

# REIMAGINING THE TOWN AND GOWN EXPERIENCE

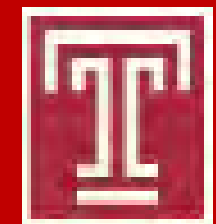
Diamond Street Corridor Neighborhood



Department of Landscape Architecture

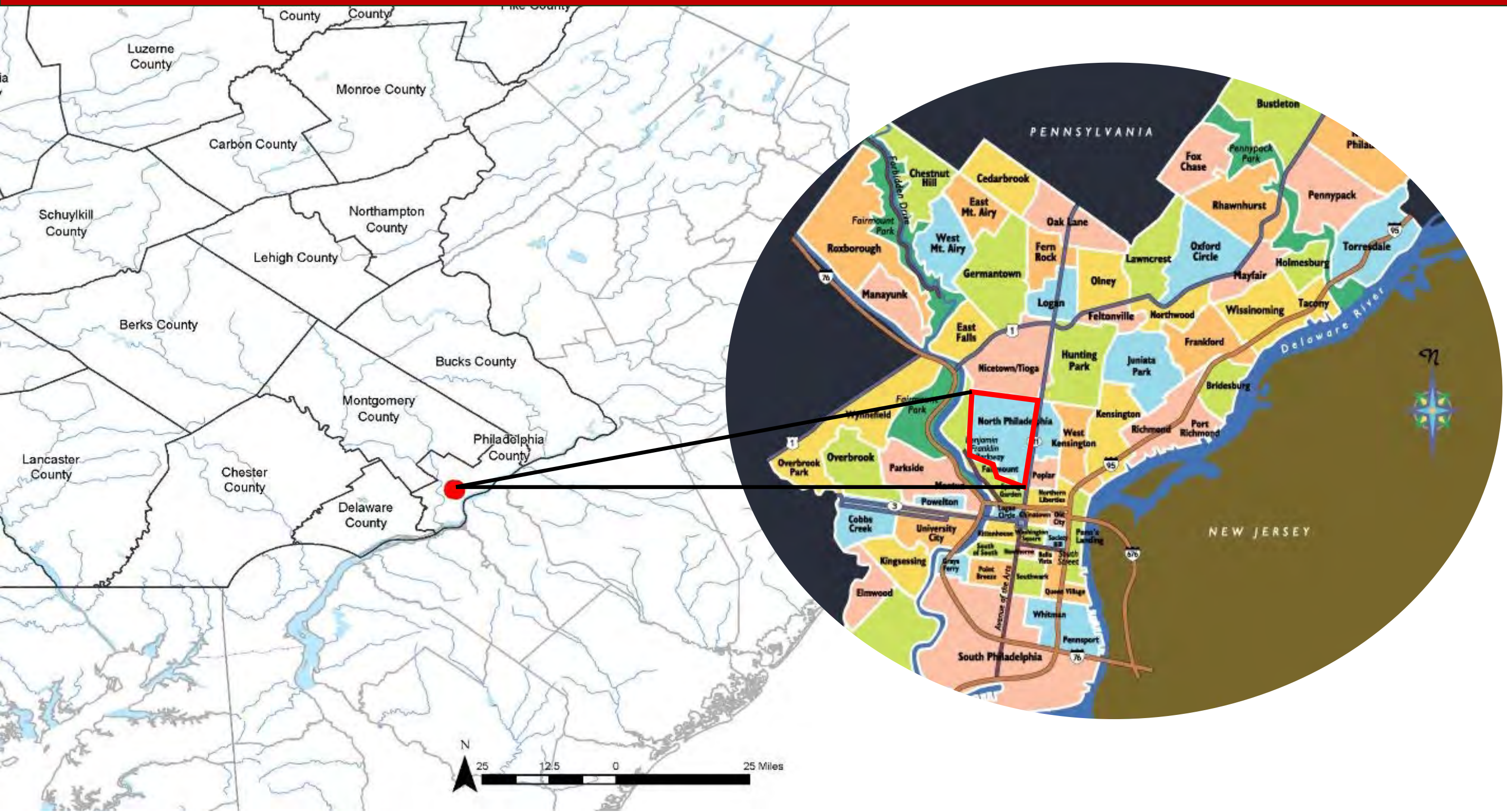
LARC 8144 - Spring 2018 - Prof. Carter van Dyke

Jacob Zurilla, Liz Krohn, Zach Cross, and Katie Bartling





# SITE



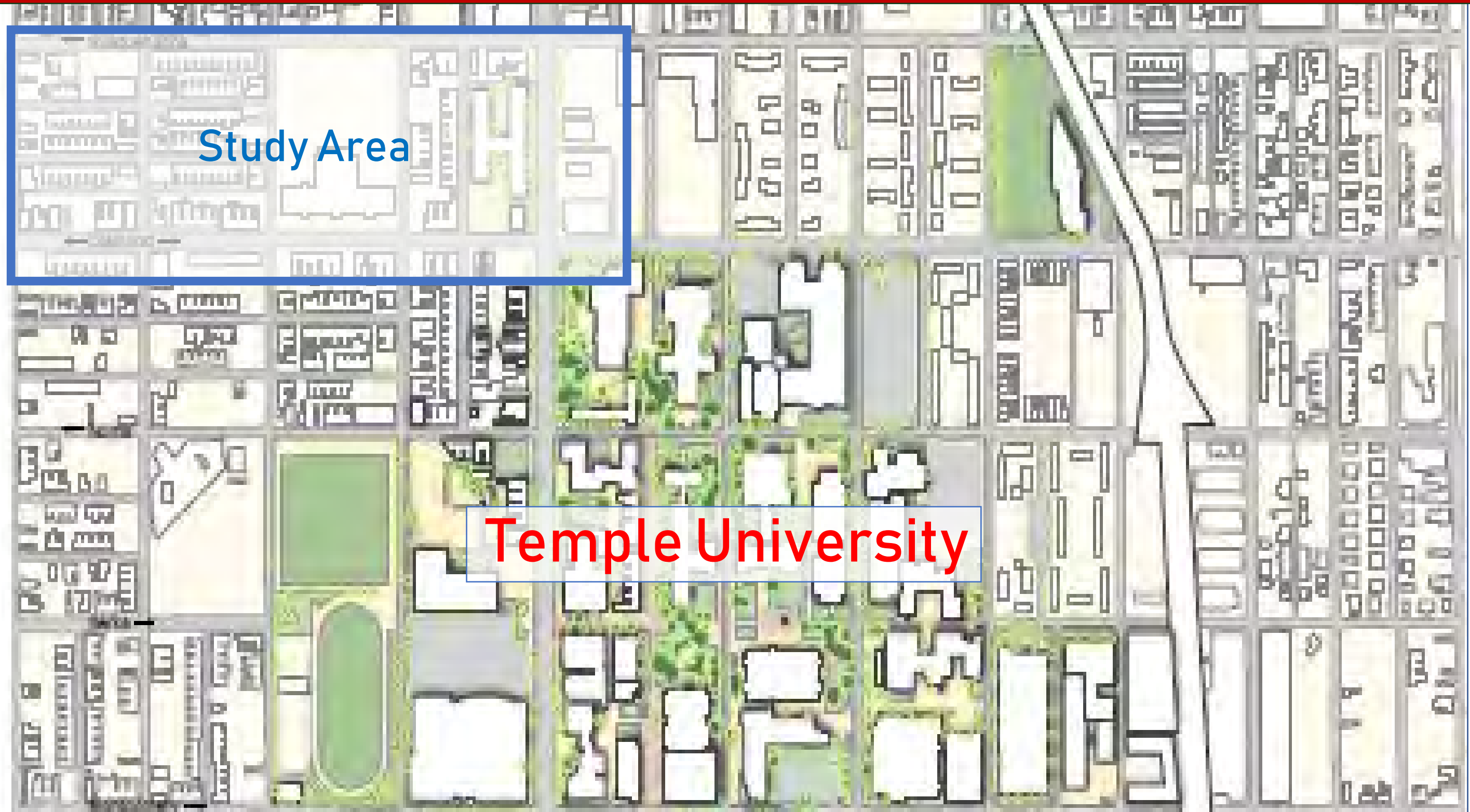
Philadelphia, Pa - Lower North District





# SITE

## Temple University North Gateway





# Project Goals and Objectives

Seeking solutions of how the built form and natural spaces in a neighborhood can nurture and develop its residents through:

- Creating a sustainable, walkable community
- Protecting historic resources and character
- Unifying the community
- Creating a healthy city





# Outline

- First Impressions
- Case Studies
- Existing Conditions Analysis
- SWOT Analysis
- Conceptual Masterplan
- Detailed Schematic Designs





# First Impressions





# Case studies

## Neighborhood Revitalization through:

- Shared Streets
- Multimodal Initiatives
- Green Infrastructure
- Historic Preservation and Greenway Enhancements



# Neighborhood Revitalization

Through Shared Streets



Poynton and Preston Fishergate, U.K.



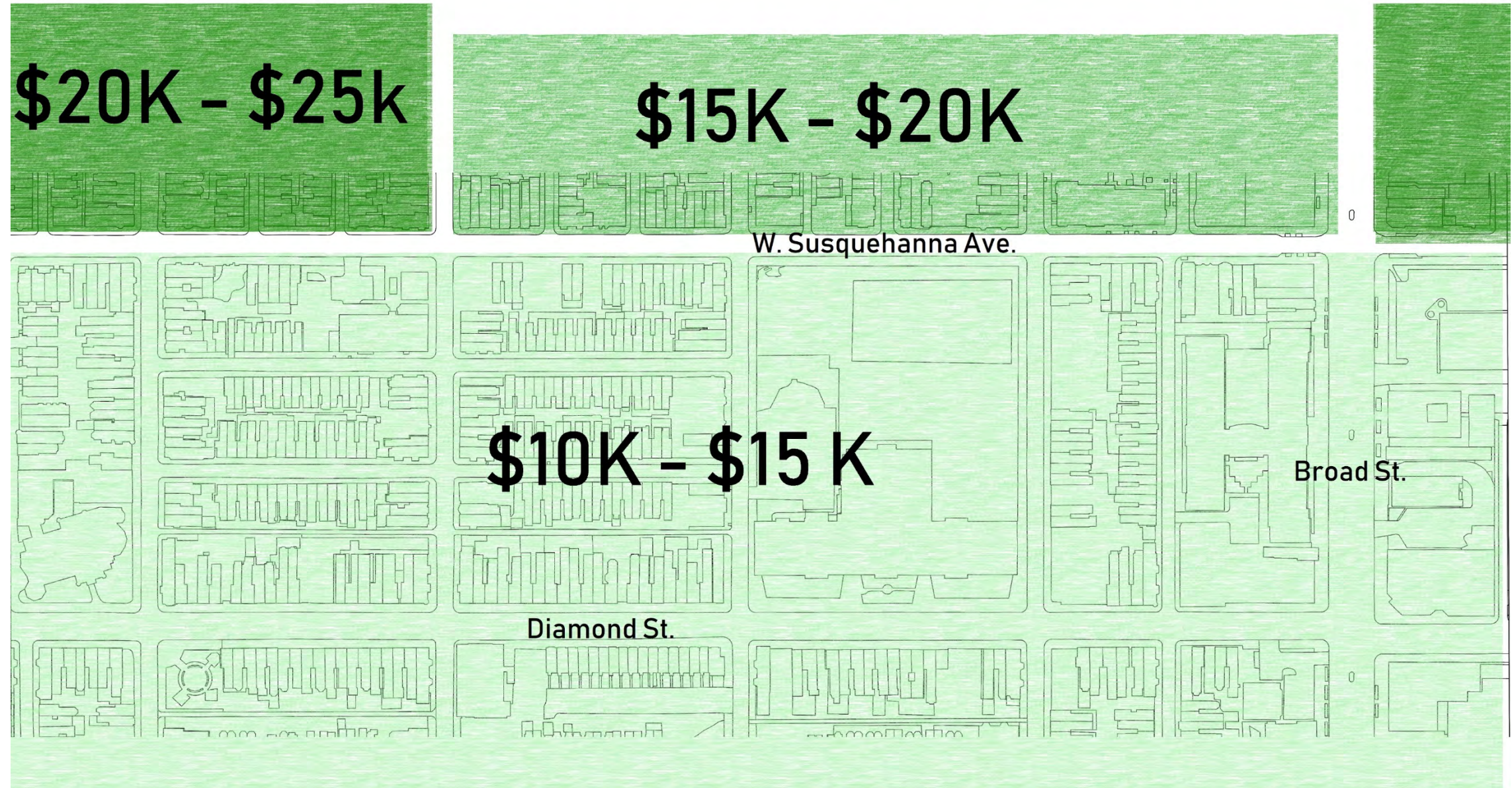
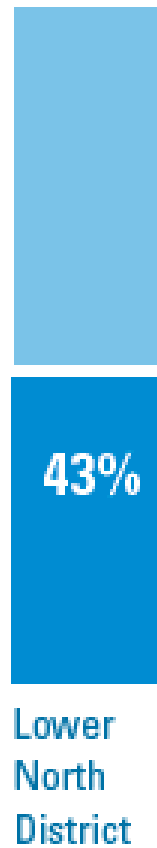
Department of Landscape Architecture, Spring 2018, LARC 8144



