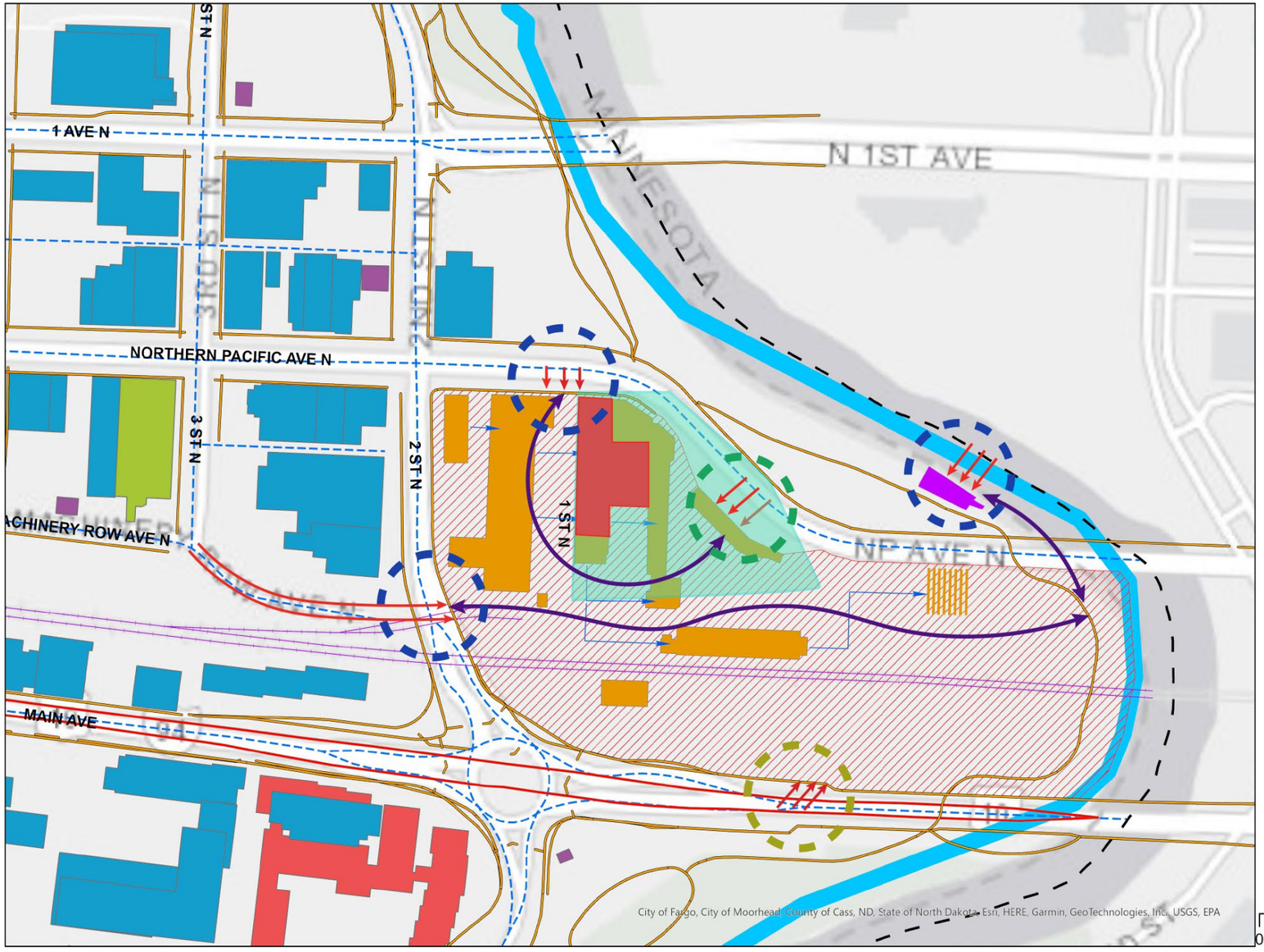
- Apartment
- Commercial
- Dwelling
- Garage/Shed
- <all other values>

- City_Boundaries
- Railroads
- State_and_Federal_Road
- Road_Centerlines
- Mid American Steel Site
- Streams_and_Rivers_10

N
W E
S

0 0.03 0.06 Miles

History and Circulation Analysis



Legend

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Type

- Apartment
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- City_Boundaries
- Railroads
- State_and_Federal_Road
- Road_Centerlines
- Mid American Steel Site
- Streams_and_Rivers_10

Analysis

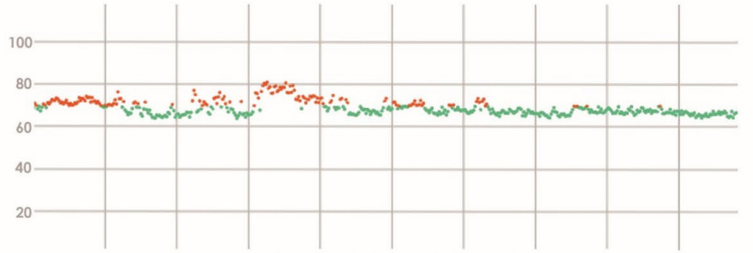
- Possible Access Point
- Possible Access Link
- Good Access Point
- Potential Access Point
- Possible Access Point
- 1st Foot Print of Fargo Foundary
- 1st Boundary of Fargo Foundary

N
W E
S

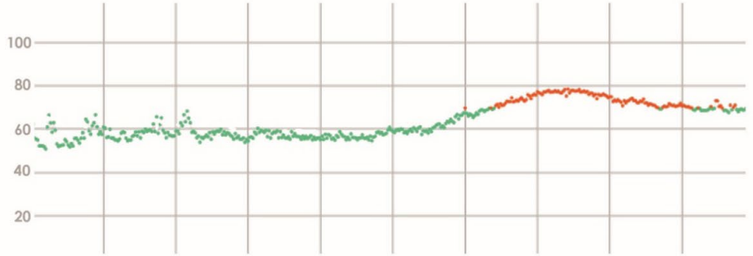
0 0.03 0.06 Miles

Inventory and Analysis of Soundscape Quality

Sound Level of Mid-American Steel Site (With Train Movement)

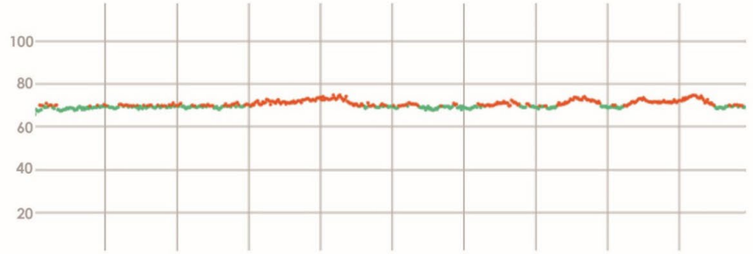


Sound: 64.1 - 81.3 dB (P1)

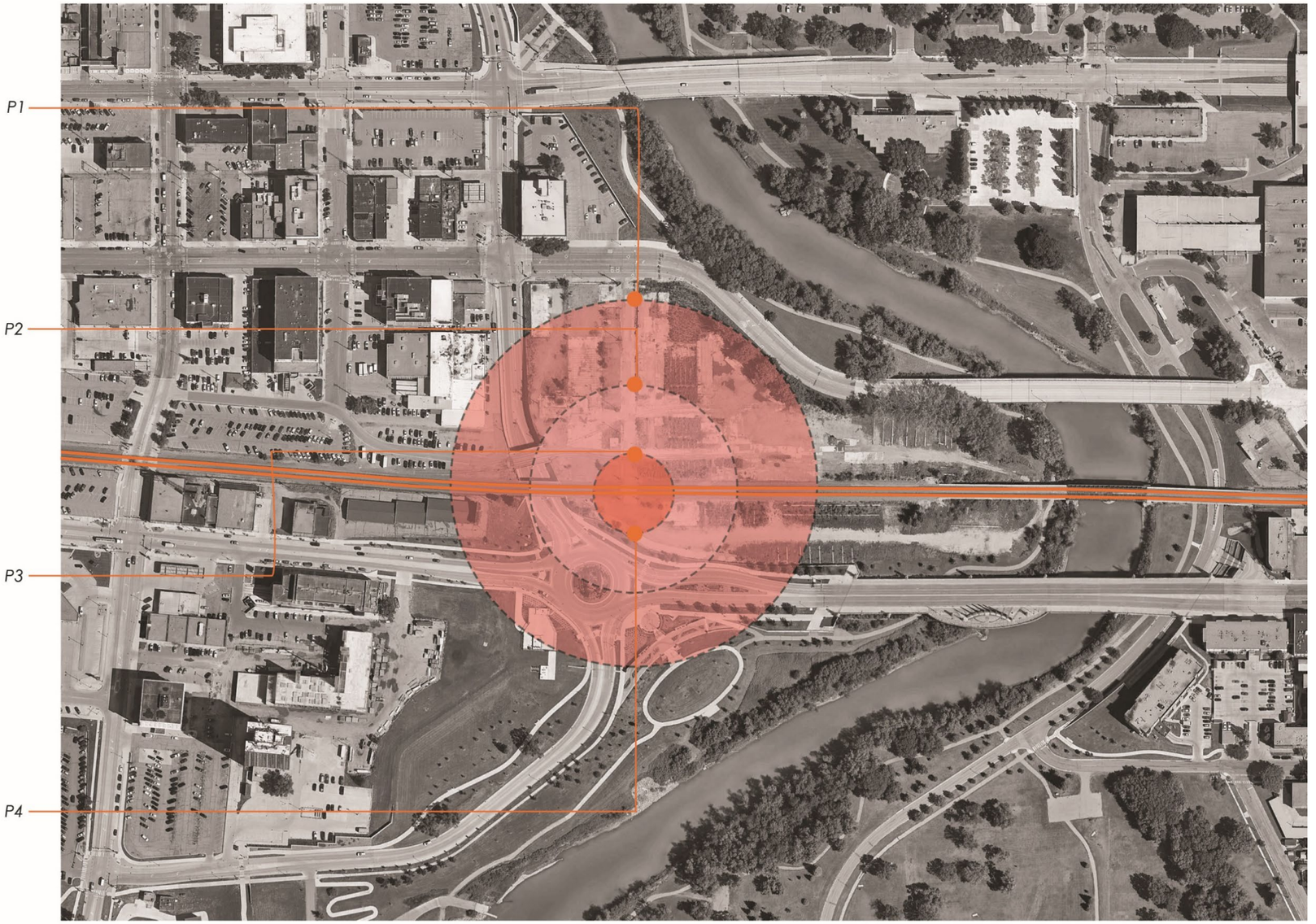


Sound: 51.2- 78.7 dB (P2)

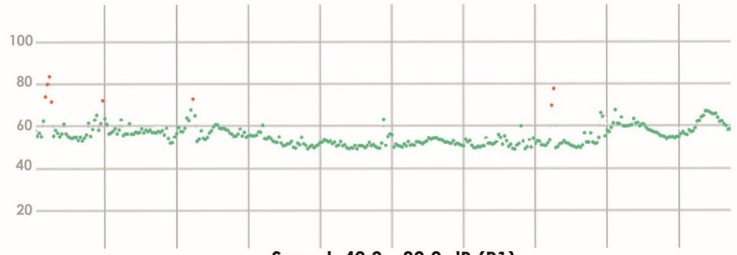
Sound: 66.7 - 78.7 dB (P3)



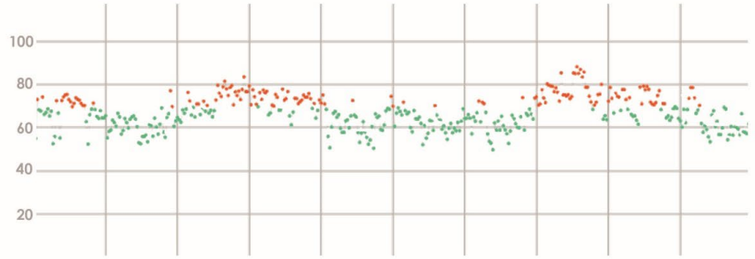
Sound: 66.0 - 75.1 dB (P4)



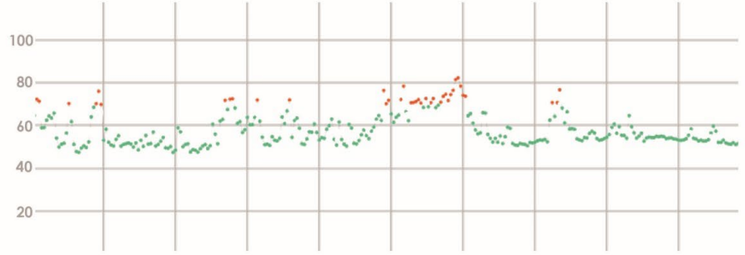
Sound Level of Mid-American Steel Site (Without Train Movement)



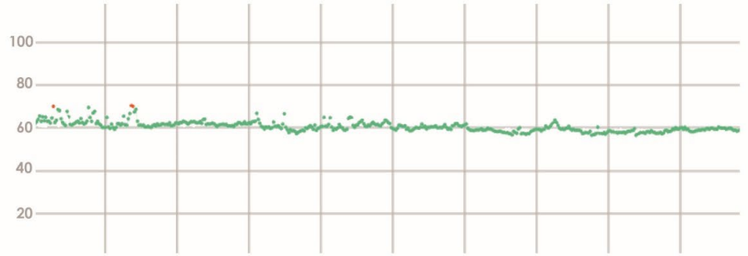
Sound: 49.3 - 83.9 dB (P1)



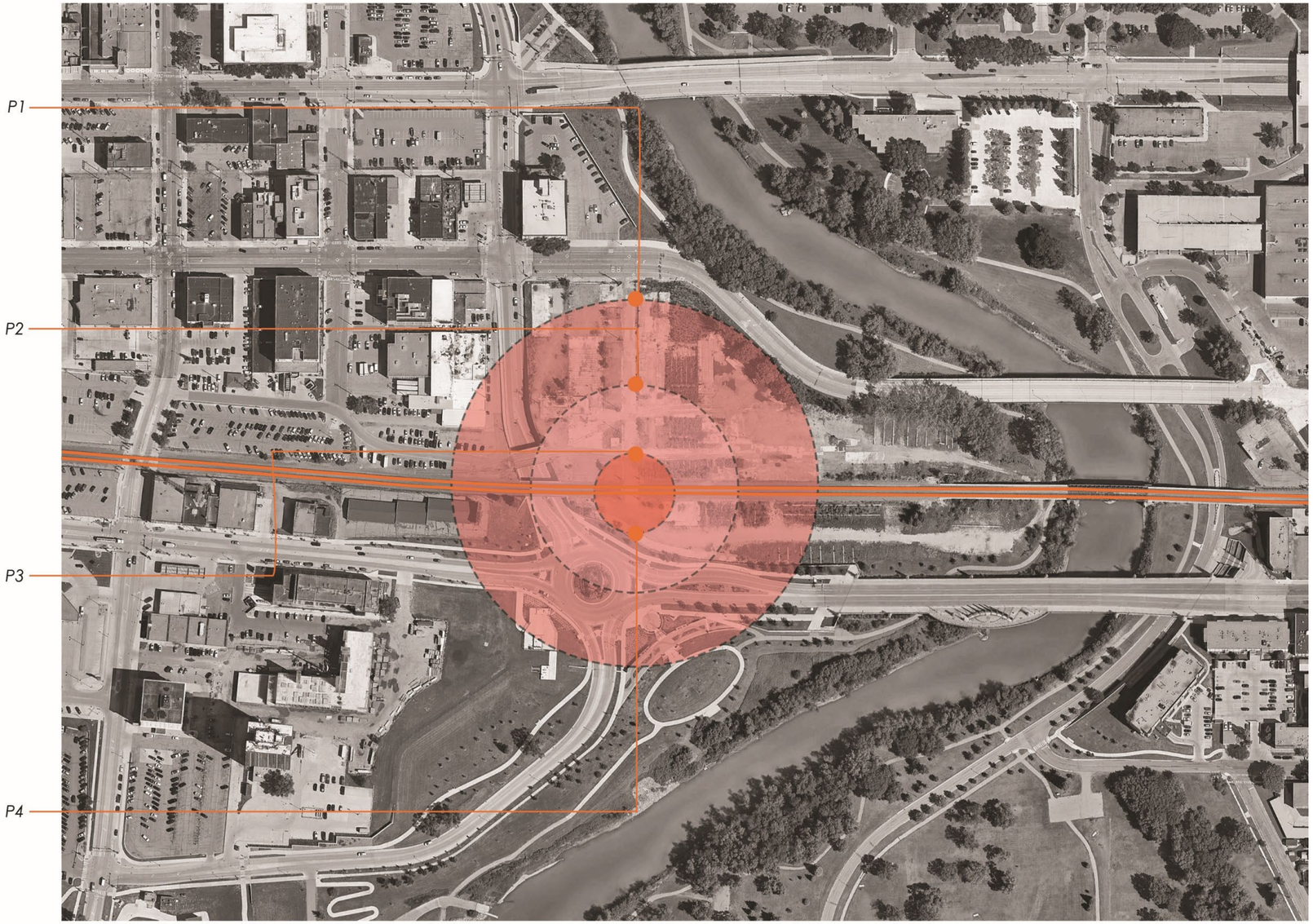
Sound: 50.0- 88.5 dB (P2)