# Car Ownership Viability

Medium Household Income

Car Ownership in the Lower North District



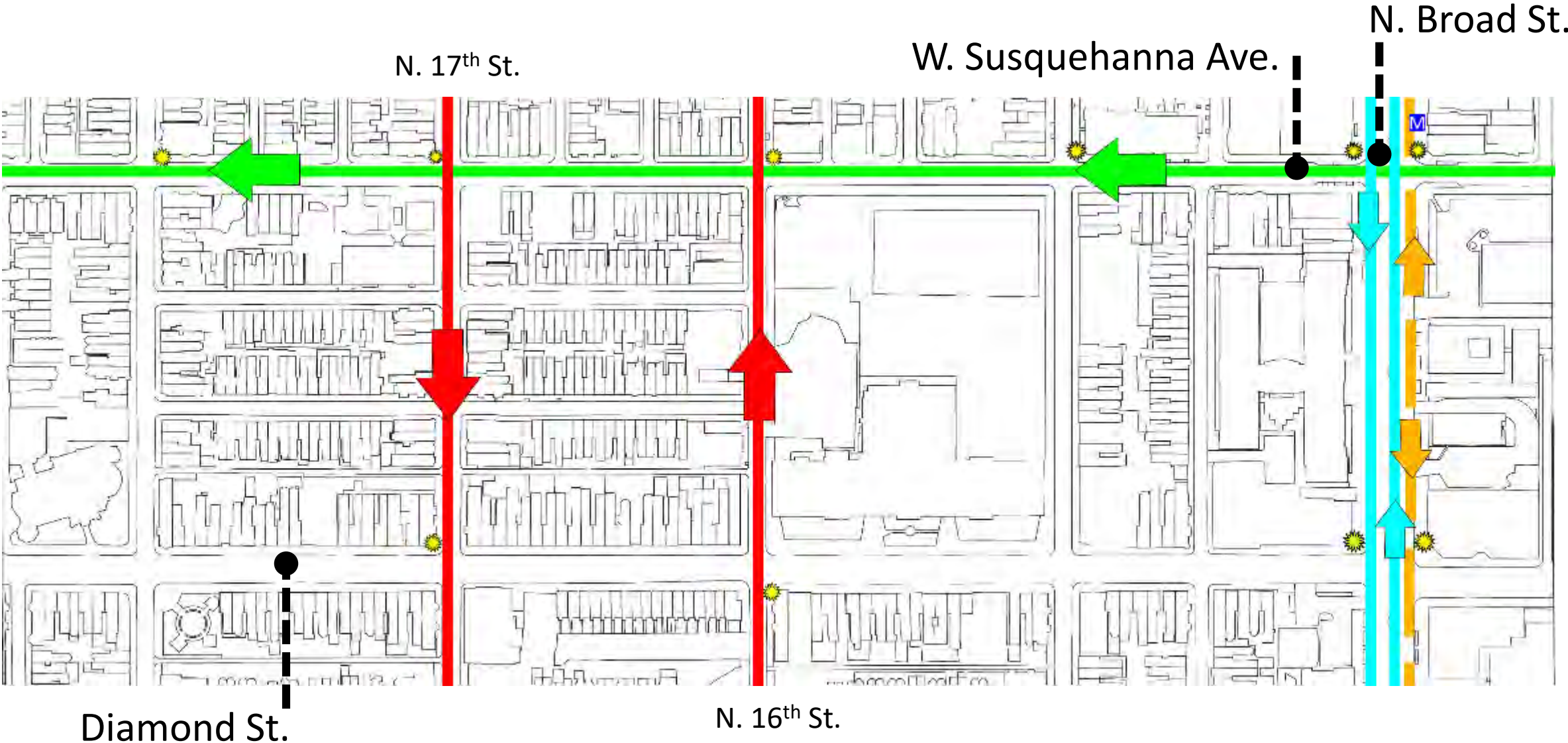
Source: US Census Bureau,  
American Community Survey, 2013





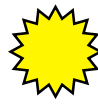

Info Source: Plan Philly 2035 – Lower North District Plan - 2014

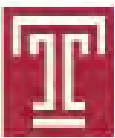
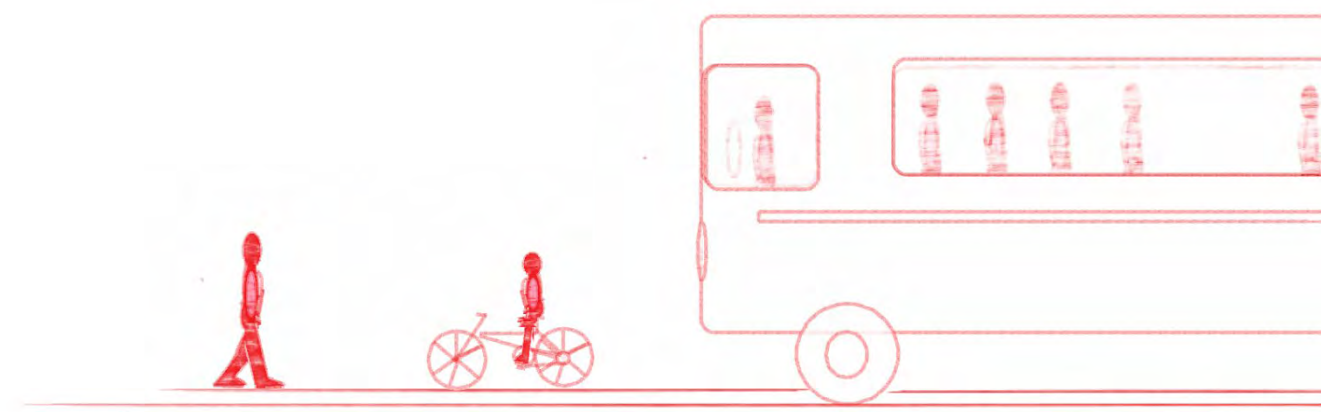




# SEPTA Routes



-  Metro
-  Bus 4, 16
-  Bus 39
-  Bus 2
-  Bus Stop
-  Subway





The background of the slide features a repeating pattern of red car icons, shown from a top-down perspective. The cars are arranged in a grid, with some overlapping. The text is overlaid on this pattern.

## Design Problem:

Automobiles are valuable tools for moving people and things but they have come to dominate the public street space in our neighborhood.

## Design Question:

How can we transform an automobile dominated space into a people space while still allowing room for these popular tools?



# Using a Shared Space Concept

## What is it?

- Woonerf or “Living Street” is a Dutch concept developed in the late 1960’s.
- It seeks to balance the relationship between people, bicycles and cars in a urban environment.



Shared Space  
is not new



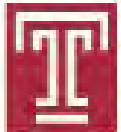
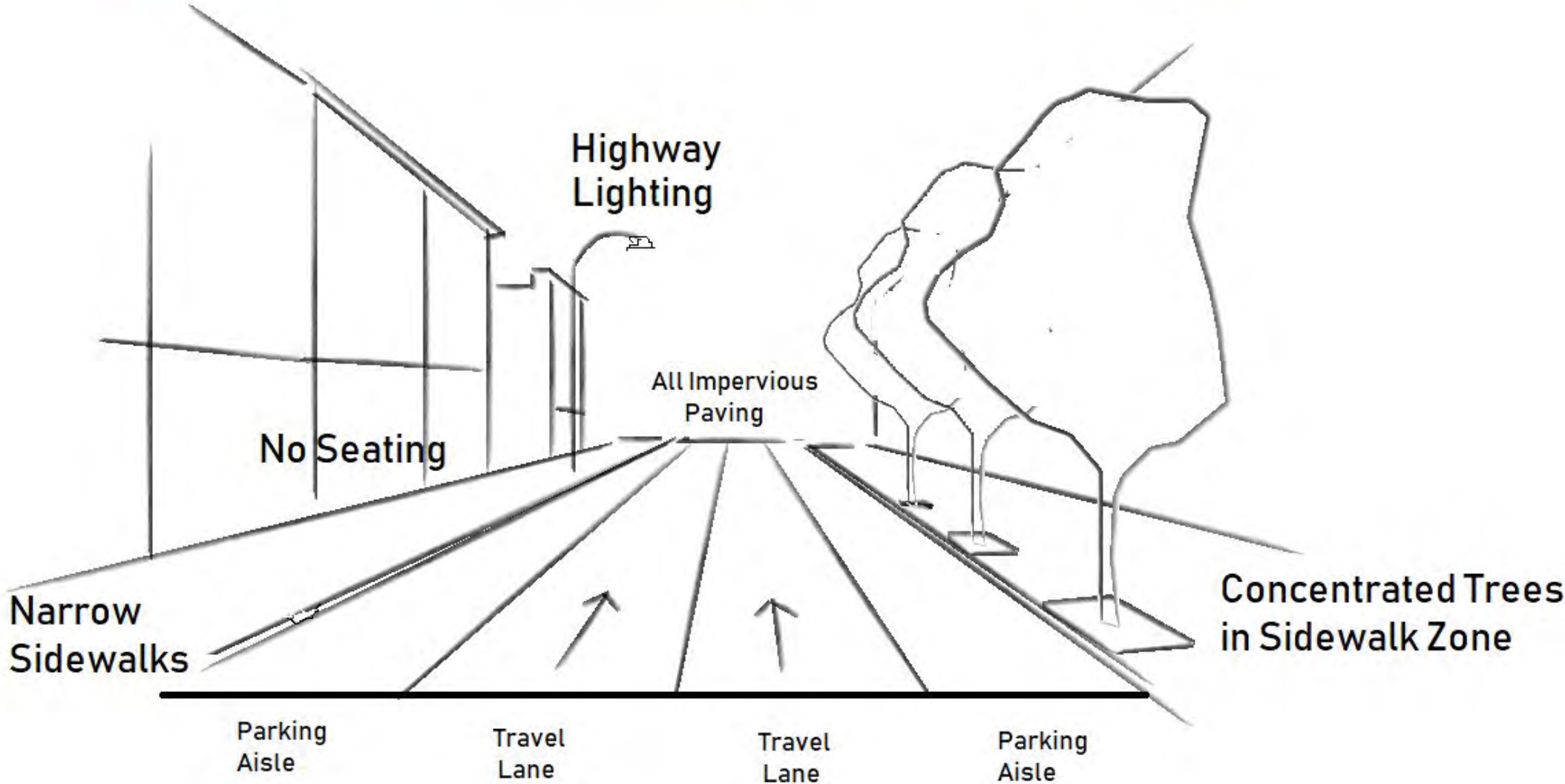
Share Space  
Streetscapes  
across the U.K.







# W. Susquehanna Ave. Existing Conditions





# Design Solutions

- Reduce to single travel aisle
- Widen sidewalks
- Limit commercial vehicle access times
- Use *pavers* not paint
- Remove high curbs
- Remove highway style signage and traffic lights.
- Utilize architectural lighting instead of highway lighting
- Plant trees *between* parking spaces.