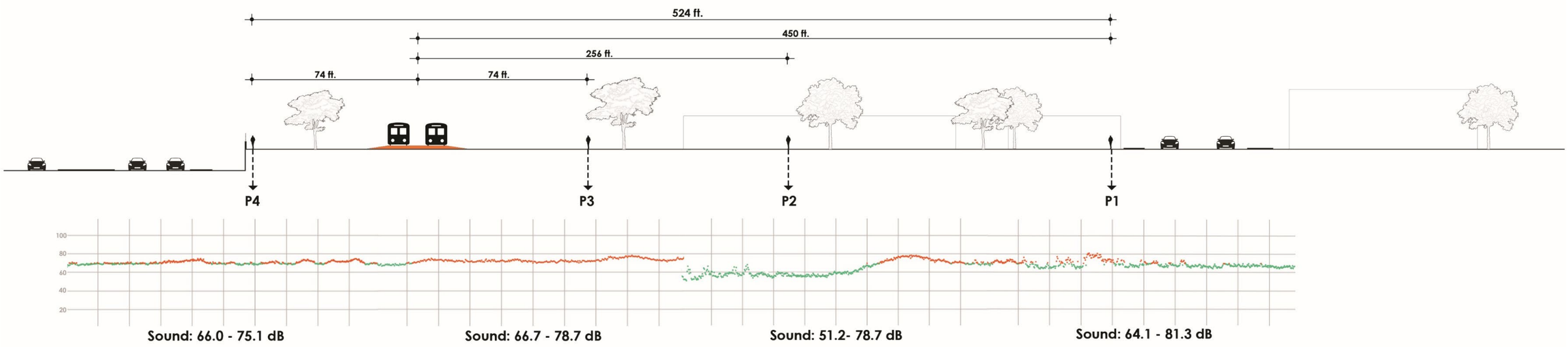
Sound: 47.7 - 82.6 dB (P3)



Sound: 56.9 - 70.7 dB (P4)



Sound Level Section (With Train Movement)



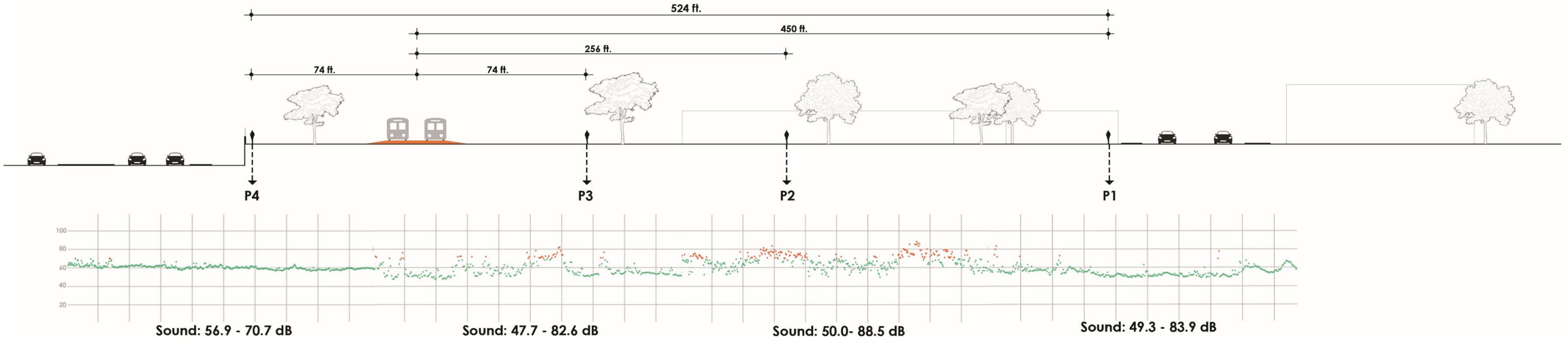
Sound: 66.0 - 75.1 dB

Sound: 66.7 - 78.7 dB

Sound: 51.2- 78.7 dB

Sound: 64.1 - 81.3 dB

Sound Level Section (Without Train Movement)