# Benefits

- Slower traffic speeds
- Fewer traffic accidents
- Green stormwater mgmt.
- More trees: Cooling, Carbon & Noise Mitigation
- More eyes on the street: Café sidewalk seating
- Nuanced lighting appears safer

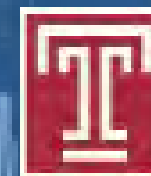


# Neighborhood Revitalization

Through multimodal initiatives



## UC Davis-Bicycle Plan

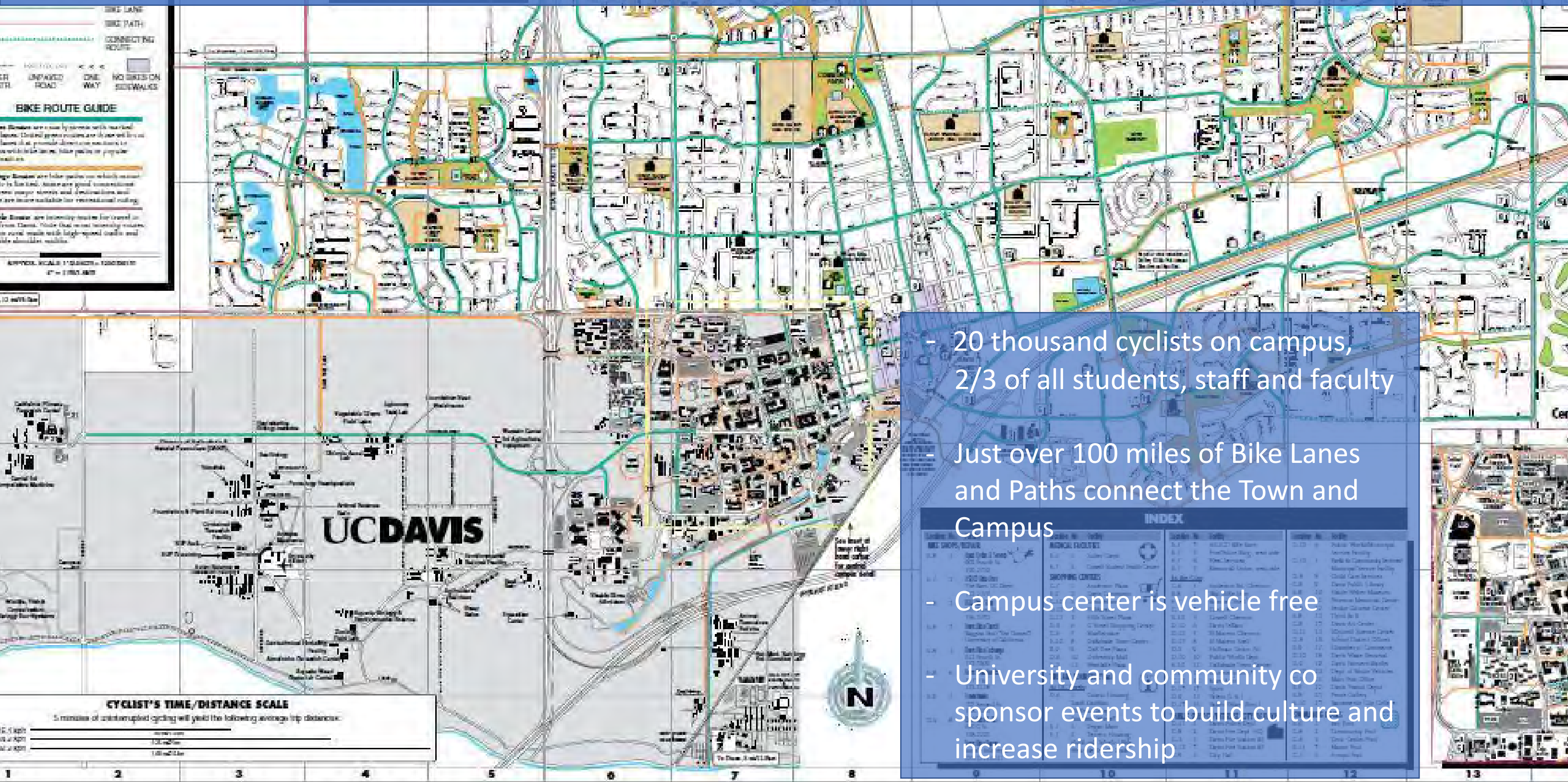


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Spring 2018 8144  
Jacob Zurilla, Liz Krohn, Zach Cross, and Katie Bartling



# A Gown and Town Success Story

A community and Campus committed to a better future together through cycling



- 20 thousand cyclists on campus, 2/3 of all students, staff and faculty

- Just over 100 miles of Bike Lanes and Paths connect the Town and Campus

- Campus center is vehicle free

- University and community co sponsor events to build culture and increase ridership



# Focus on the E's: Engineering

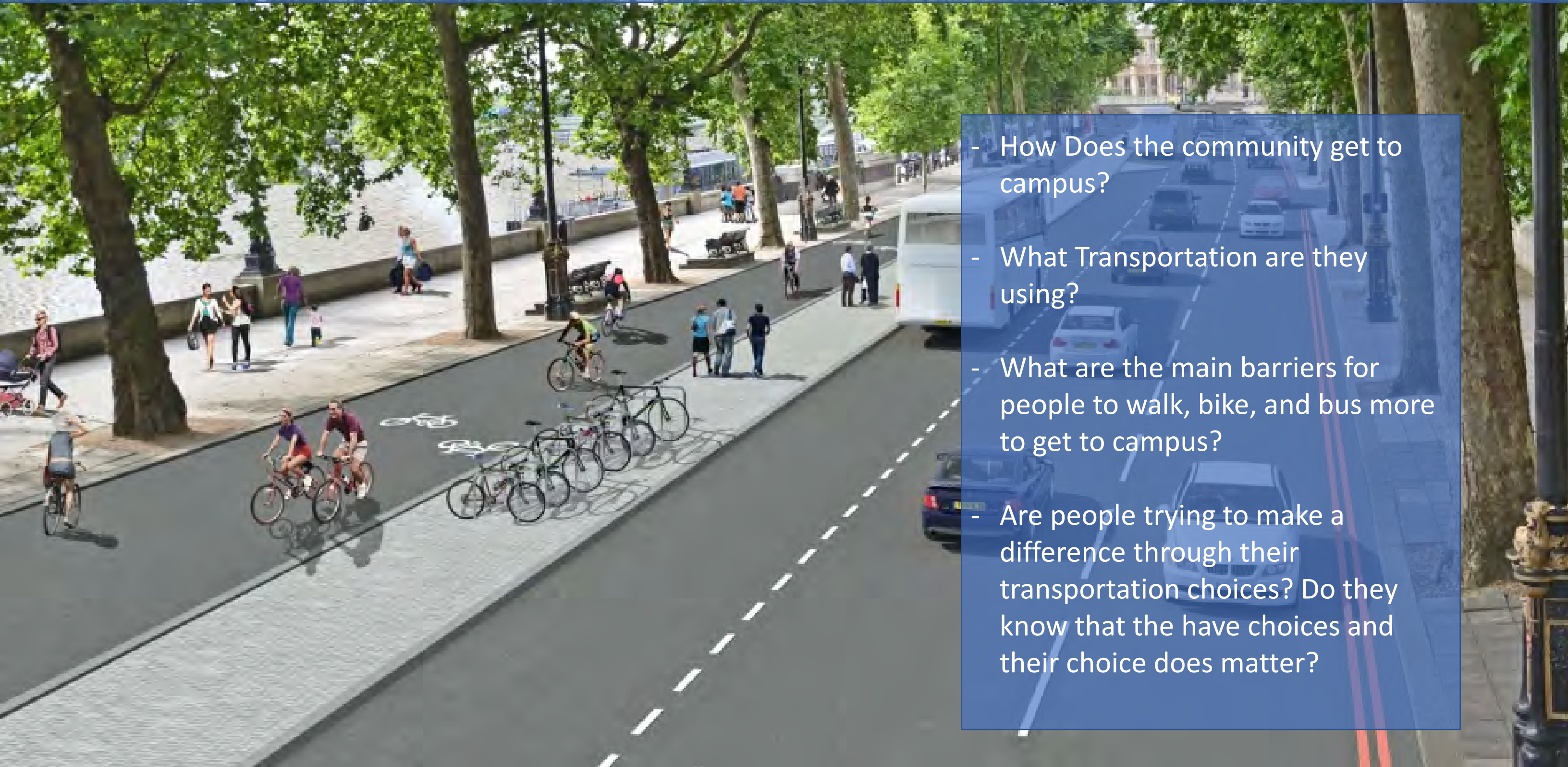
- Bikeways, Trails Lanes and Shared Spaces
- Bike Parking, 1.1 per Student
- Wayfinding Signage, Maps, Lights and Signals
- Air and Maintenance



THE EAST COVELL BO INTERSECTION EXHIBIT OPTION 3



# Evaluation / Becoming less Car dependent



- How Does the community get to campus?
- What Transportation are they using?
- What are the main barriers for people to walk, bike, and bus more to get to campus?
- Are people trying to make a difference through their transportation choices? Do they know that the have choices and their choice does matter?



# Making a Bike and Pedestrian Friendly Community in North Philadelphia

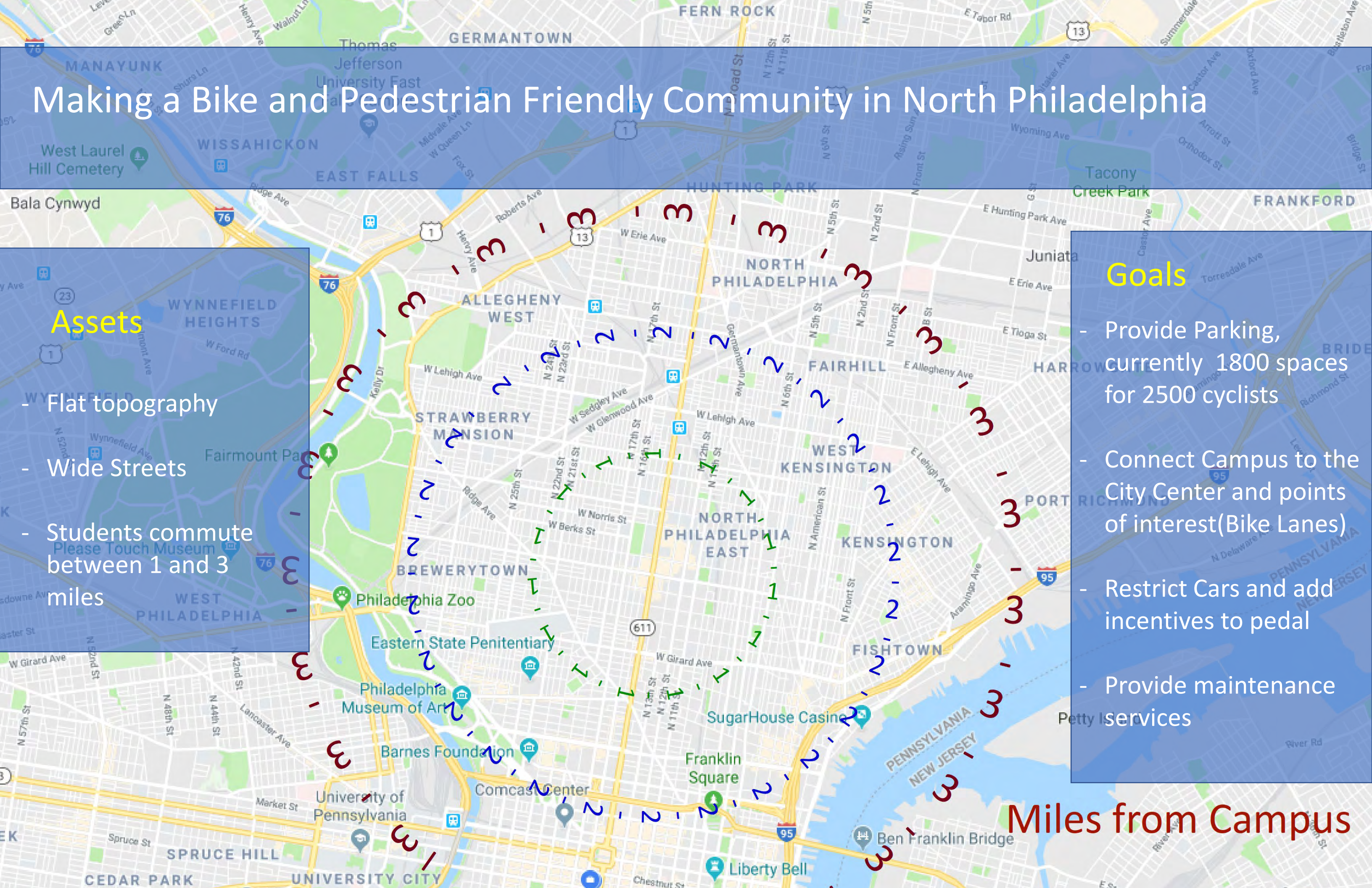
## Assets

- Flat topography
- Wide Streets
- Students commute between 1 and 3 miles

## Goals

- Provide Parking, currently 1800 spaces for 2500 cyclists
- Connect Campus to the City Center and points of interest (Bike Lanes)
- Restrict Cars and add incentives to pedal
- Provide maintenance services

Miles from Campus





# Urban Neighborhood Revitalization Through Green Infrastructure

Case Study: Germany





# Germany and the EU

## Green Infrastructure – Regulating Services

### Climate Mitigation

Storage of CO<sub>2</sub>

Biomass production

Reduction of cooling energy

Oxygen emission

Moistening

Filtering dust and pollutants

Air Quality

### Urban Heat Island

Reflection and absorption of solar radiation

Cooling down by evaporation and shadow

Flood retention

Rainwater storage

Percolation

Dryness  
Heavy Rainfall



Source: Rößler 2012





# Community Scale



- Green Roof
- Urban Farming
- Wildlife Overpass
- Wildlife Park

## Decentralized System

### To Neighborhood Scale



- Infiltration
- Rainwater harvesting
- Bio-Retention
- Pervious Surfaces



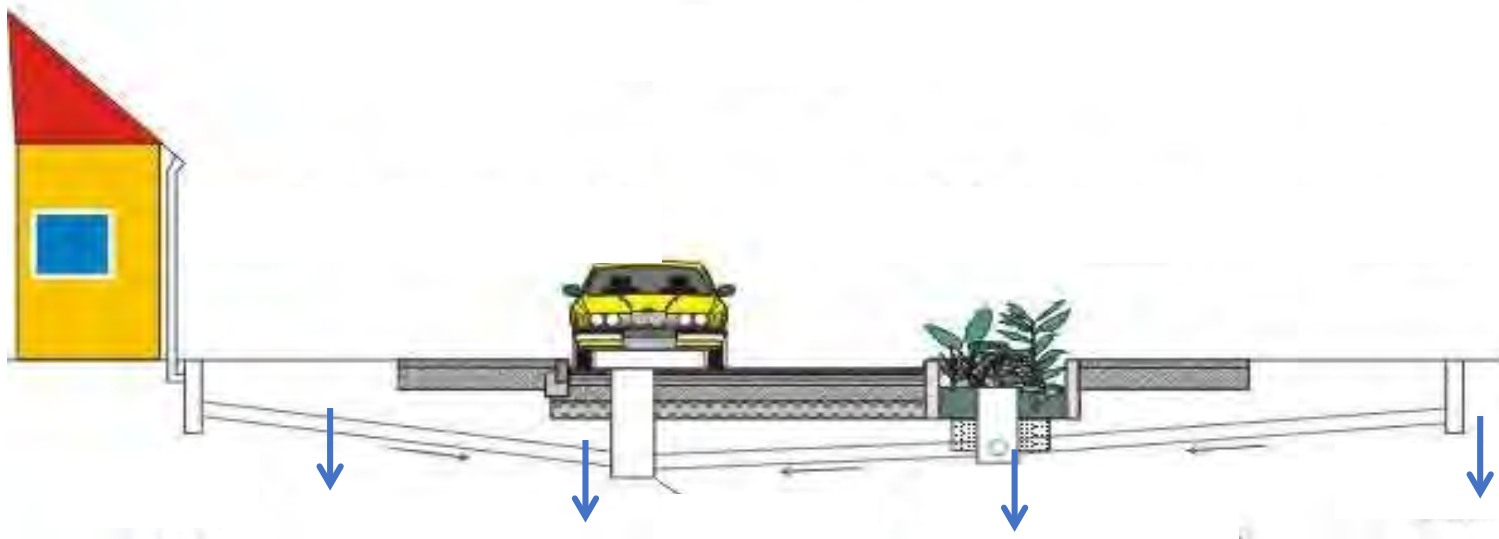


# Dahlwitz-Hoppegarten - Birkenstein



## INNODRAIN

- Drainage and Treatment of Runoff
- Space-Saving Solution
- Biologically active soil
- Water retention zone





# Dresdon and Freiburg



**A “Compact City Within An Ecological Network”**

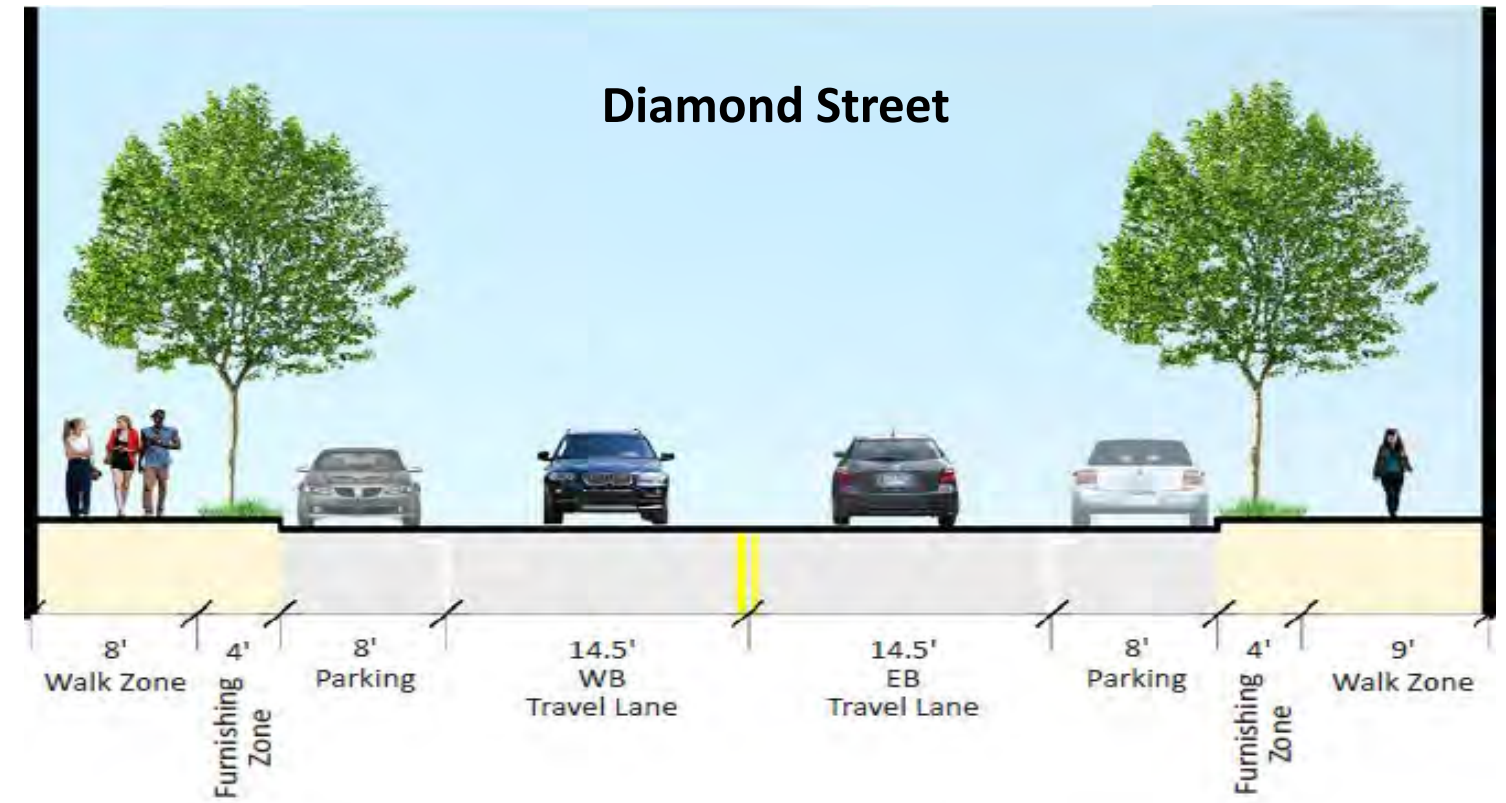




# Reference to Diamond Street

## Existing Conditions

- Need for increased green space
- Lack of storm water management and infiltration mechanisms
- Opportunity to combine traffic calming efforts with green infrastructure





# Diamond Street Re-Imagined

Amended  
**Green City  
Clean Waters**

The City of Philadelphia's Program for Combined Sewer Overflow Control  
Program Summary

Amended by the Philadelphia Water Department  
June 1, 2011

- **25 Year Implementation**
- **Sustainable and resilient future for Philadelphia**
- **Promote incentives to create successful projects**
- **Opportunity to incorporate decentralized green design into existing infrastructure**



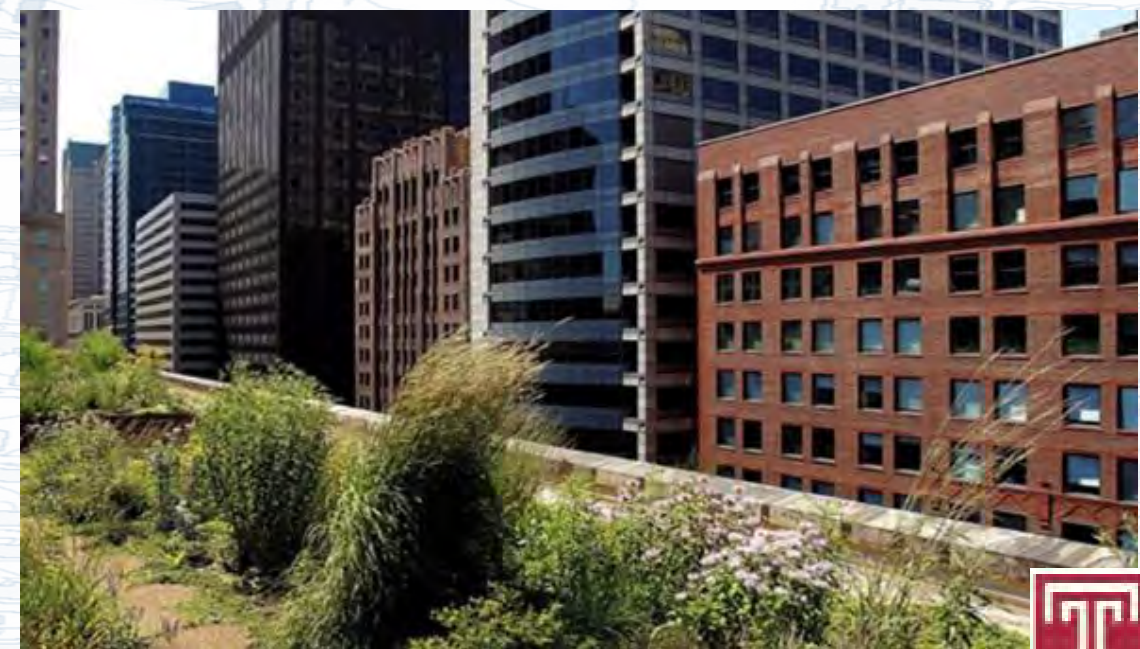


# Take Away Messages

## **Green Infrastructure is all about developing solutions within a “Network”**

- **Opportunity to incorporate storm water management projects within the Diamond Street corridor**
- **Green Infrastructure leads to improvements in:**
  - **Watershed planning**
  - **Road maintenance (decreased standing water leads to less salt usage)**
  - **Recreational opportunities**
  - **Tourism- e.g. PWD Living Wall**