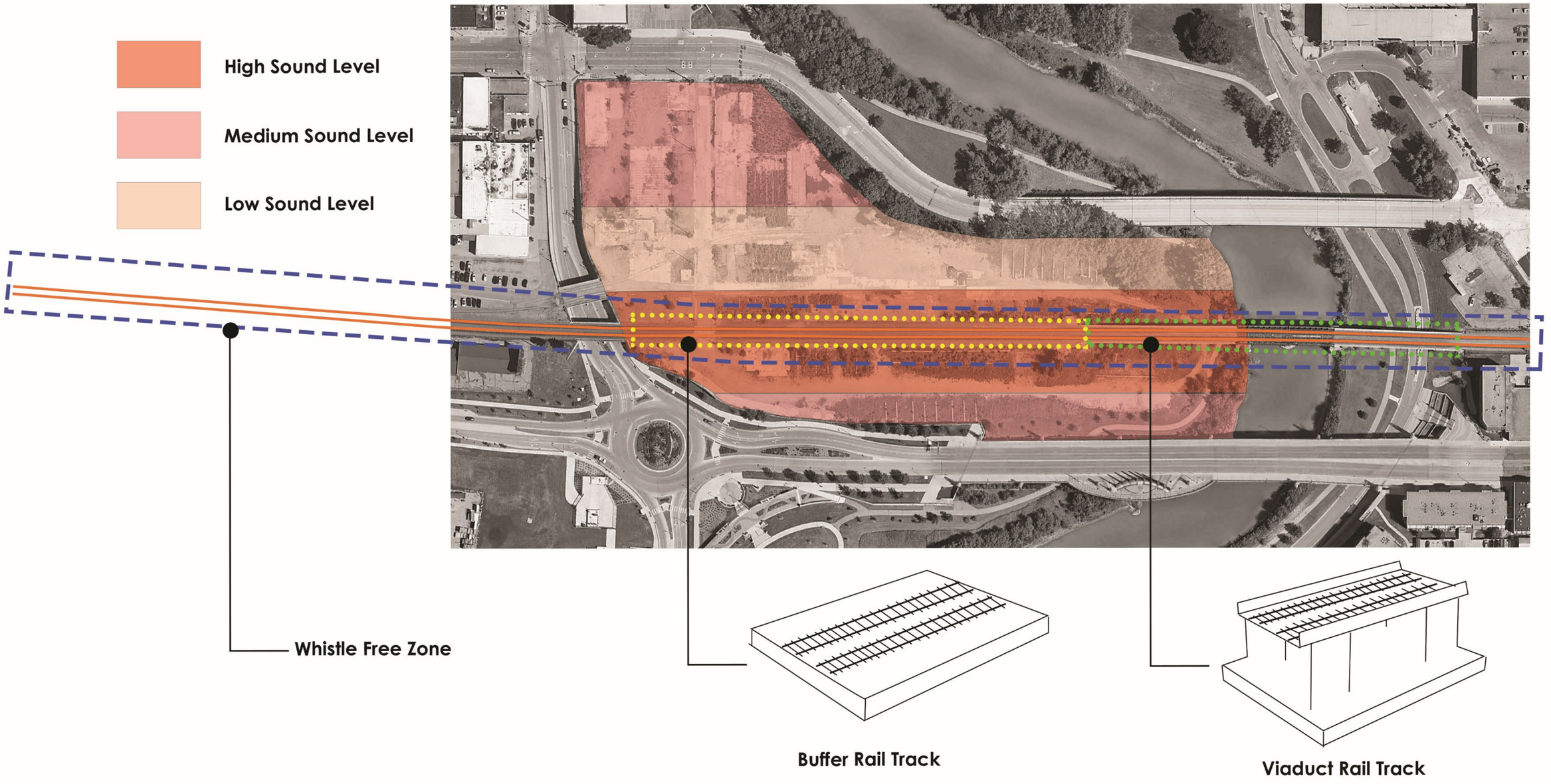
Sound: 56.9 - 70.7 dB

Sound: 47.7 - 82.6 dB

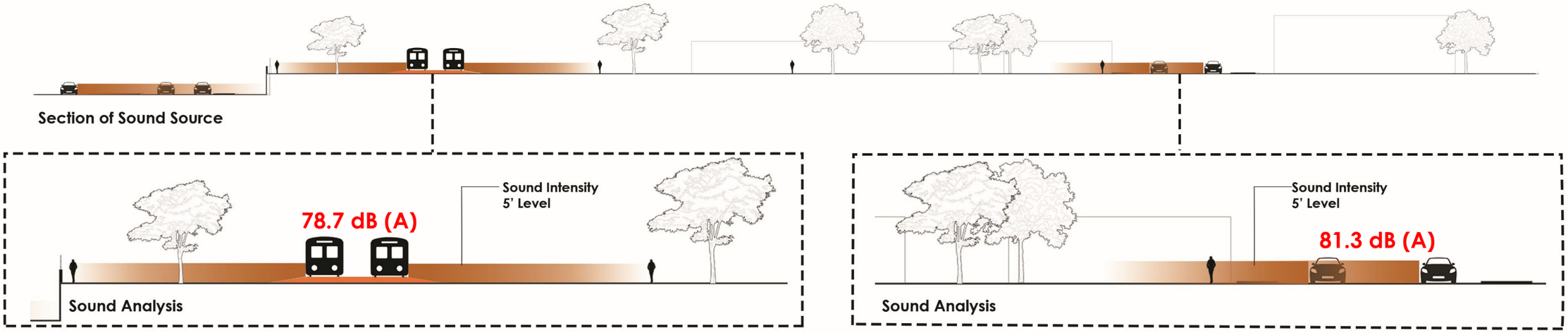
Sound: 50.0- 88.5 dB

Sound: 49.3 - 83.9 dB

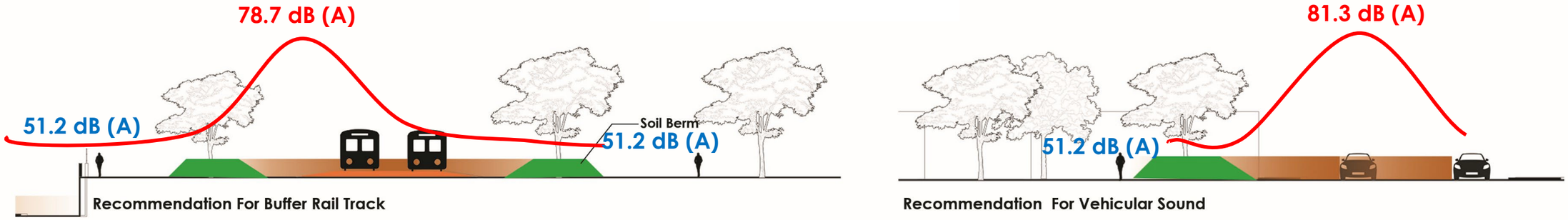
Sound Intensity Map

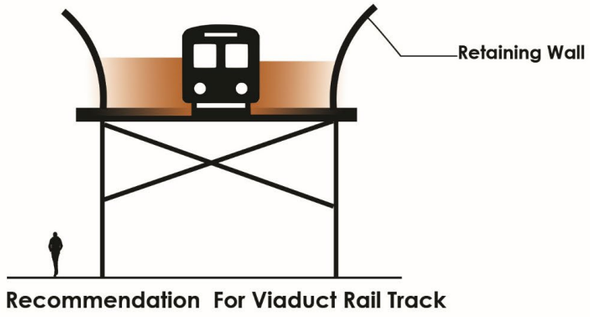


Sound Analysis



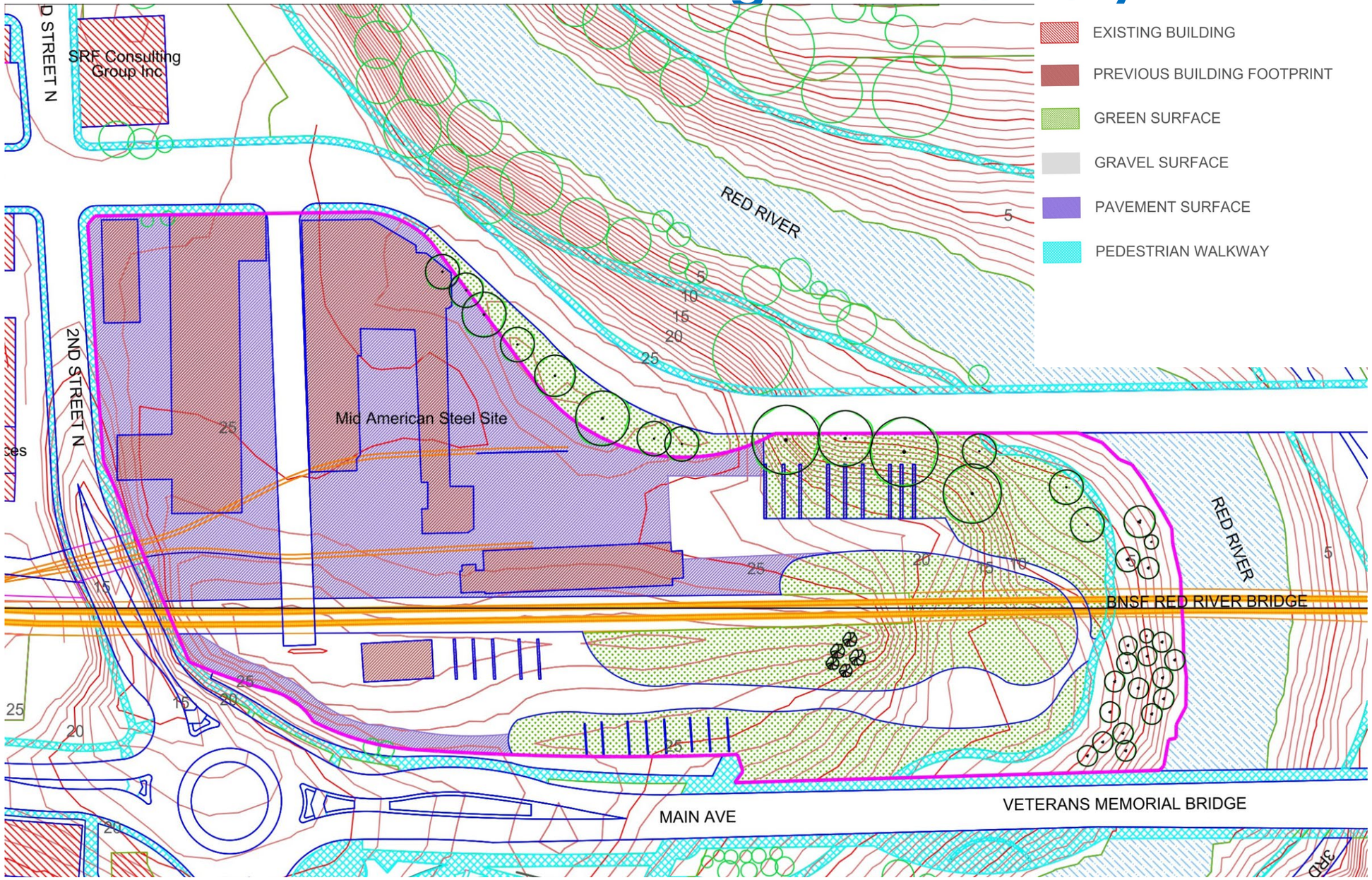
Recommendation





Inventory and Analysis of Ecological Processes

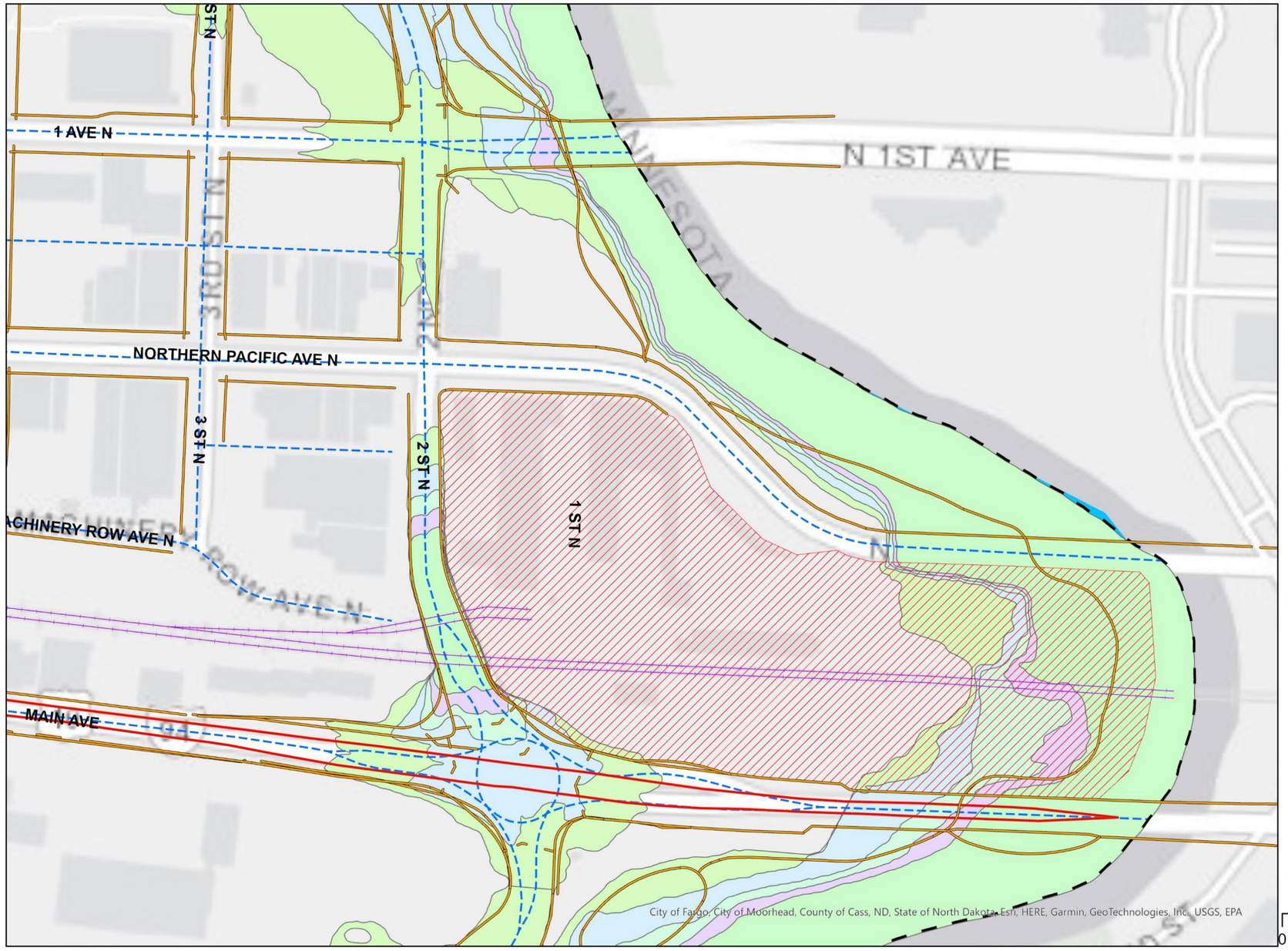
Ecological Inventory



Legend

- EXISTING BUILDING
- PREVIOUS BUILDING FOOTPRINT
- GREEN SURFACE
- GRAVEL SURFACE
- PAVEMENT SURFACE
- PEDESTRIAN WALKWAY
- RED RIVER
- EVERGREEN TREE
- CANOPY TREE
- LARGE DECIDUOUS SHRUB
- EXISTING TREE
- RAIL TRACK
- MID AMERICAN STEEL PROPERTY LINE
- MAJOR CONTURE
- MINOR CONTOUR

Flood Level Analysis



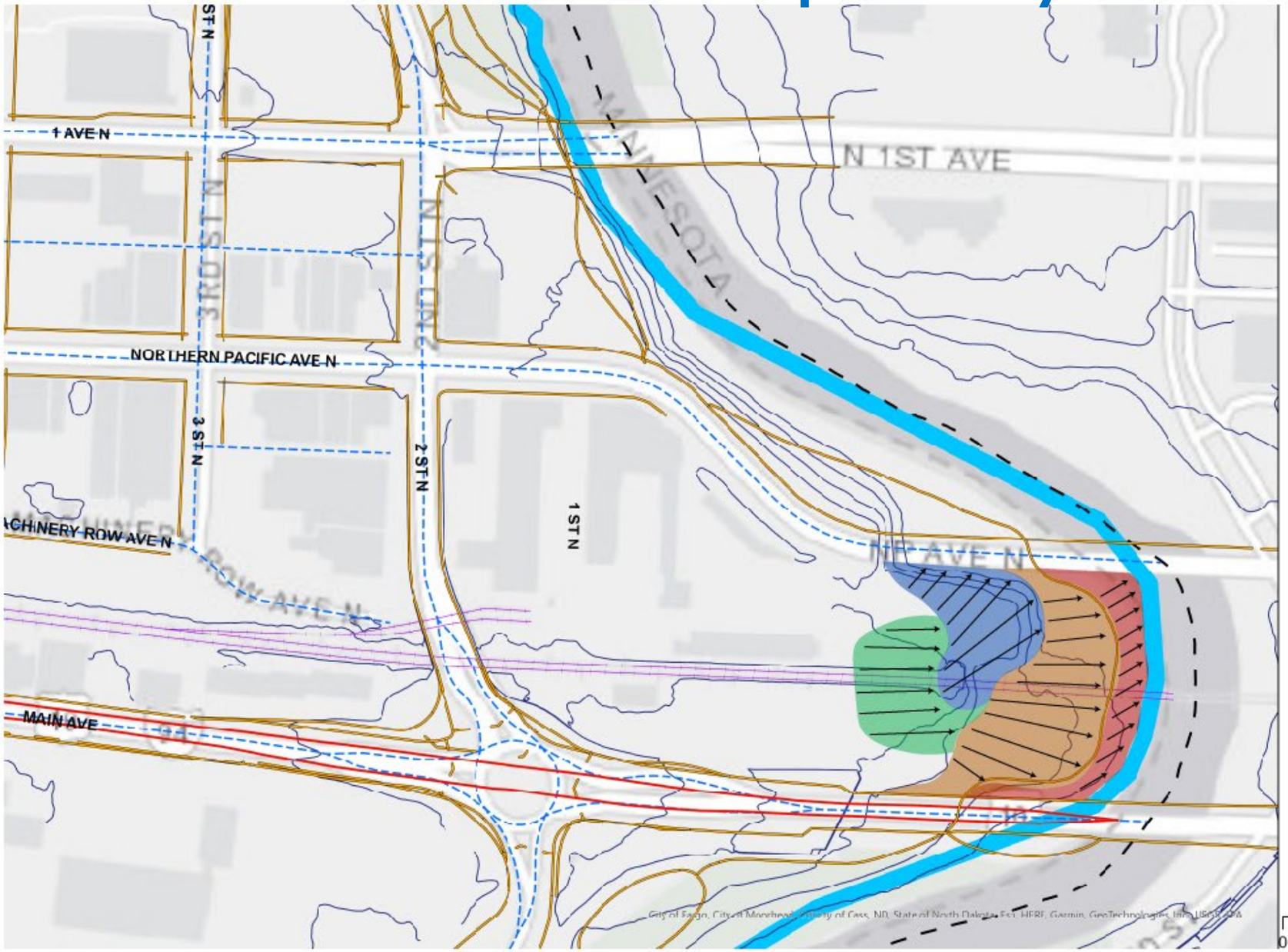
Legend

- SidewalksAndRecPath
- City_Boundaries
- stg_27
- stg_29
- stg_31
- stg_34
- stg_37
- Railroads
- State_and_Federal_Ro
- Road_Centerlines
- Mid American Steel Site
- Streams_and_Rivers_1

N
W E
S

0 0.03 0.06 Miles

Slope Analysis



Legend

- SidewalksAndRecPath
- City_Boundaries
- NDGISHUB_Fargo_Con
- Railroads
- State_and_Federal_Ro
- Road_Centerlines
- Streams_and_Rivers_1

Analysis

- 9% Slope
- 10% Slope
- 17% Slope
- 31% Slope

N
W E
S

0 0.03 0.06 Miles

Vegetation Analysis

Legend

- SidewalksAndRecPath
- City_Boundaries
- NDGISHUB_Fargo_Con
- Railroads
- State_and_Federal_Ro
- Road_Centerlines
- Streams_and_Rivers_1

Analysis

- Ornamental Tree
- Shrub Tree

N
W E
S

0 0.03 0.06 Miles

Ecological Recommendation

Legend

- SidewalksAndRecPath
- City_Boundaries
- NDGISHUB_Fargo_Con
- Railroads
- State_and_Federal_Ro
- Road_Centerlines
- Streams_and_Rivers_1

Recommendation

- Riparian Development
- Rainwater Retention Pond
- Rain Garden
- Land Development
- Ornamental Tree
- Botanical Garden

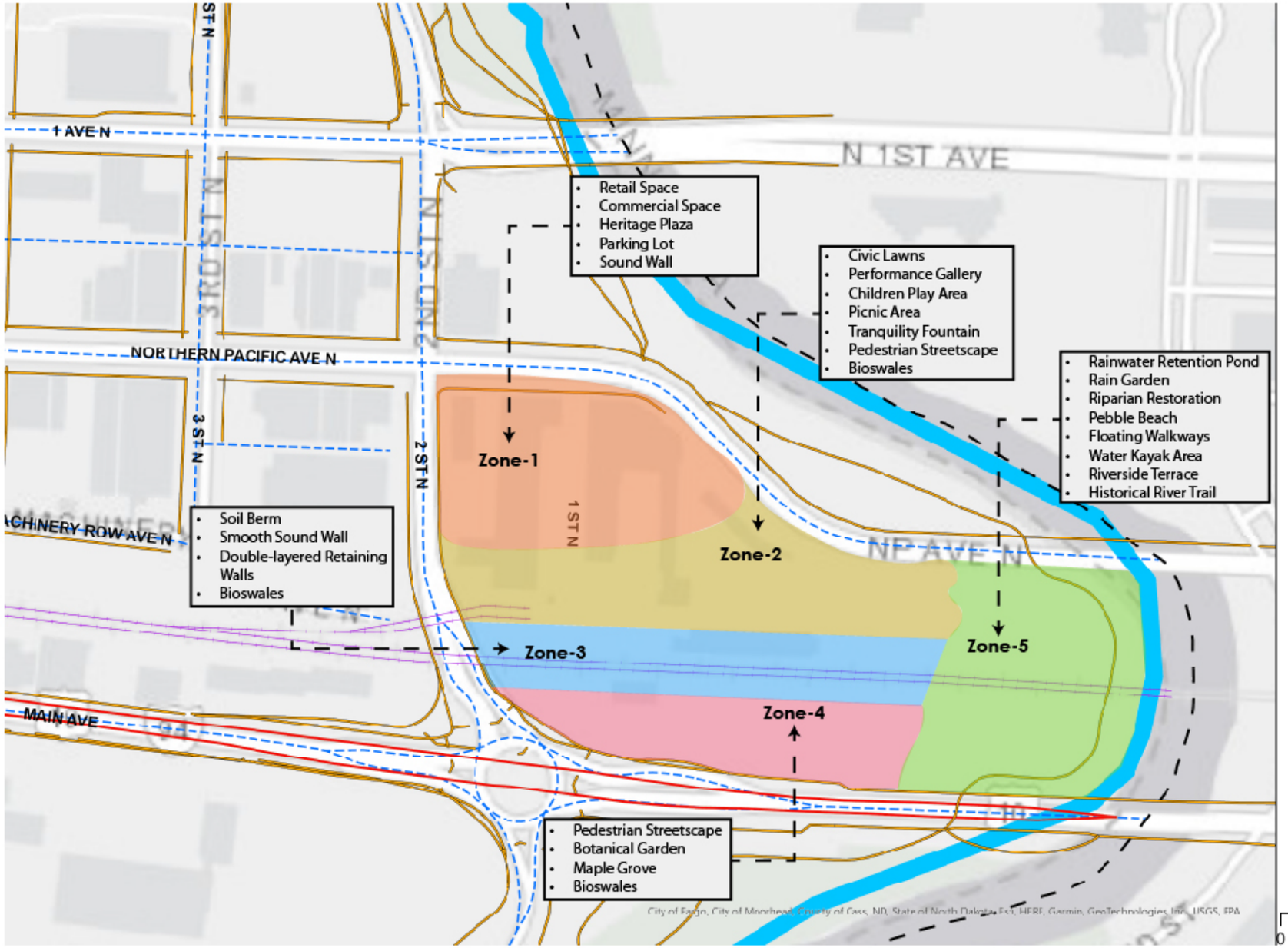
N
W E
S

0 0.03 0.06 Miles

Site Analysis Recommendation

Objective-1 (Cultural History)	Objective-2 (Soundscape Quality)	Objective-3 (Ecological Processes)
❑ Transform the historical footprint of Fargo Foundry. ❑ Develop a link between the 1st steamboat landing area and the proposed landscape design. ❑ Develop a new access connection from the East side of NP Avenue. ❑ Using old rail track as a design element.	❑ A soil berm or smooth sound wall parallel to the rail track will improve the park's soundscape. ❑ Double layer concrete wall on rail bridge for noise reduction. ❑ Plants could be a solution for rail track noise reduction. ❑ The white noise (fountain) effect can also improve sound quality.	❑ Riparian development with appropriate plant species. ❑ Use of existing evergreen and ornamental canopy trees for the new development. ❑ Use of existing topography to design an effective rainwater retention pond. ❑ Use existing hardscape surfaces for Pavel beach development and floating walkways in the riverbank area.