## **Promote Neighborhood Cohesiveness**



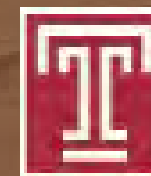


# Neighborhood Revitalization

Through Historic Preservation and Greenway Enhancements



## Society Hill



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Spring 2018 8144

Jacob Zurilla, Liz Krohn, Zach Cross, and Katie Bartling



# Before



# After



Bloody Fifth Ward, 1940s – 1960s

Society Hill Today



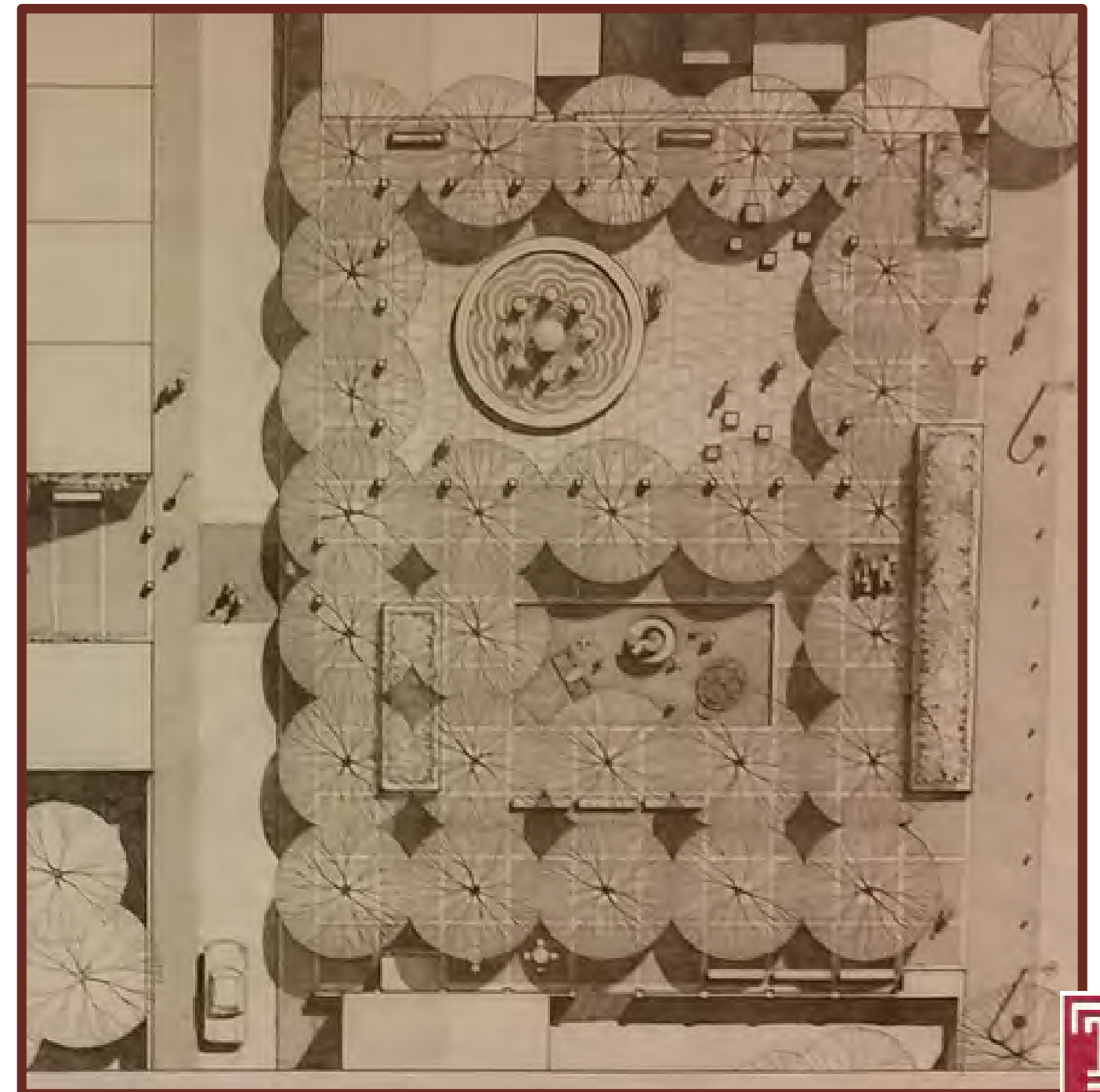


# Goals

Preservation and  
Modern Infill



Greenways/ Integrating  
Streetscapes





# Details



Parks/ Gathering Spaces

Pedestrian Walkways

Materials and Signage





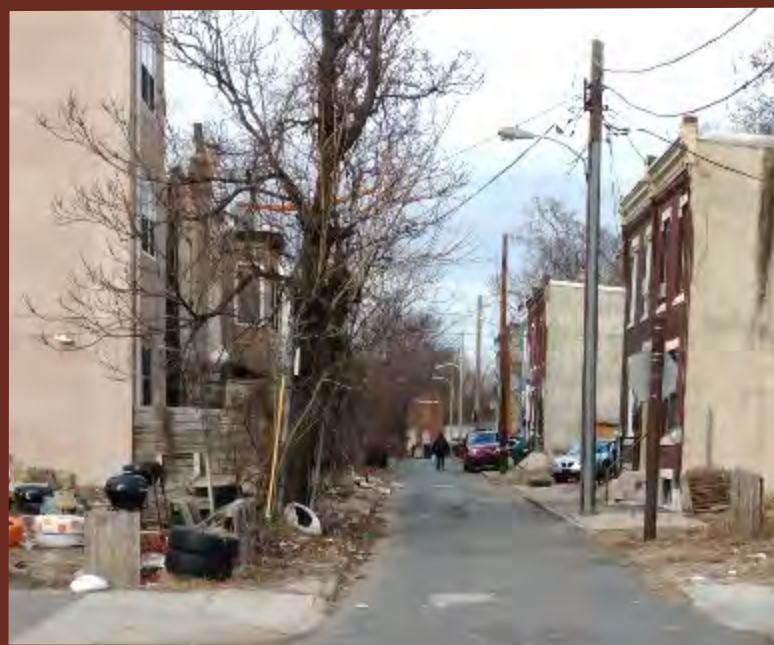
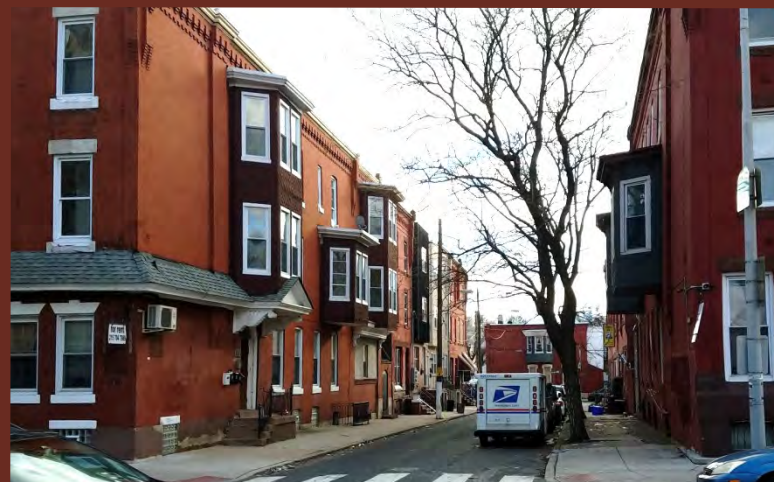
# Benefits

- Neighborhood Identity/ Pride
- Healthier Communities
- Safety
- Increased employment opportunities
- Attractiveness
- Connectedness
- Environmental Benefits





# Application





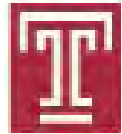
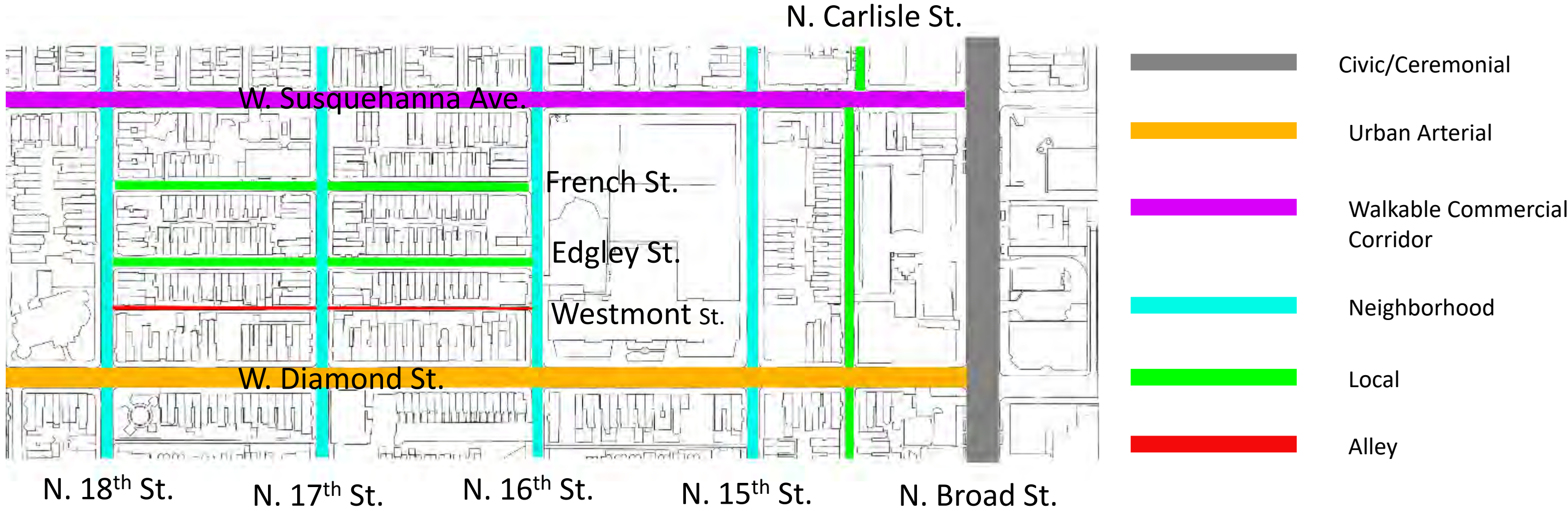
# Existing Neighborhood Conditions

- **Street Systems**
- **Land Use**
- **Community Context**
- **Man-made and Natural Resources**



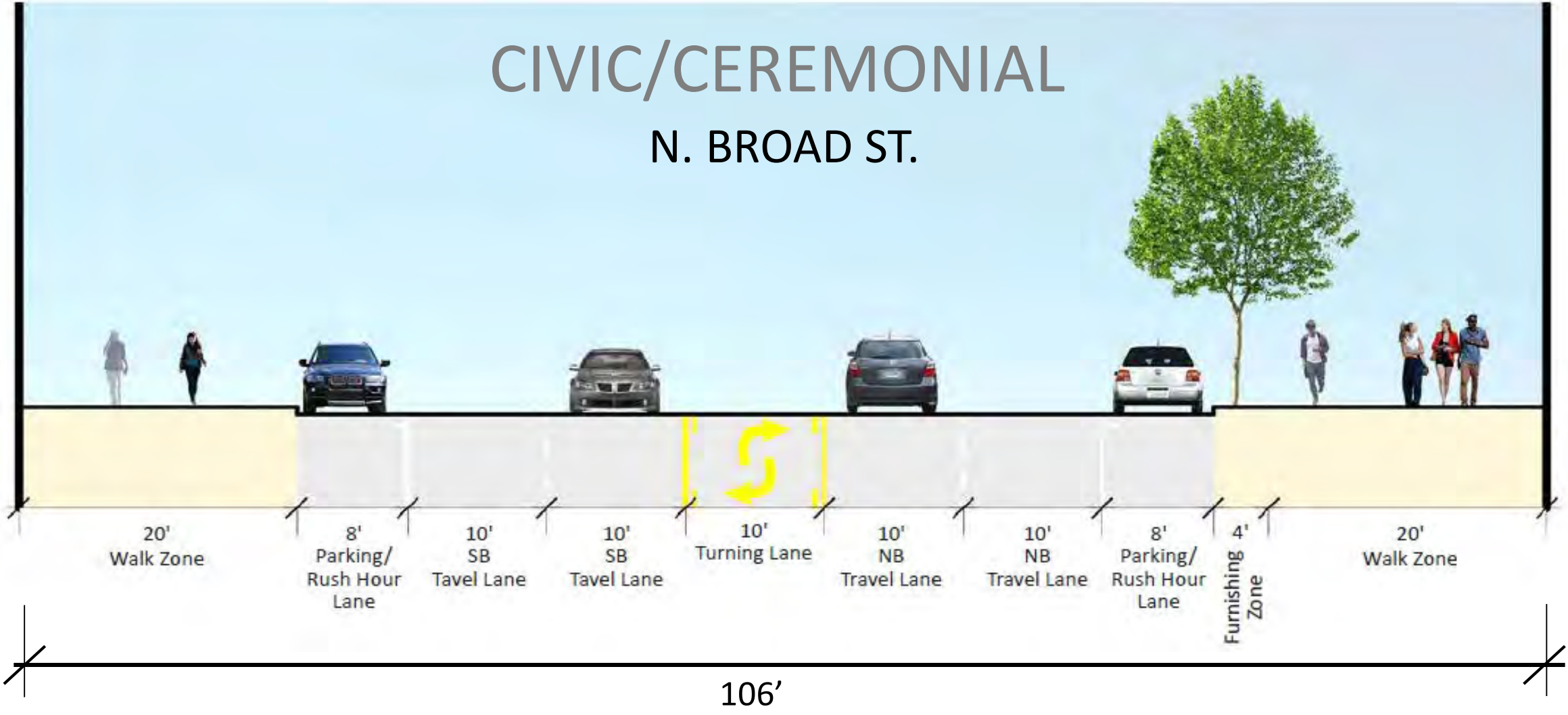


# Street Typology



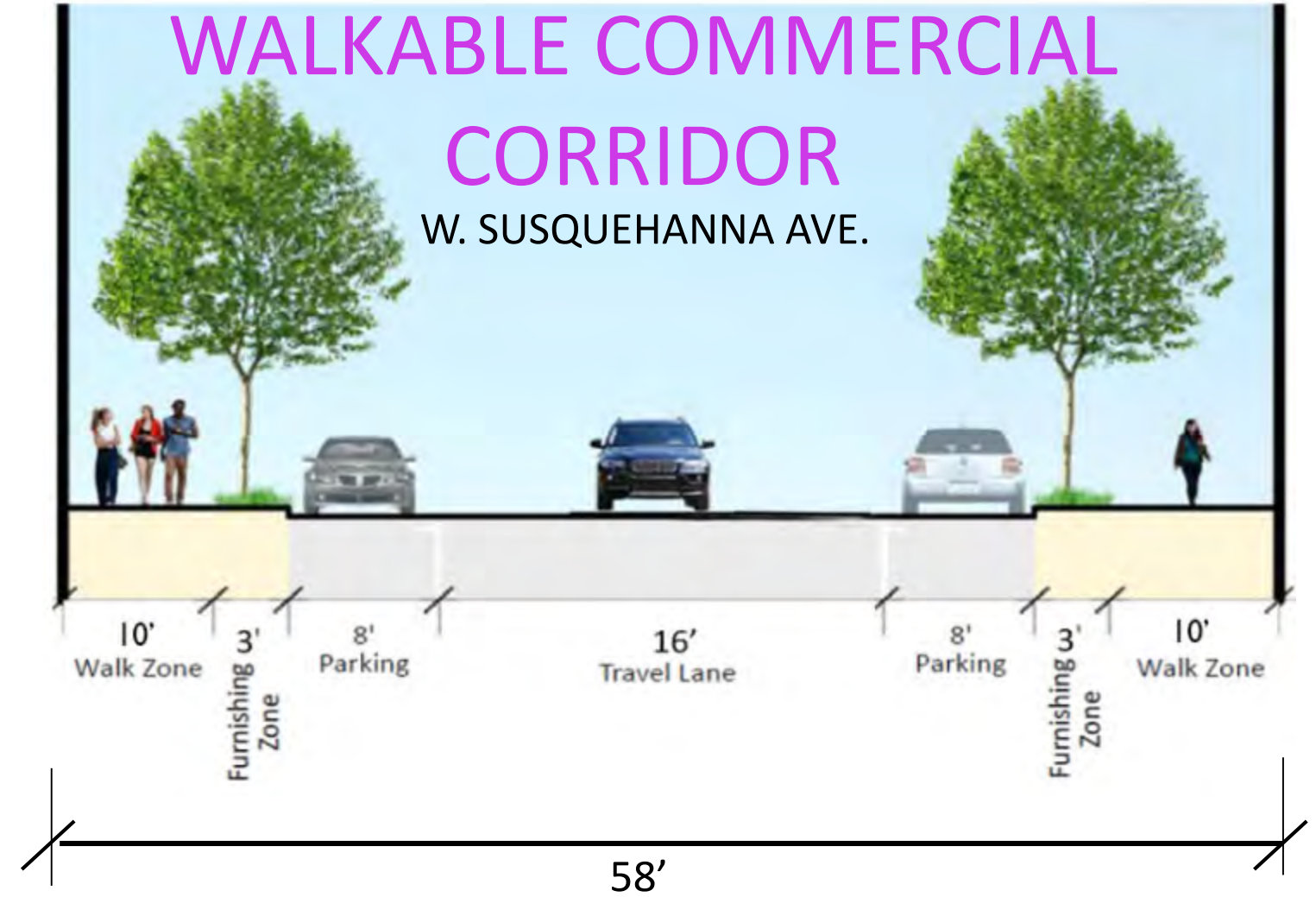
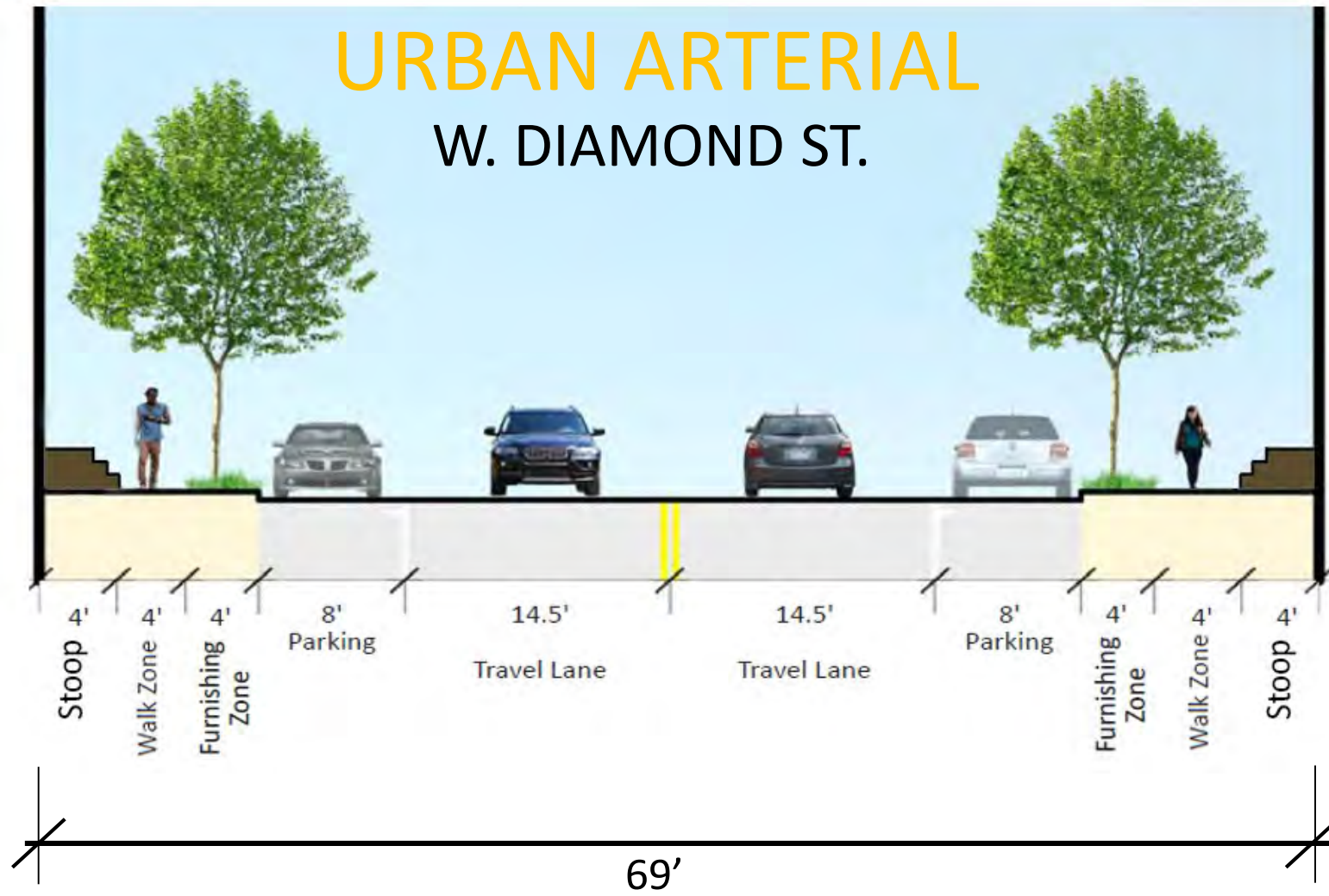


# EXISTING: Cross Section



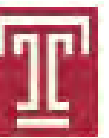
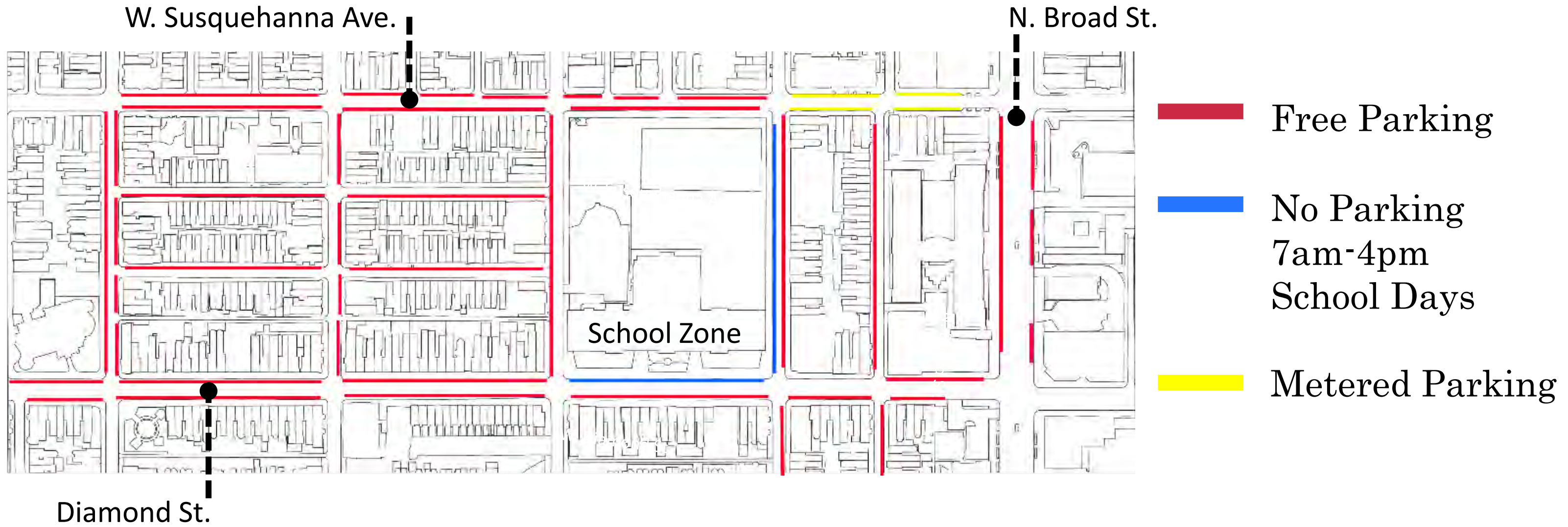


# EXISTING: Cross Section



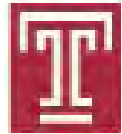
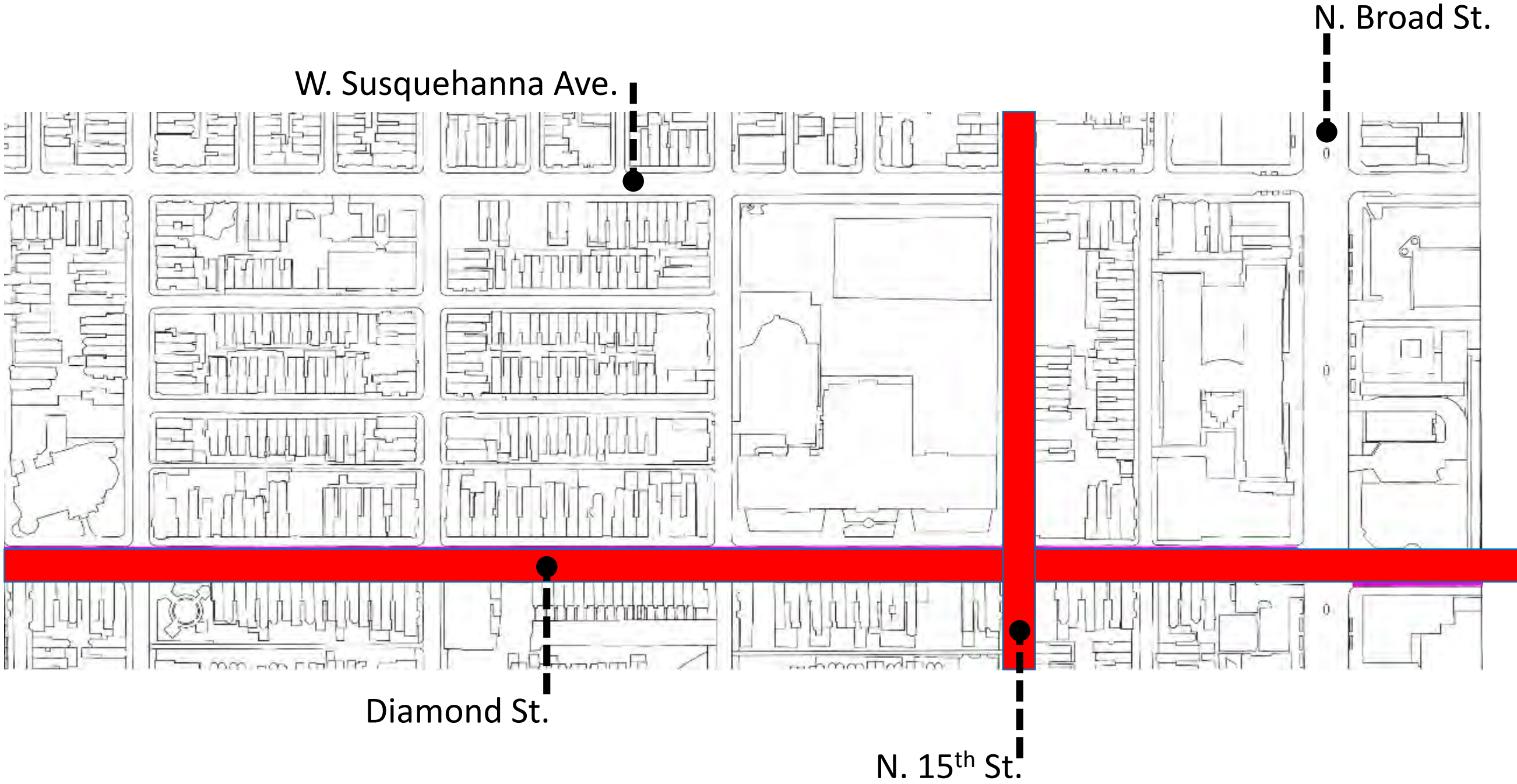