Zoning for Master Plan



Legend

- SidewalksAndRecPath
- City_Boundaries
- Railroads
- State_and_Federal_Ro
- Road_Centerlines
- Streams_and_Rivers_1

Vision Plan

- Zone-1
- Zone-2
- Zone-3
- Zone-4
- Zone-5

N
W E
S

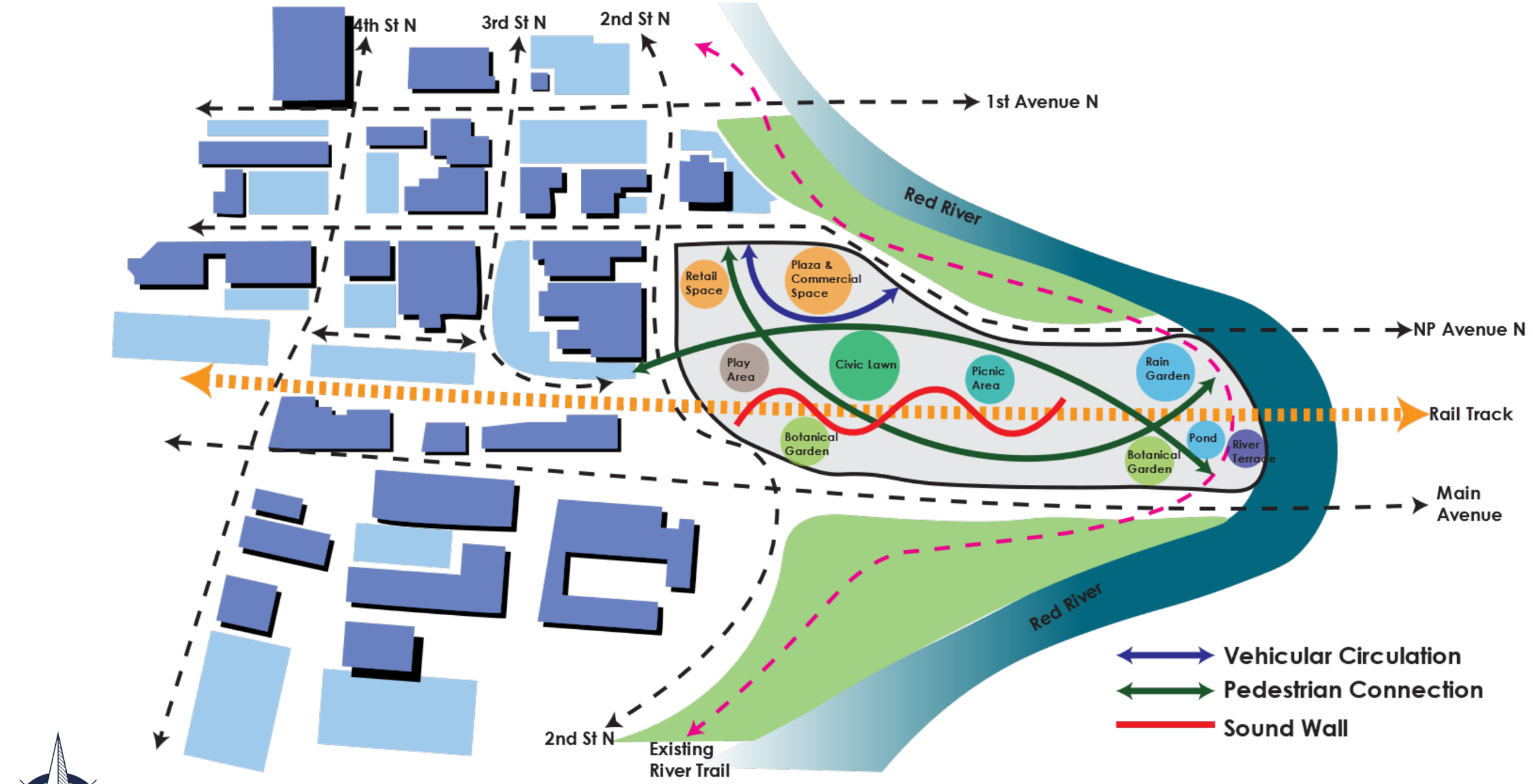
0 0.03 0.06 Miles

List of Programs in Different Zone of Master Plan

Sl. No.	Objective-1	Zone-1	Zone-2	Zone-3	Zone-4	Zone-5
1	Cultural History					
1.1	Retail Space	X				
1.2	Commercial Space	X				
1.3	Heritage Plaza	X				
1.4	Performance Gallery		X			
1.5	Children Play Area		X			
1.6	Picnic Area		X			
1.7	Historical River Trail					X
1.8	Civic Lawns		X			
1.9	Water Kayak Area					X
1.10	Parking Lot	X				
	Objective-2					
2	Soundscape Quality					
2.1	Pedestrian Streetscape		X		X	
2.2	Botanical Garden				X	
2.3	Soil Berm	X		X		
2.4	Smooth Sound Wall	X		X		
2.5	Double-layered Retaining Walls			X		
2.6	Tranquility Fountain (White noise effect)		X			
	Objective-3					
3	Ecological Process					
3.1	Rainwater Retention Pond					X
3.2	Rain Garden					X
3.3	Pebble Beach					X
3.4	Riparian Restoration					X
3.5	Maple Grove				X	
3.6	Floating Walkways					X
3.7	Riverside Terrace					X
3.8	Bioswales		X	X	X	

Land Area - 12.83 acres

Land Zone – Mixed Use



Conceptual Diagram of Master Plan

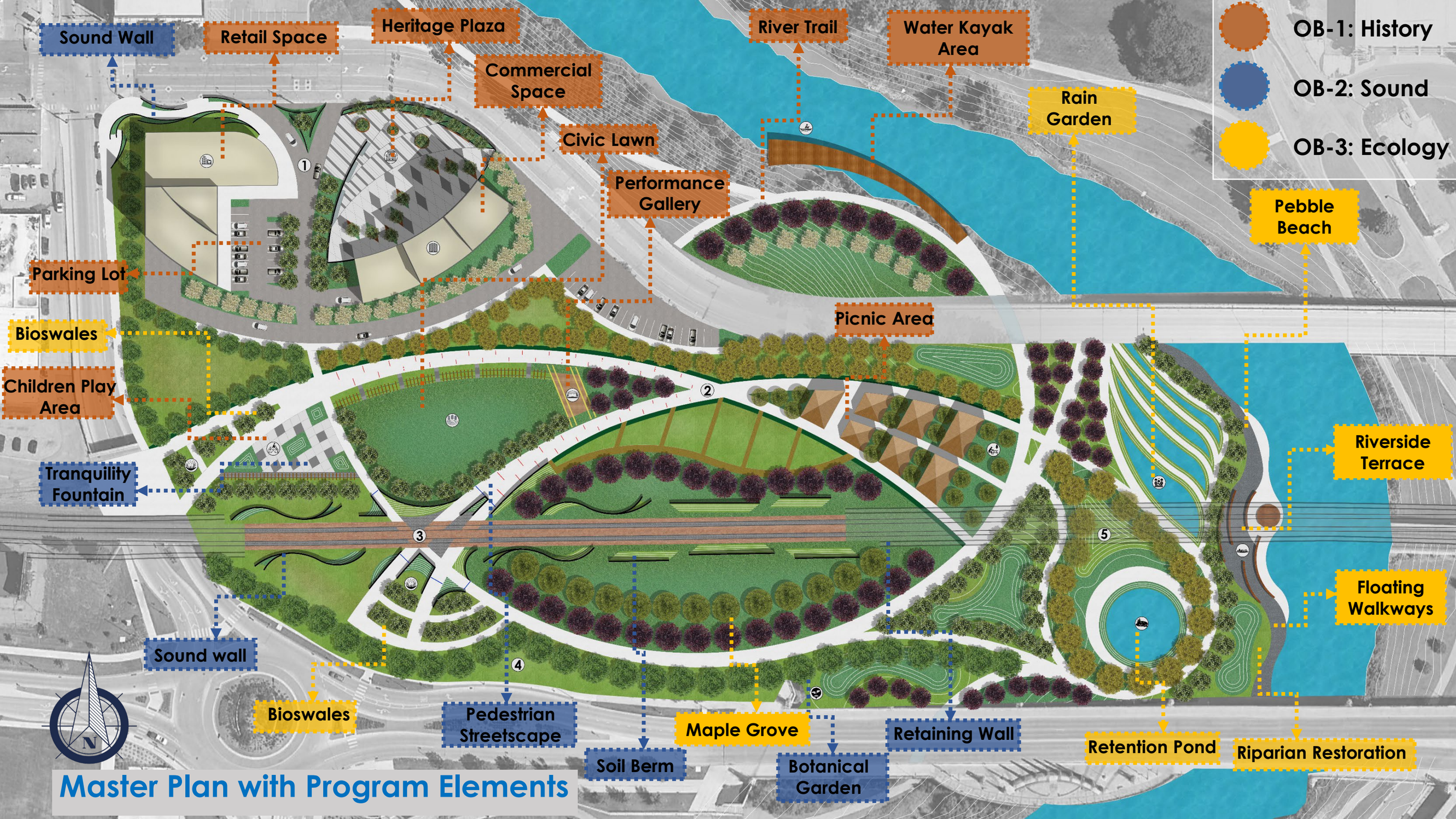

NP AVENUE N
X1
X1
1
2ND STREET N
NP AVENUE N
2
3
Y1
Y1
4
5
MAIN AVENUE
VETERAN MEMORIAL BRIDGE
ZONE KEY
1 ZONE-1 (Heritage Plaza, Retail Space)
2 ZONE-2 (Civic Lawns, Picnic & Children's Play Area)
3 ZONE-3 (Pedestrian Streetscape, Sound Wall)
4 ZONE-4 (Botanical Garden, Maple Grove)
5 ZONE-5 (Rain Garden, Riverside Terrace)
PROGRAM KEY
Retail Space
Commercial Space
Heritage Plaza
Civic Lawn
Performance Stage
Children Play Area
Water Kayak Area
Picnic Space
Bioswales
Botanical Garden
Rainwater Retention Pond
Riverside Terrace
Rain Garden
N

Master Plan

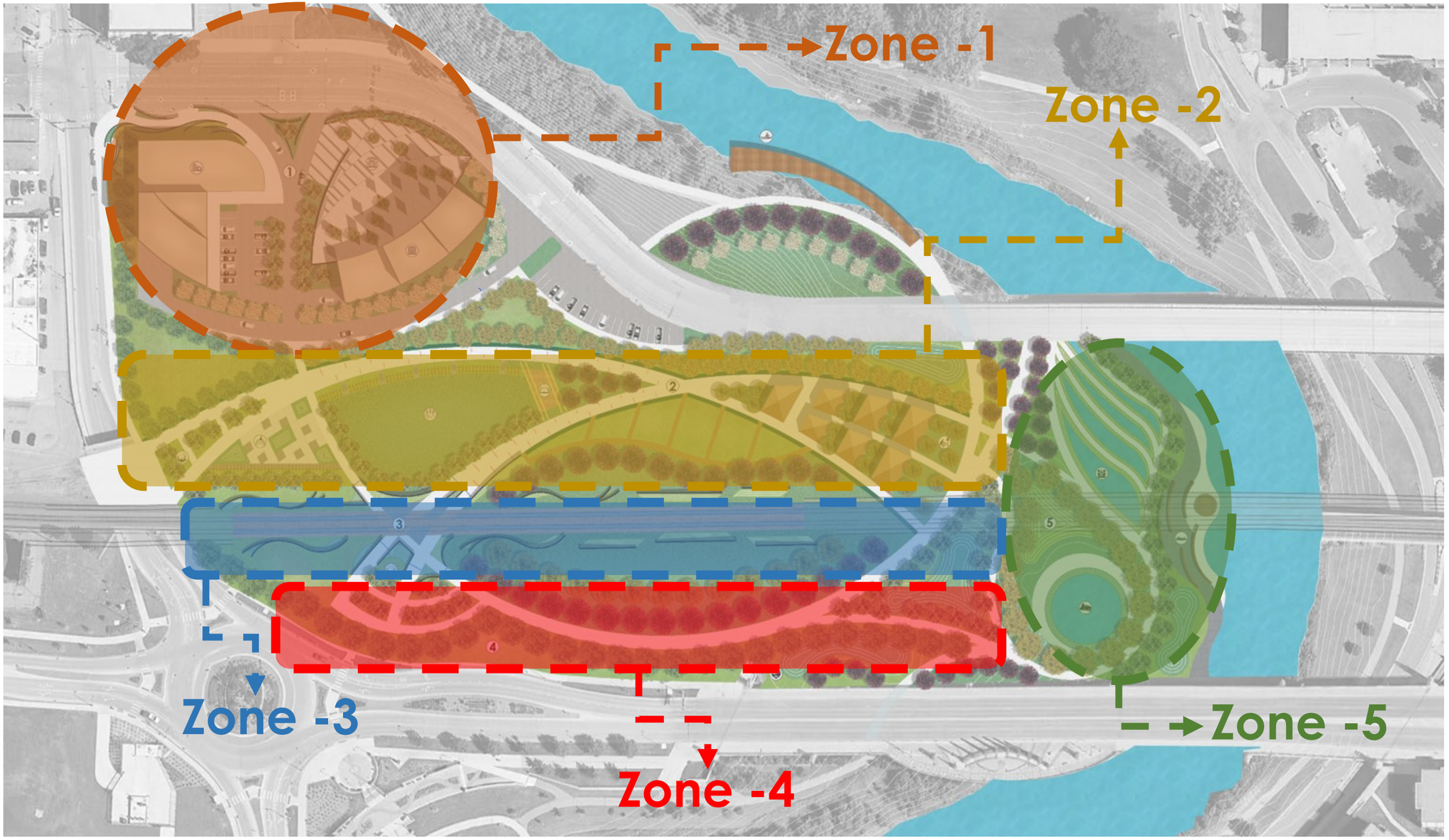
Master Plan with Program Elements for Cultural History (Objective-1)

Master Plan with Program Elements for Soundscape Quality (Objective-2)

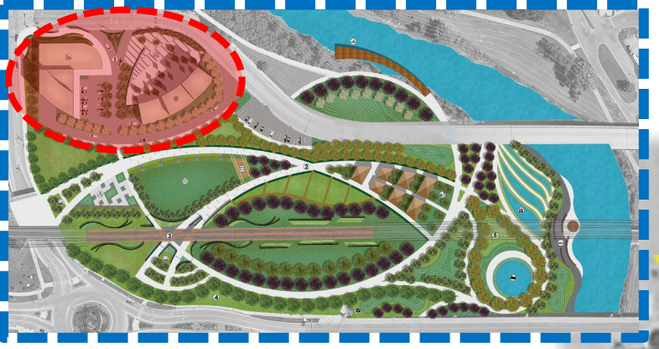
Master Plan with Program Elements for Ecological Process (Objective-3)



Master Plan with Program Elements



5 Zone of Master Plan



Key Plan

- OB-1: History
- OB-2: Sound
- OB-3: Ecology

Sound Wall

Retail Space

Heritage Plaza

Commercial Space

P2

P1

X1

X1

1

Parking Lot

Detail Plan of Heritage Plaza (Zone-1)

Perspective of Heritage Plaza (P-1)

Heritage plaza is the symbol of the old footprint of Fargo Foundry.

Ornamental Tree Selection

American Linden

Soil Description
rich, moist, well-drained soil
Height
50’-80'
Bloom Color
white

Amur Maple

Soil Description
moist, well-drained soil
Height
15’-18'
Bloom Color
red

Crab Apple

Soil Description
acidic, alkaline, clay, loamy, moist, sandy, well-drained, wet soil
Height
12’-20’
Bloom Color
red

Pagoda Dogwood

Soil Description
acid soil, moist, well-drained soil
Height
15’-25'
Bloom Color
white

Paper White Birch

Soil Description
acid soil, moist, well-drained soil
Height
50’-70'
Bloom Color

Upright Ironwood

Soil Description
acid soil, moist, well-drained soil
Height
20’-40'
Bloom Color

OB-1: History

OB-2: Sound

OB-3: Ecology

Commercial Space

Heritage Plaza

Upright Ironwood

American Hophornbeam

Retail Space

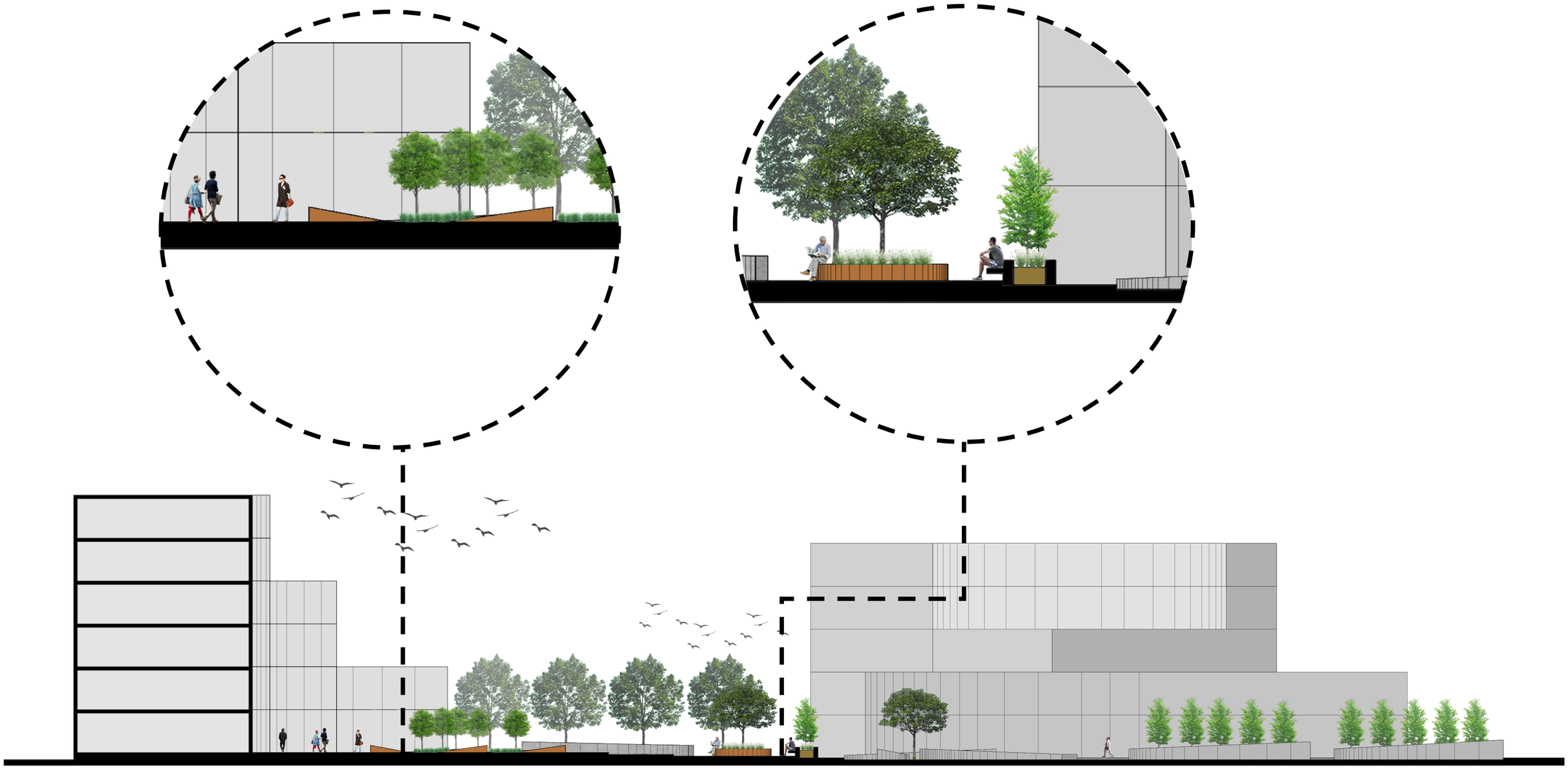
Smooth Sound wall
Max Height- 5’-0”
Minimum Height- 3’-0”

Pagoda Dogwood

Hackberry

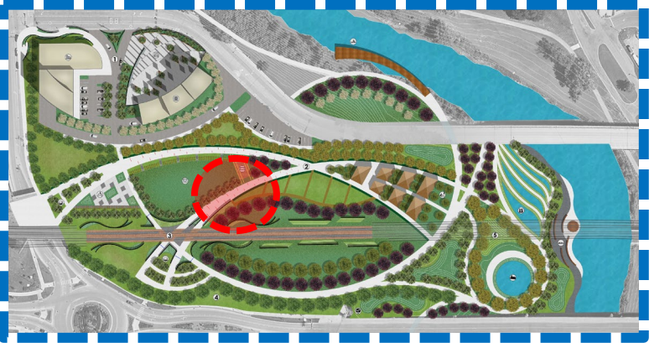
Aerial View of Heritage Plaza (P-2)

Heritage plaza is the symbol of the old footprint of Fargo Foundry.



Section of Heritage Plaza (X1-X1)

This section illustrates infill structures and heritage plaza components including the smooth sound wall.



Key Plan

Black Walnut

Turf Grass

Street Furniture

Streetlight

Crab Apple

P3

Wooden Bridge

Black Walnut

Rainwater Collection Pond

Upright Ironwood

Sound Wall

Permeable Paving

OB-1: History

OB-2: Sound

OB-3: Ecology

N

Detail Plan of Pedestrian Streetscape (Zone-2)

Canopy Tree Selection

Sugar Maple
Soil Description
moist, well-drained soil
Height
60’-75'
Bloom Color
red

Silver Maple
Soil Description
moist, well-drained soil, wet soil
Height
50’-70'
Bloom Color
yellow

Northern Catalpa
Soil Description
alkaline soil, moist, well-drained soil
Height
40’-60’
Bloom Color
white

Thornless Honey-locust
Soil Description
moist, well-drained soil
Height
30’-70'
Bloom Color
yellow

Hackberry
Soil Description
alkaline soil, moist, well-drained soil
Height
40’-60’
Bloom Color

American Hophornbeam
Soil Description
acidic, clay, moist, sandy, well-drained, occasionally dry
Height
15’-30'
Bloom Color
golden yellow

Bur Oak
Soil Description
alkaline soil, moist, well-drained soil
Height
70’-80'
Bloom Color

Coffeetree
Soil Description
moist, well-drained soil
Height
60’-75'
Bloom Color

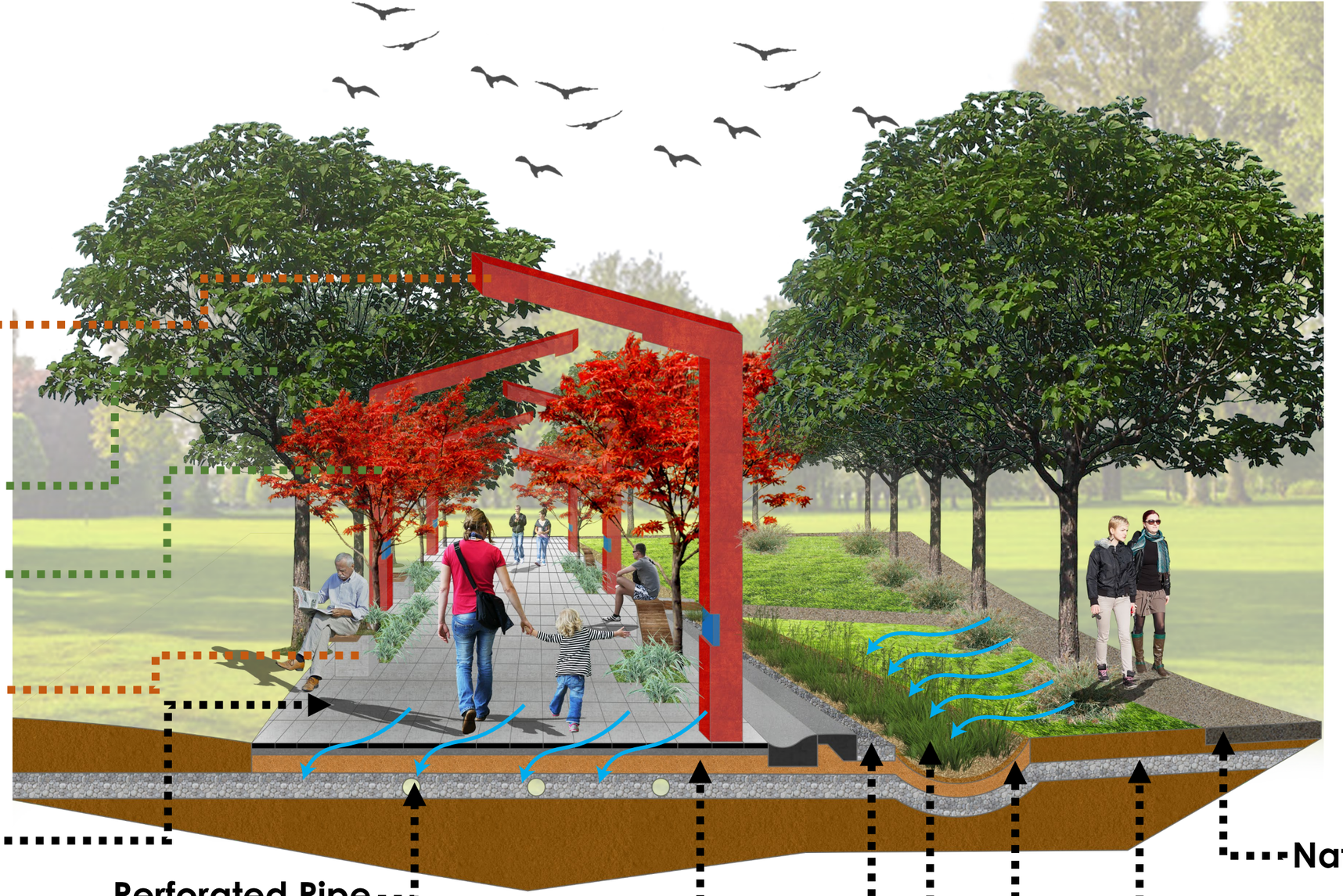
Ohio Buckeye
Soil Description
acidic, moist, well-drained
Height
20’-40’
Bloom Color

Black Walnut
Soil Description
acidic, moist, well-drained
Height
50’-75'
Bloom Color