# PARKING



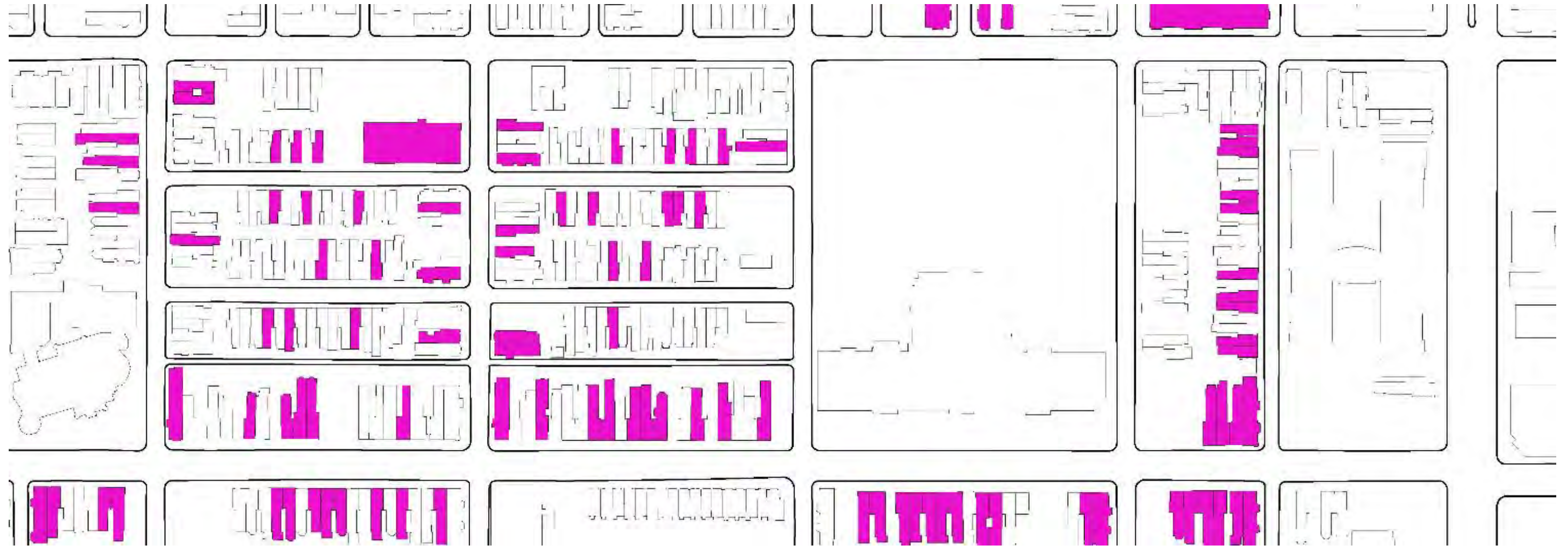


# City Bike Plan Routes





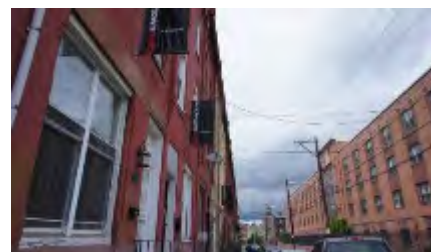
# Rentals - Temple in the Community



Student Rentals

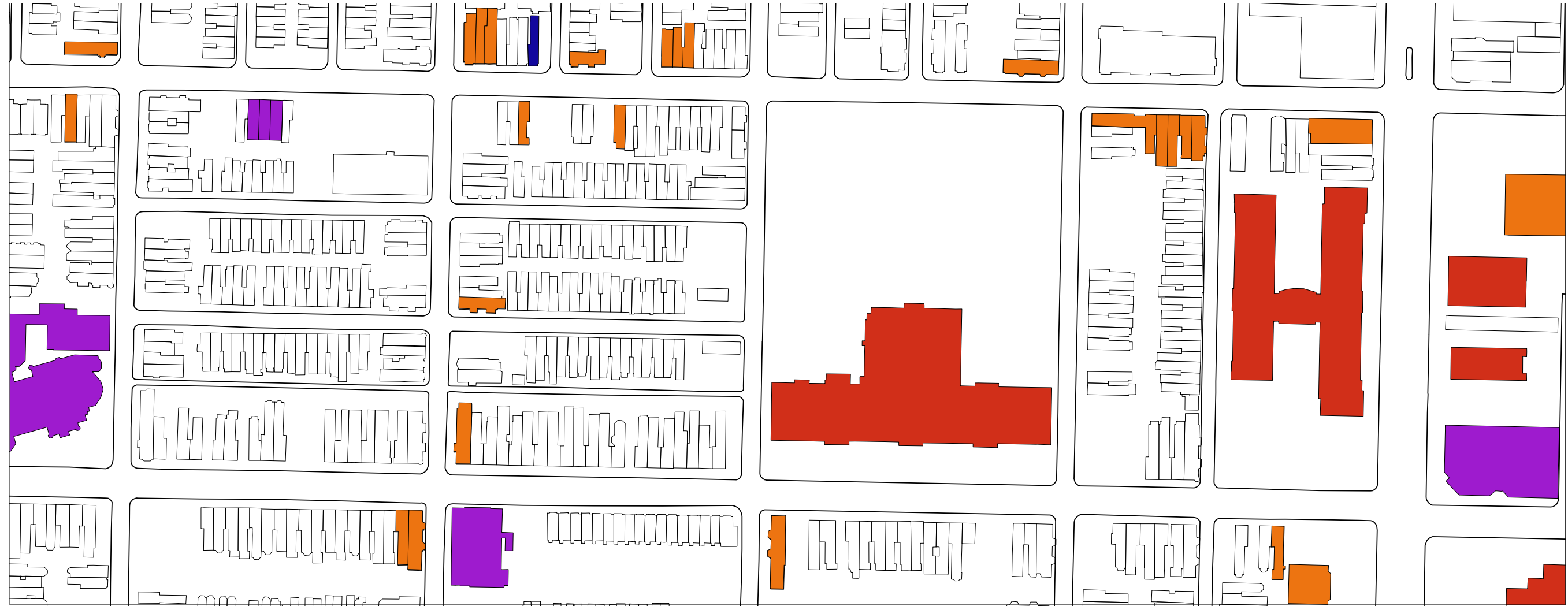


Other





# Businesses and Neighborhood Institutions



Businesses



Educational



Police



Religious





# Trees and Open Spaces



City Park



Redevelopment



Privately Owned



Philadelphia Board of Ed



City Owned

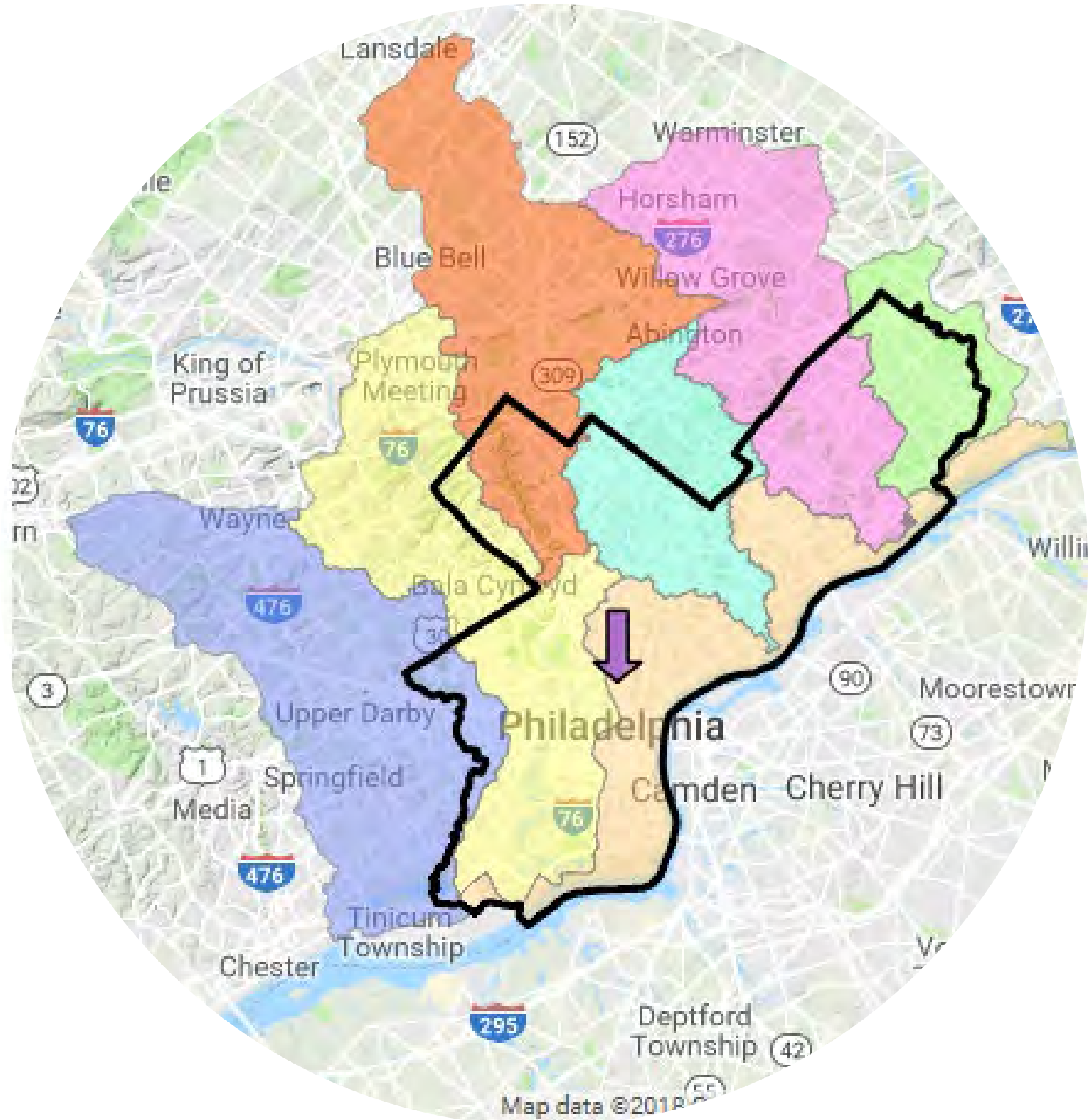


Temple Owned





# Site Analysis: Water Resources

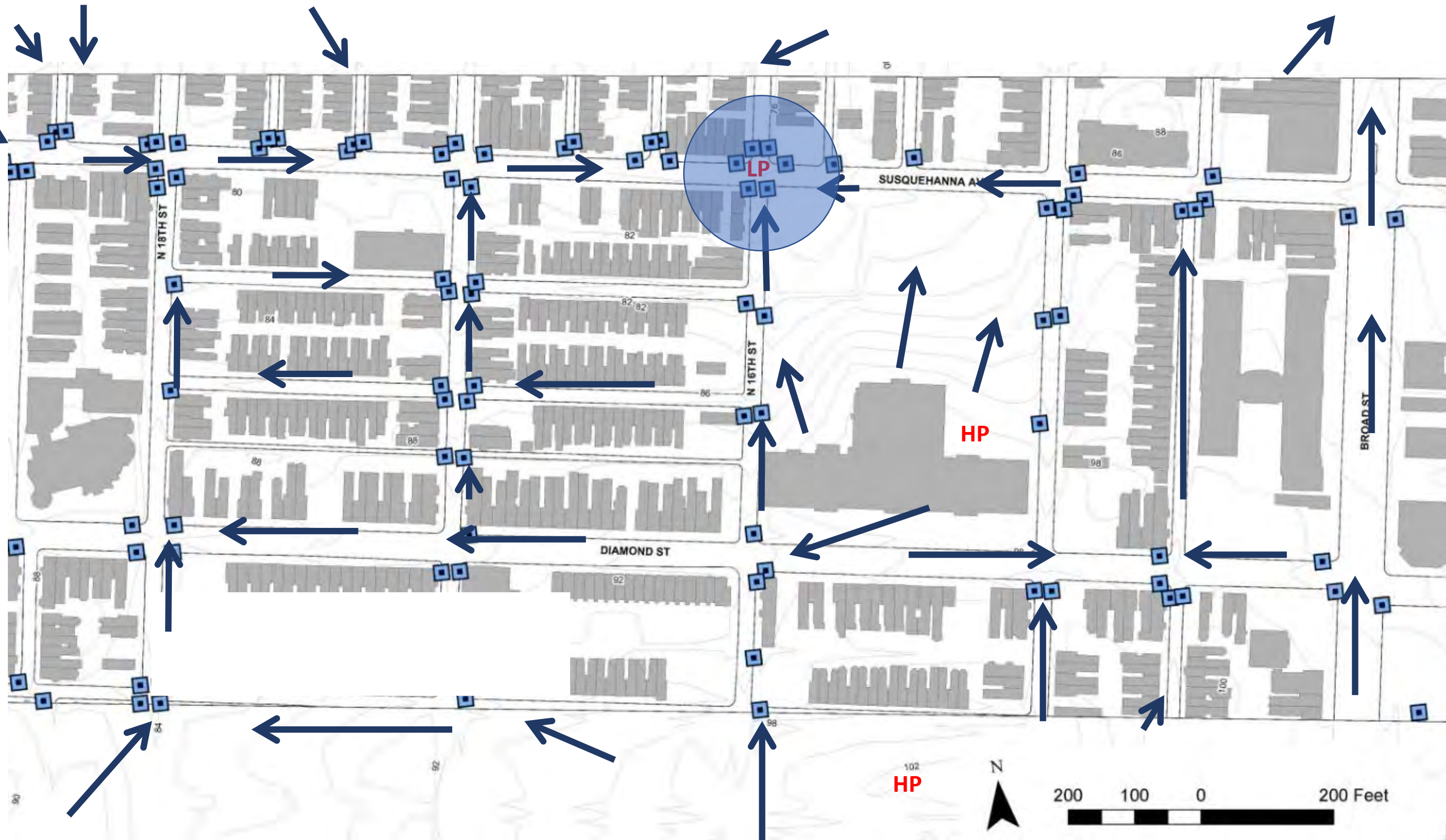


- Darby & Cobbs Creeks Watershed
- Delaware Direct Watershed
- Lower Schuylkill River Watershed
- Pennypack Creek Watershed
- Poquessing Creek Watershed
- Tacony & Frankford Creeks Watershed
- Wissahickon Creek Watershed





# Site Analysis: Storm Water Inlets and Surface Topography



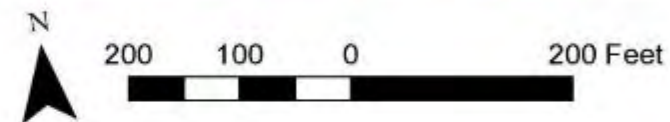