OB-1: History

OB-2: Sound

OB-3: Ecology

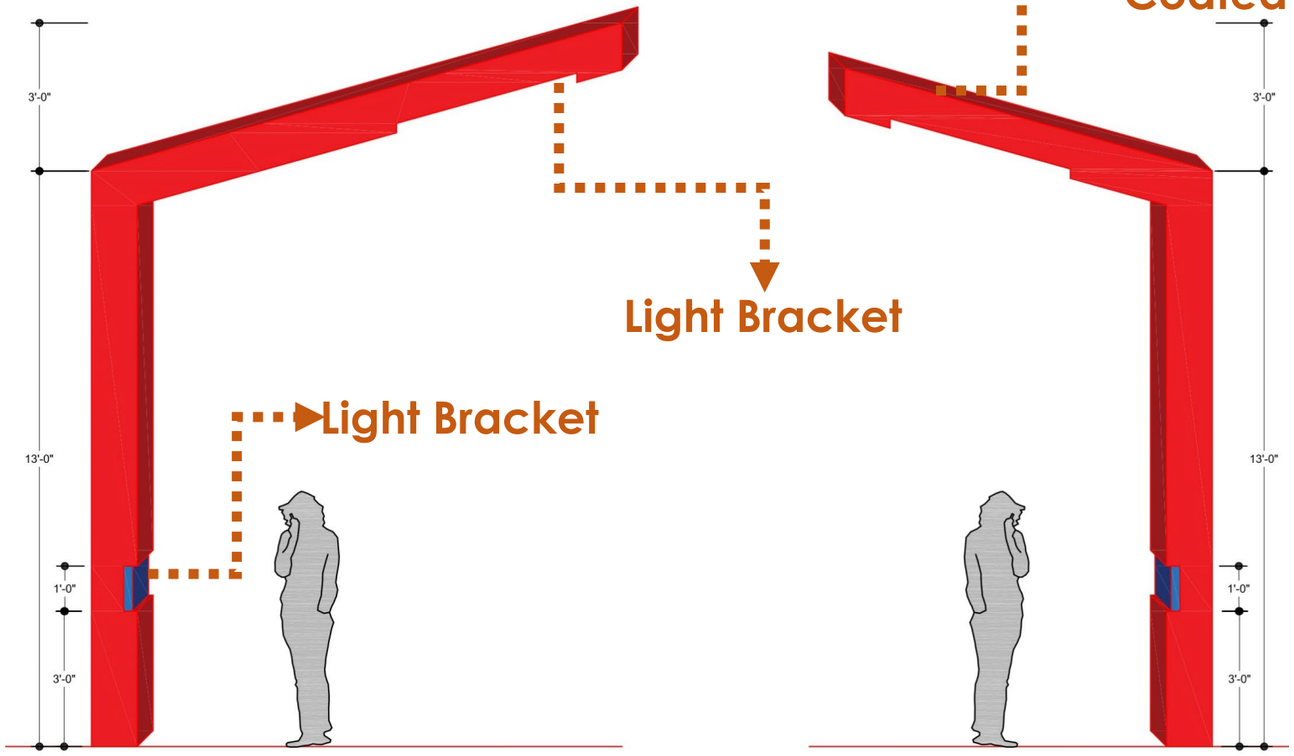


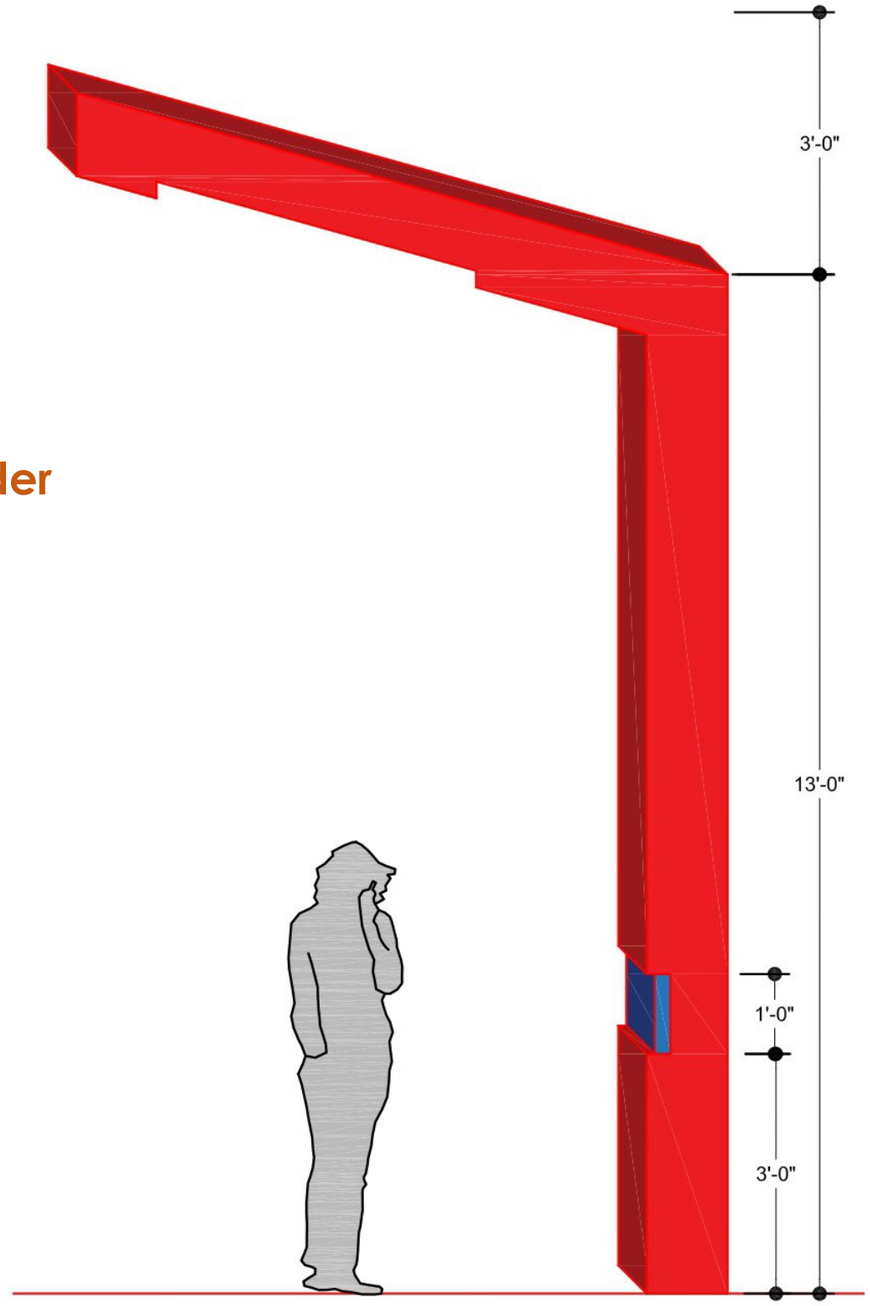
Streetscape Ecology Section (P-3)

This detail shows the street components with rain and surface water collection methods to make a sustainable park environment.

Streetlight Design

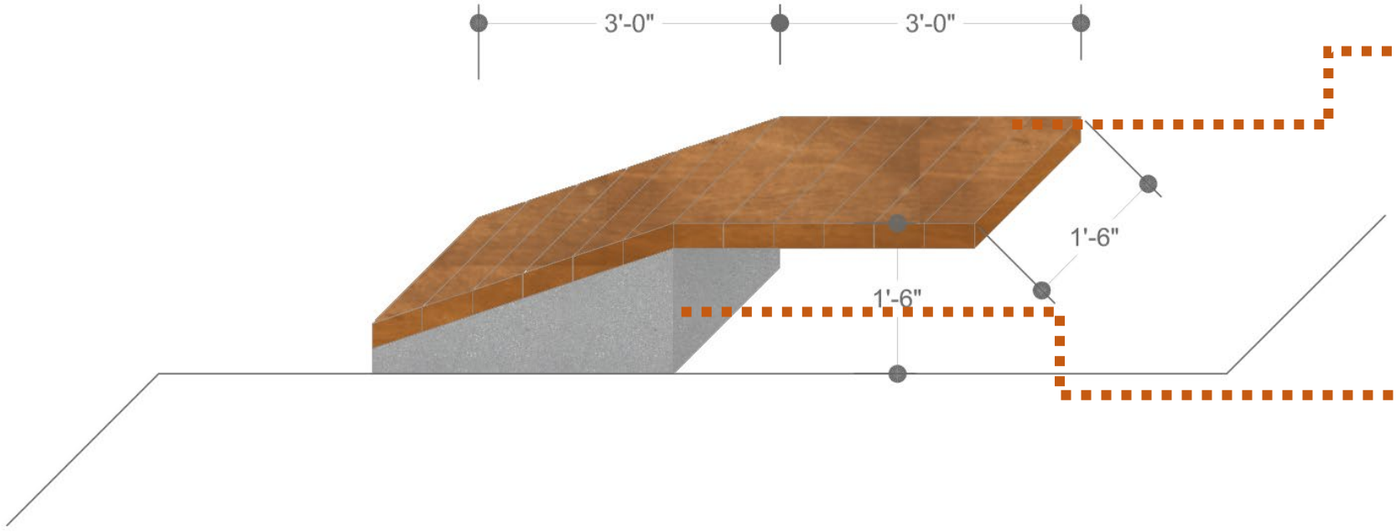
Design Inspiration of Streetlight





Street Furniture Design

Design Inspiration of Street Furniture

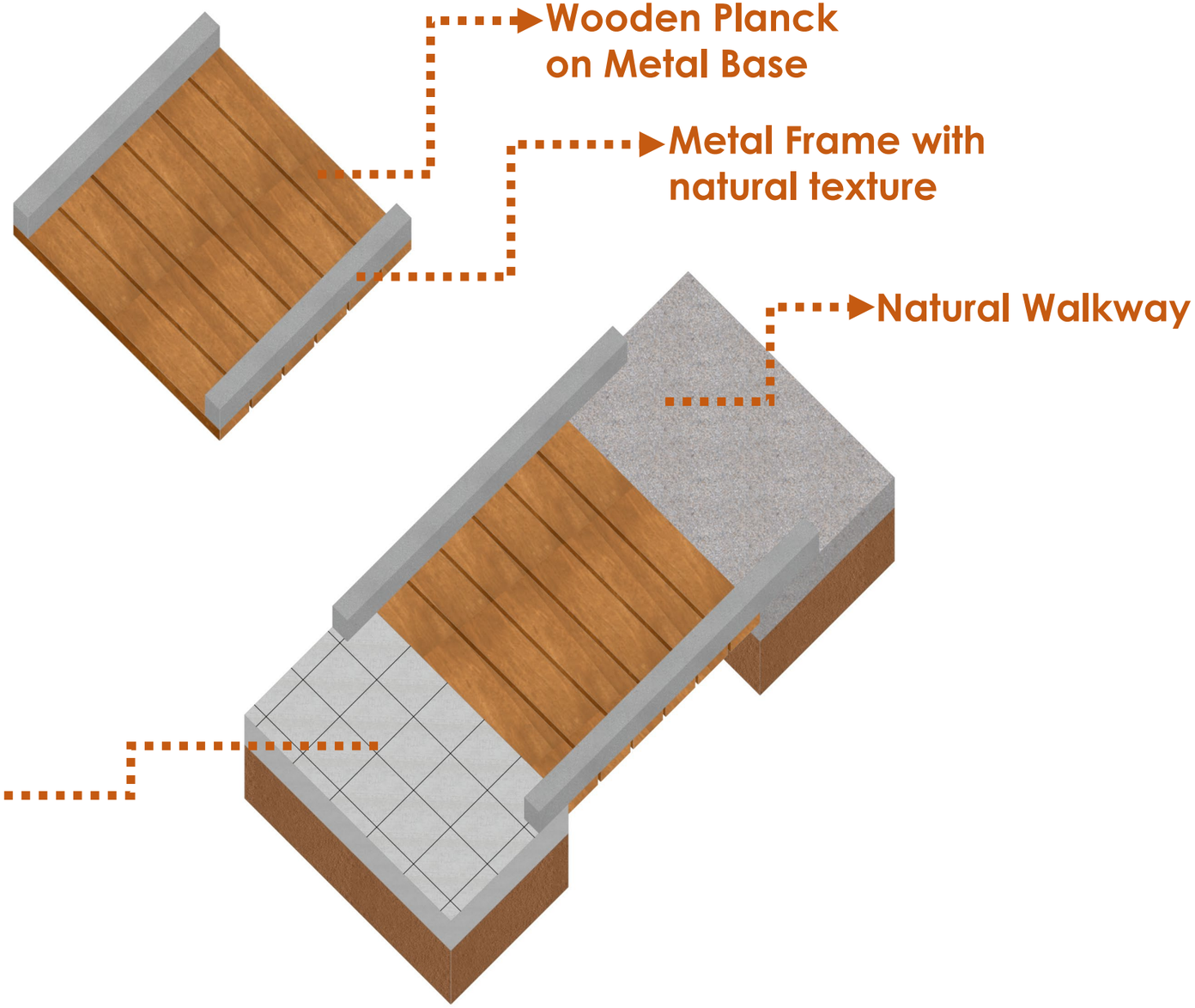


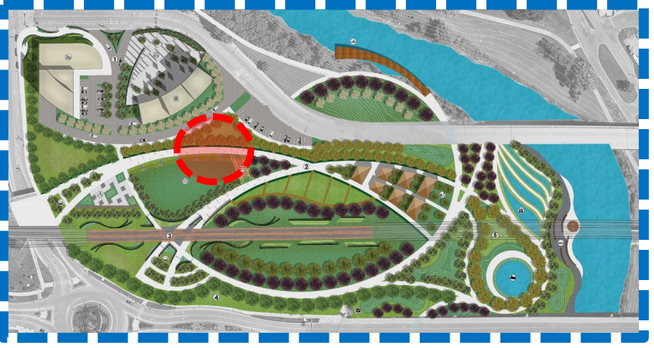
Wooden Planck on Metal Base

Metal Base with natural texture

Wooden Bridge Design Over Water Collection Pond

Design Inspiration of Wooden Bridge





Key Plan

Bur Oak

Rainwater Collection Pond

Native Grass

OB-1: History

OB-2: Sound

OB-3: Ecology

Permeable Paving

Streetlight

Street Furniture

P4

Old Rail Track

Crab Apple

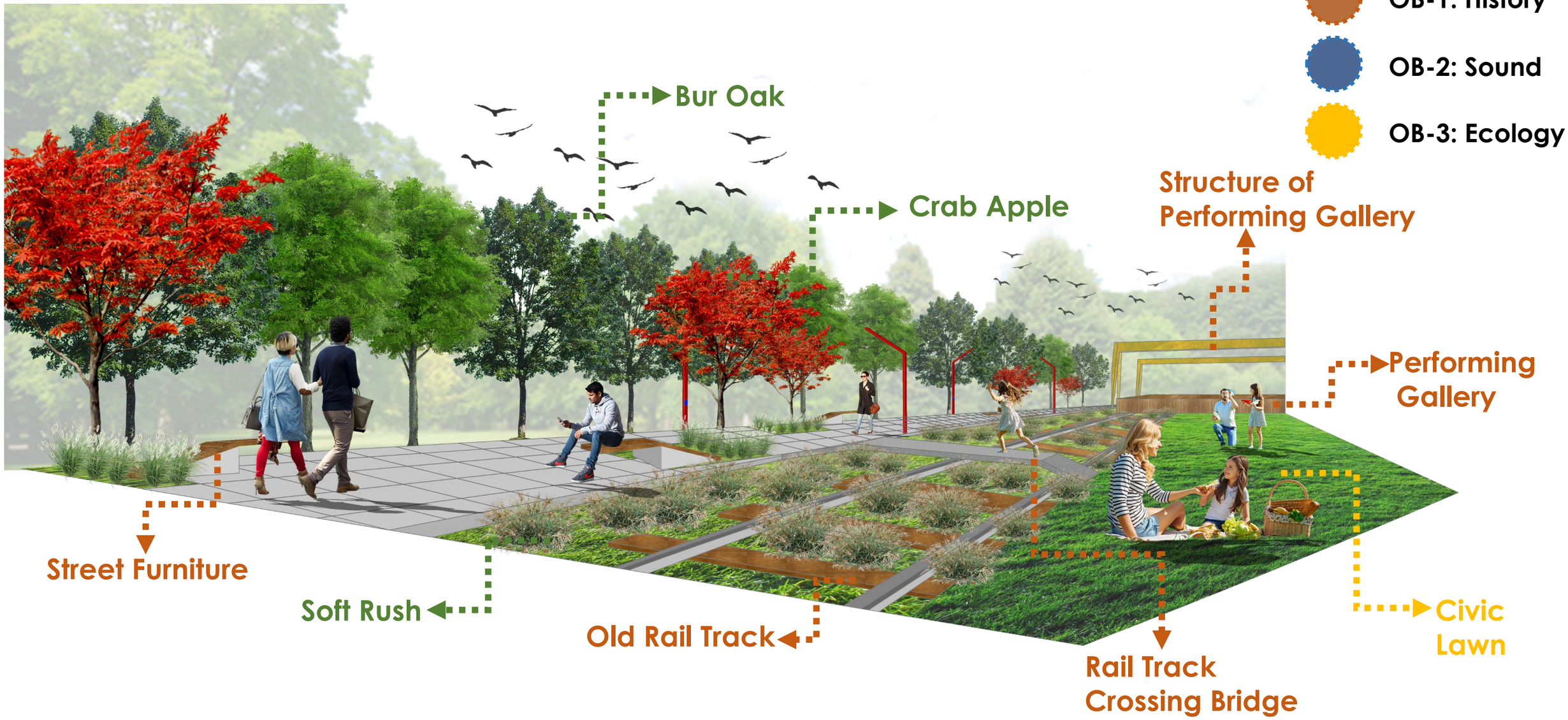
Pedestrian Bridge Over Track

Soft Rush

Performing Gallery

Sugar Maple

Detail Plan of Old Rail Track (Zone-2)

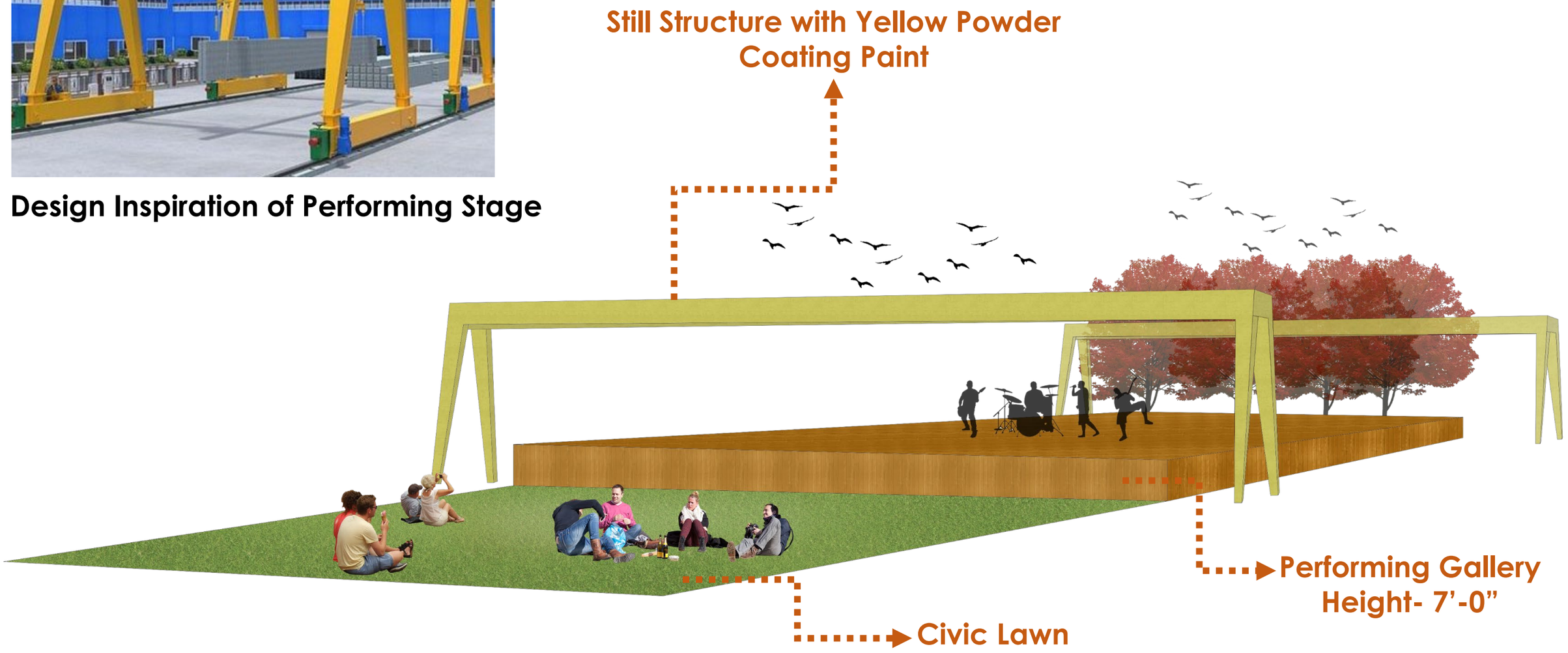


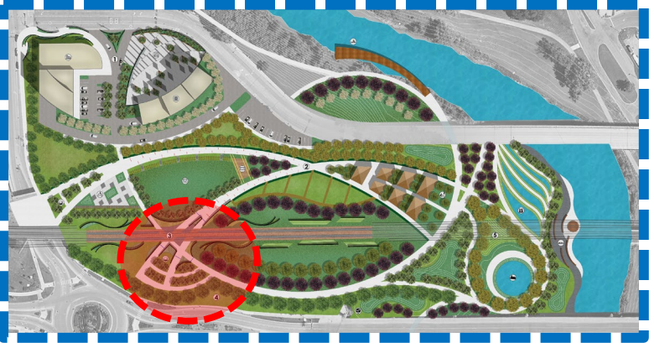
Perspective of Old Rail Track (P-4)

The perspective shows the old rail line transformed into a landscape that allows walking in planting beds on exposed rail tracks.

Performing Gallery Design

Design Inspiration of Performing Stage





Key Plan

OB-1: History

OB-2: Sound

OB-3: Ecology

Brick Paving

Gravel

Upright Ironwood

Bioswale

P5

Permeable Paving

Y1

Y1

Auto Retractable Barrier

Smooth Sound Wall

Sugar Maple

Silver Maple

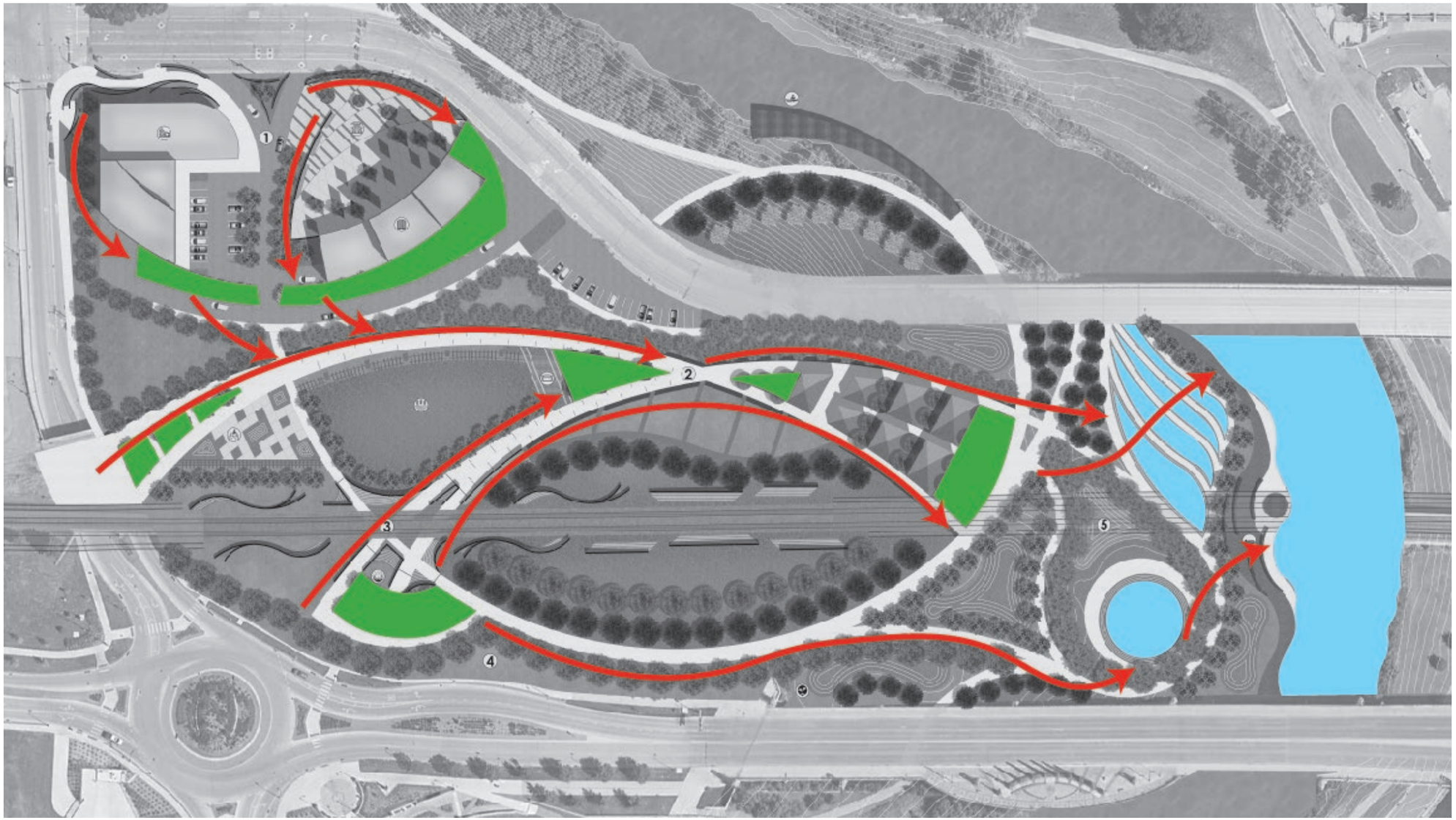
Detail Plan of Pedestrian Crossing (Zone-3 & 4)

This plan demonstrates pedestrian crossing of the rail track, sound walls and soil berm for soundscapes improvements and bioswales for rainwater collection.

Collection Point

Storage

Flow Direction



Rain & Surface Water Collection Flow

Perspective of Sound Wall & Pedestrian Crossing (P-5)

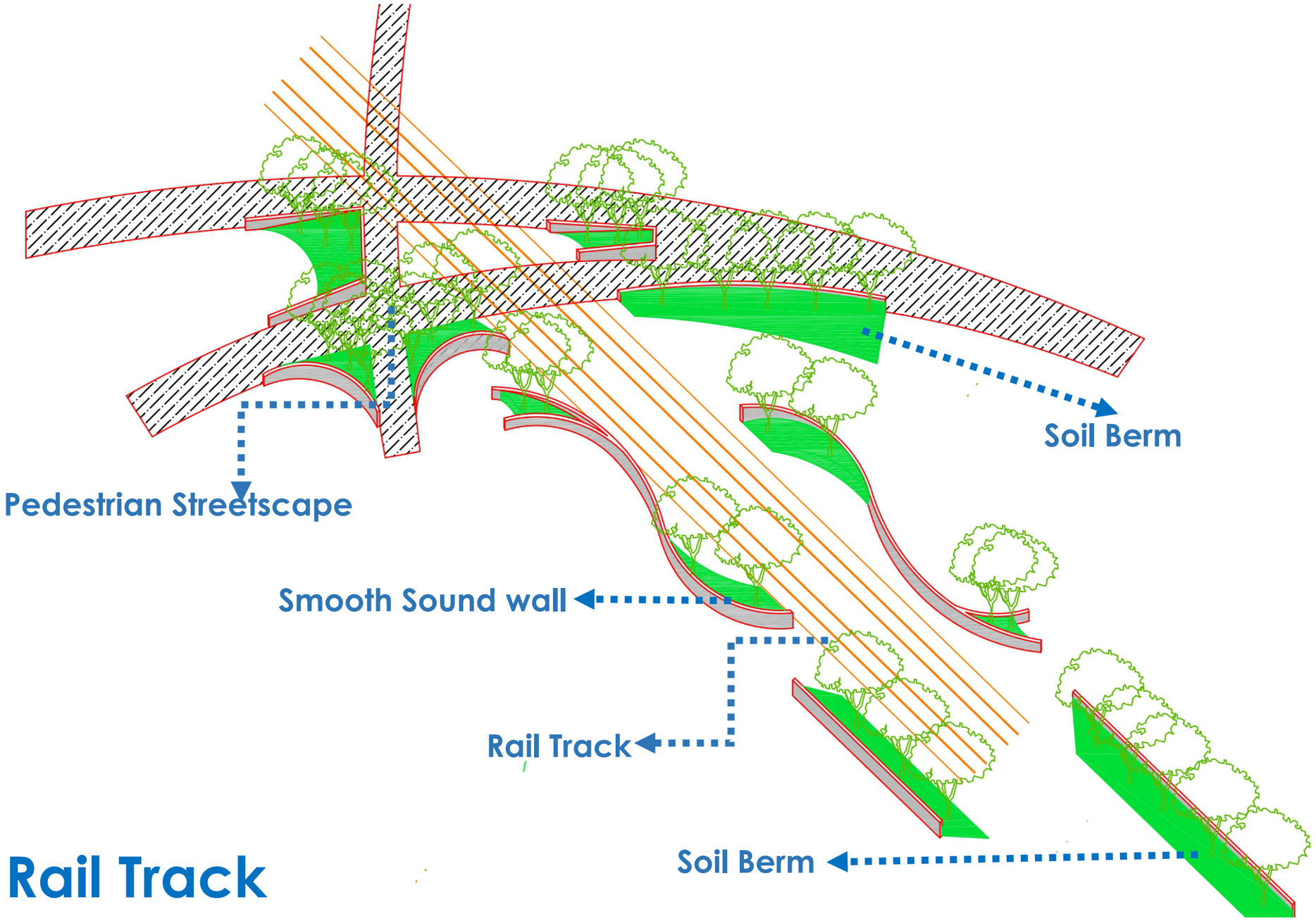
Section of Bioswale (Y1-Y1)

This section exhibits bioswales for rain and surface water collection before being connected to the retention pond.

OB-1: History

OB-2: Sound

OB-3: Ecology



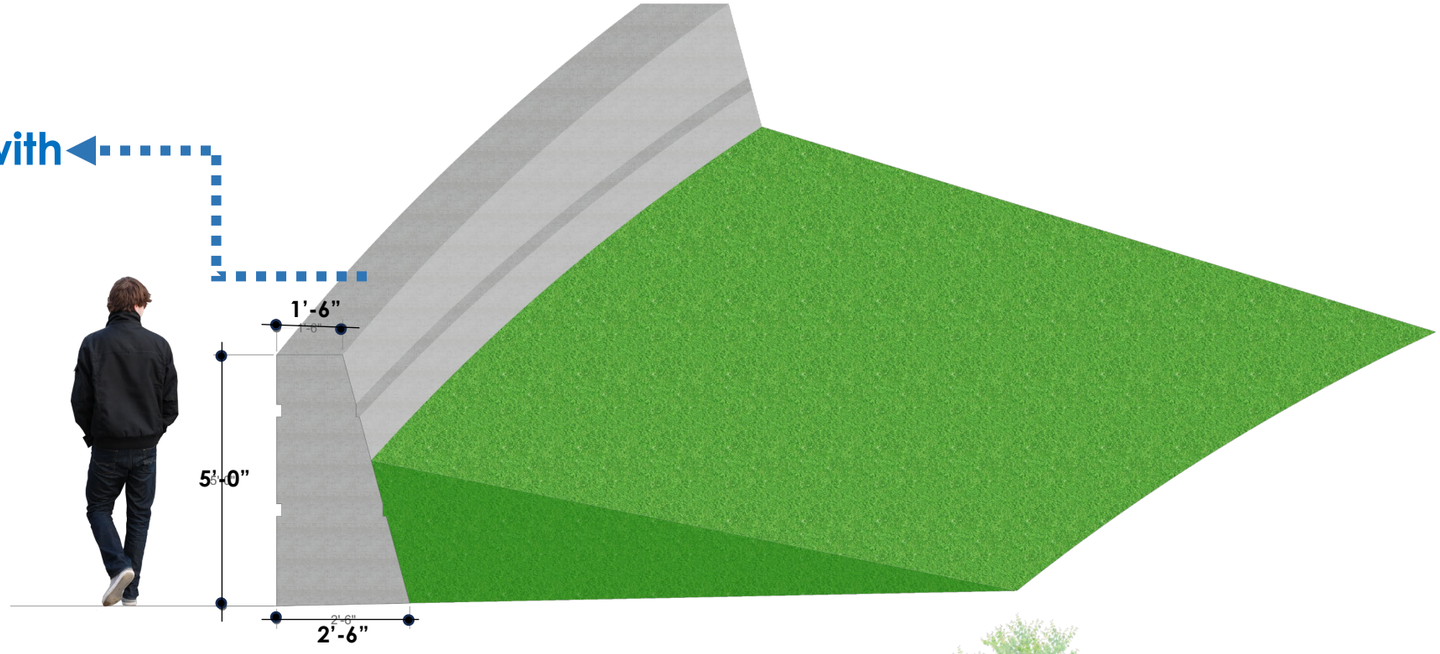
Aerial View of Rail Track

OB-1: History

OB-2: Sound

OB-3: Ecology

Structure Made with
Foam Concrete



Upright Ironwood Trees to
Reduce Sound Effect

Structure Made with
Foam Concrete

Soil Berm

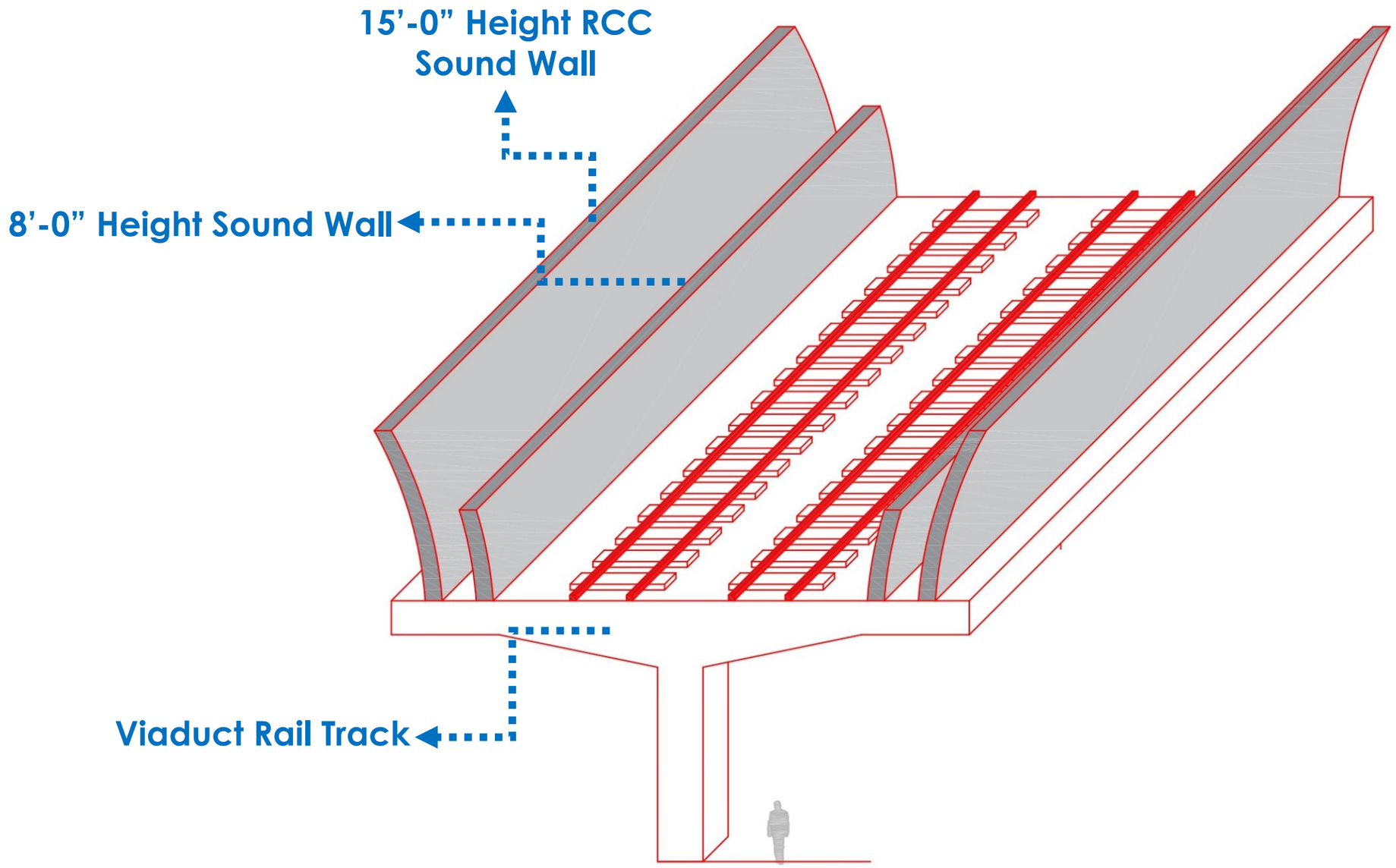
Smooth Sound wall
Max Height- 5'-0"
Minimum Height- 3'-0"

Detail of Smooth Sound Wall

OB-1: History

OB-2: Sound

OB-3: Ecology

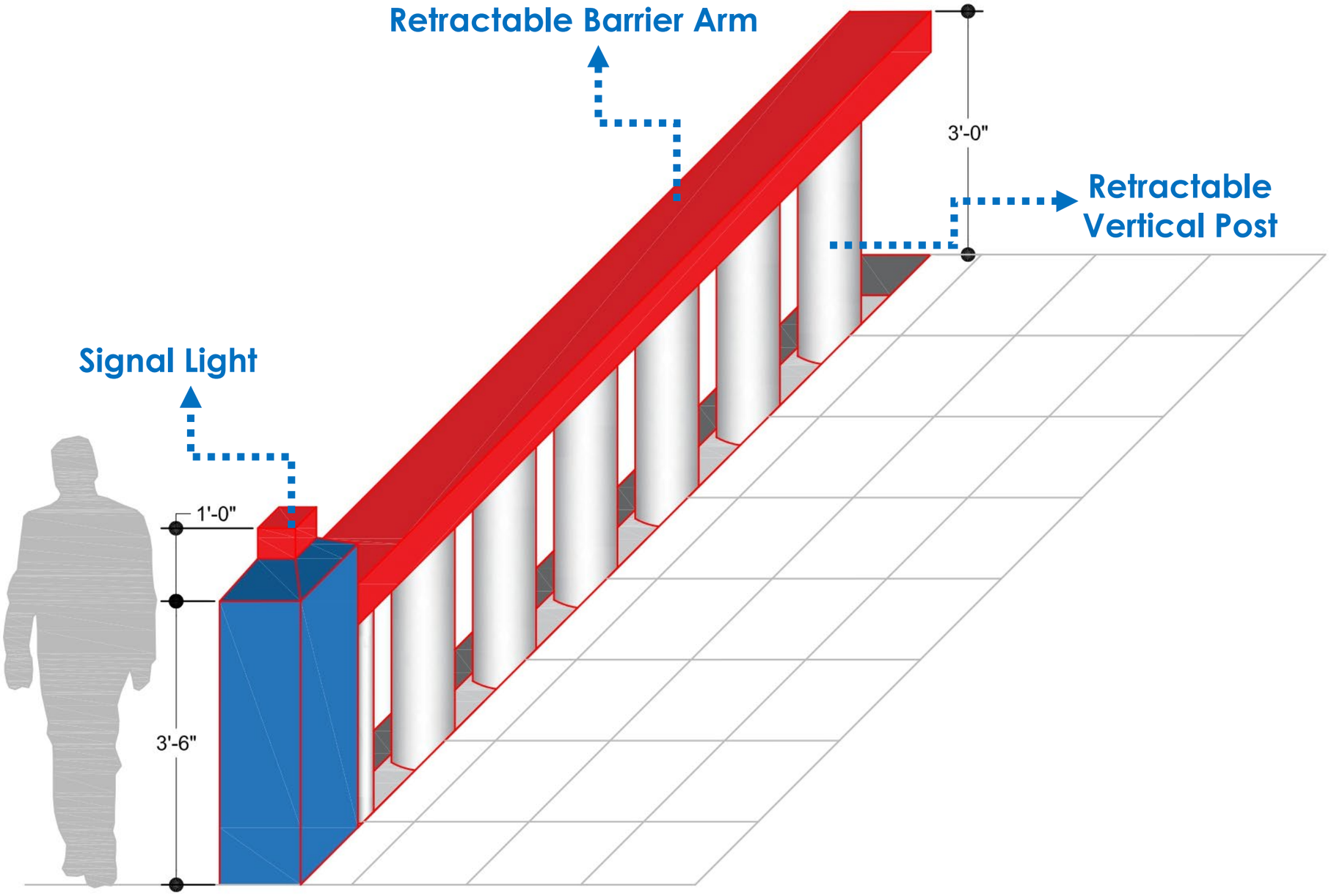


Sound Wall Detail for Rail Track Bridge

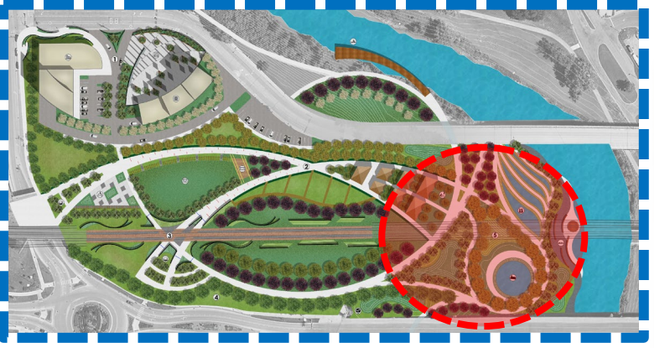
OB-1: History

OB-2: Sound

OB-3: Ecology



Auto Retractable Barrier for Pedestrian Crossing



Key Plan

OB-1: History

OB-2: Sound

OB-3: Ecology

Picnic Shelter

Double Layer Sound Wall for Rail Track Bridge

America n Linden

Rain Garden

Pebble Beach

Amur Maple

P6

Riverside Terrace

Paper White Birch

Hackberry

Floating Walkway

Retention Pond

Riparian Restoration

Detail Plan of Raingarden & Riparian Area (Zone-5)

Native Grass Selection

Sweet Flag
Soil Description
rich, average, poor, clay, sand
Height
2'-4'
Bloom Color
yellow, green, brown

River Bulrush
Soil Description
loam, clay, sand
Height
4'-6'
Bloom Color
brown

Clustered Field Sedge
Soil Description
alkaline, average, loam, clay, sand
Height
18"-30"
Bloom Color
green

Tufted Hairgrass
Soil Description
acid, neutral, rich, average, loam, clay, sand
Height
3'-4'
Bloom Color
yellow

Soft Rush
Soil Description
acid, rich, average, loam, clay, sand
Height
2'-4'
Bloom Color
yellow, green, brown

Switchgrass
Soil Description
average, poor, loam, clay, sand, gravel/rock
Height
3'-6'
Bloom Color
pink

Native Shrub Selection

Fragrant Sumac
Soil Description
dry, rocky soils, sandy, Clay
Height
4'-6'
Bloom Color
yellow

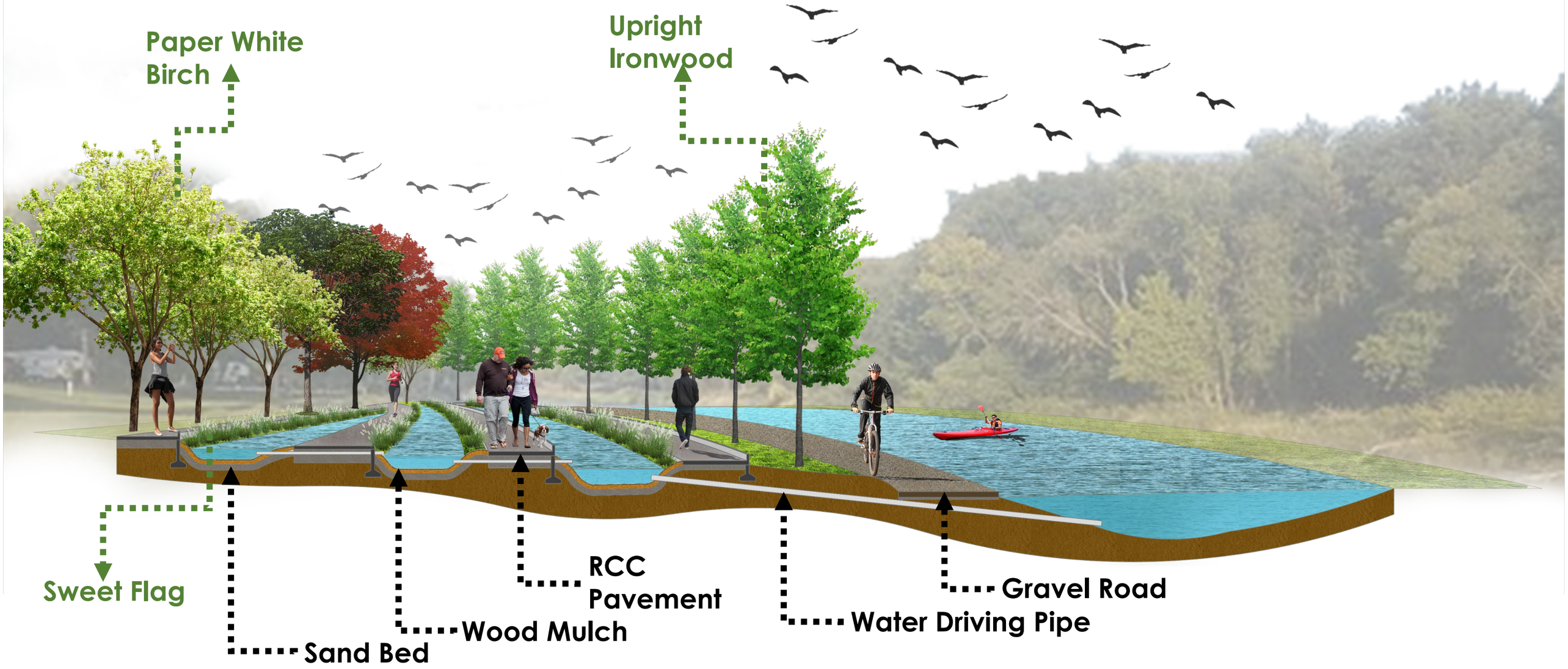
Redosier Dogwood
Soil Description
loam, clay, sand
Height
2'-10'
Bloom Color
red

Creeping Juniper
Soil Description
average, loam, sand
Height
12"-18"
Bloom Color
white

American Cranberry Bush
Soil Description
normal, clay/heavy, wet
Height
10'-12'
Bloom Color
white

Arrowwood Viburnum
Soil Description
acidic, alkaline, clay, loamy, moist
Height
6'-15'
Bloom Color
white

Winterberry Euonymus
Soil Description
Wide range of soil
Height
10'-15'
Bloom Color
red



Rain Garden (P-6)

This detail exhibits the water flow structure of the rain garden.

Discussion

Objective -01 (Cultural History)	Objective -02 (Soundscape Quality)	Objective -03 (Ecological Process)
❑ Considering historical value and significance. ❑ Cultural footprint of the history. ❑ Connection between historical events. ❑ Develop new accessibility.	❑ Identify the components for soundscape improvement. ❑ To transform existing sound levels, the World Health Organization recommends a 55 dB sound level for the urban park. ❑ Rail track surface development.	❑ Use of natural topography. ❑ Improvement of existing ground cover. ❑ Right plant, right place. ❑ Use of potential existing resources.

Conclusion

Objective -01 (Cultural History)	Objective -02 (Soundscape Quality)	Objective -03 (Ecological Process)
❑ Reflection on the historical significance of the old steel industry in streetscape design. ❑ Transform the old footprint of Mid-American Steel into Heritage Plaza. ❑ Bridging connection with Steamboat Landing with new park setting and Heritage Plaza through river trail. ❑ Using the existing bridge over 2nd Street N and transforming it into a new pedestrian connection.	❑ Transform Smooth sound wall into landscape design components. ❑ Improve existing sound quality to 55 dB, acceptable for a park setting, through a sound wall, soil berm, and vegetation. ❑ Improvement of pedestrian crossing by changing the rail track surface material.	❑ Rain and surface water collection and restoration by using existing topography. ❑ Improve existing ground cover and transform it into a 70% permeable and 20% non-permeable surface. ❑ Selection of adaptive vegetation for post-industrial site and Zone-3 condition. ❑ Redeploying the design hardscape and riparian development will use the old structure's existing foundation and gravel surface.

Thank You

If you have any questions, I am happy to answer.


NP AVENUE N
2ND STREET N
NP AVENUE N
MAIN AVENUE
VETERAN MEMORIAL BRIDGE
ZONE KEY
1 ZONE-1 (Heritage Plaza, Retail Space)
2 ZONE-2 (Civic Lawns, Picnic & Children's Play Area)
3 ZONE-3 (Pedestrian Streetscape, Sound Wall)
4 ZONE-4 (Botanical Garden, Maple Grove)
5 ZONE-5 (Rain Garden, Riverside Terrace)
PROGRAM KEY
Retail Space
Commercial Space
Heritage Plaza
Civic Lawn
Performance Stage
Children Play Area
Water Kayak Area
Picnic Space
Bioswales
Botanical Garden
Rainwater Retention Pond
Riverside Terrace
Rain Garden
N

Master Plan