# Site Analysis: Impervious Cover



## Impervious Areas

7%	Asphalt/Concrete	28%	Buildings
.1%	Driveways	19%	Lawn
4%	Parking	3%	Mixed- Lawn and Houses
15%	Sidewalks	0.6%	Mixed-Trees and Asphalt
20%	Travelway		



- Sidewalks, Streets , Asphalt and Buildings encompass 70% of the Site Area
- With Green Infrastructure, this can be significantly reduced



# Site Analysis: Lighting



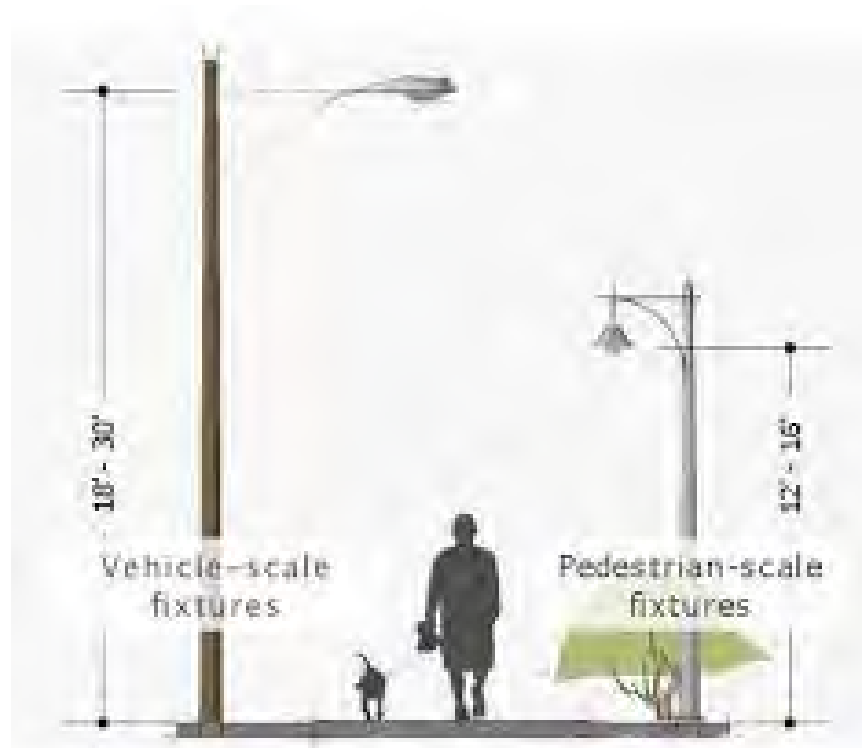


# Site Analysis: Existing Lighting





# Site Analysis: Lighting Possibilities



- Both the scale and type of fixture is important
- Pedestrian-scaled lighting
- Continuous coverage 'warm' light is inviting
- Combine lighting with wayfinding



Montreal, Canada



Arlington, VA



National Association of City Transportation Officials: Minneapolis, MN



KTS Solar Lighting







# Site Analysis: Historic District



## Key

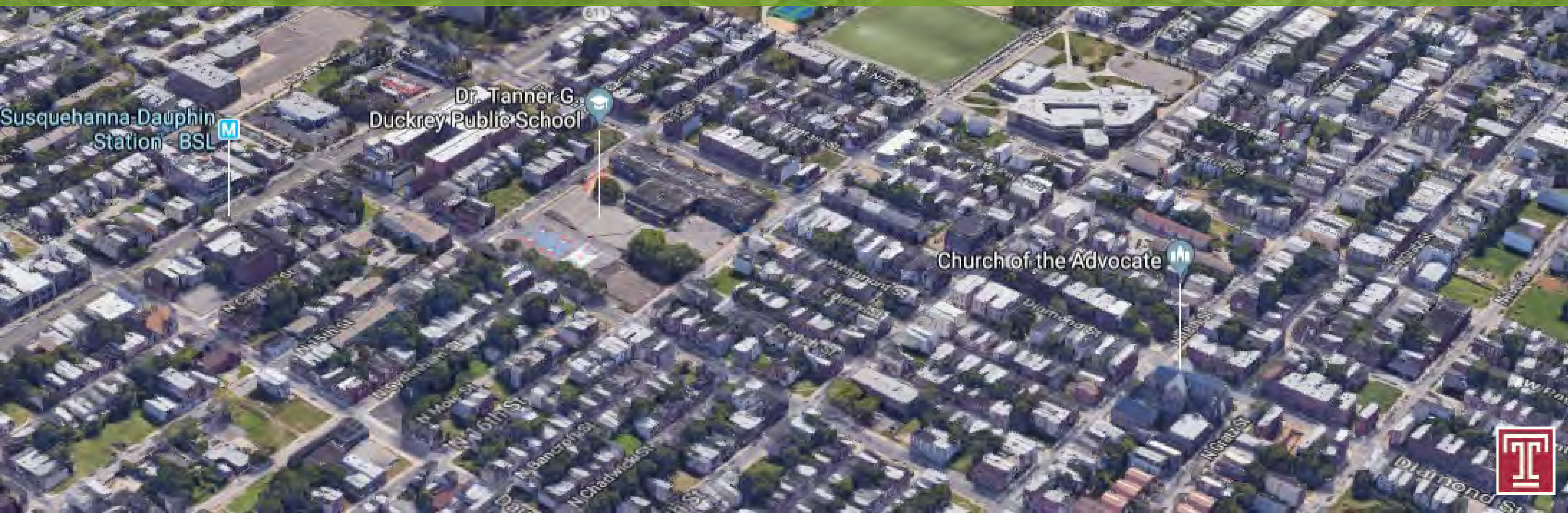
-  Historic Buildings
-  Historic District







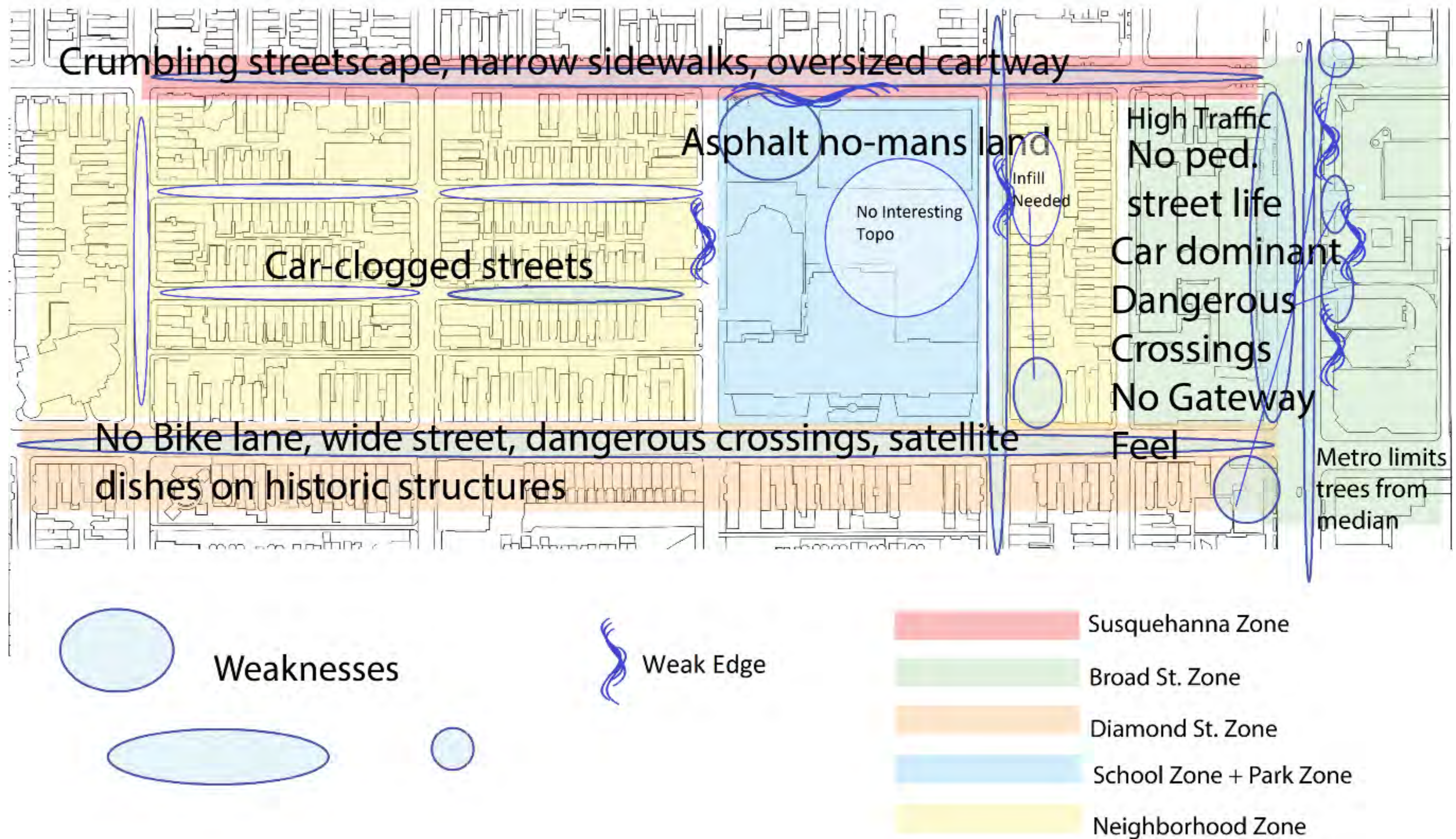
# S.W.O.T. Analysis



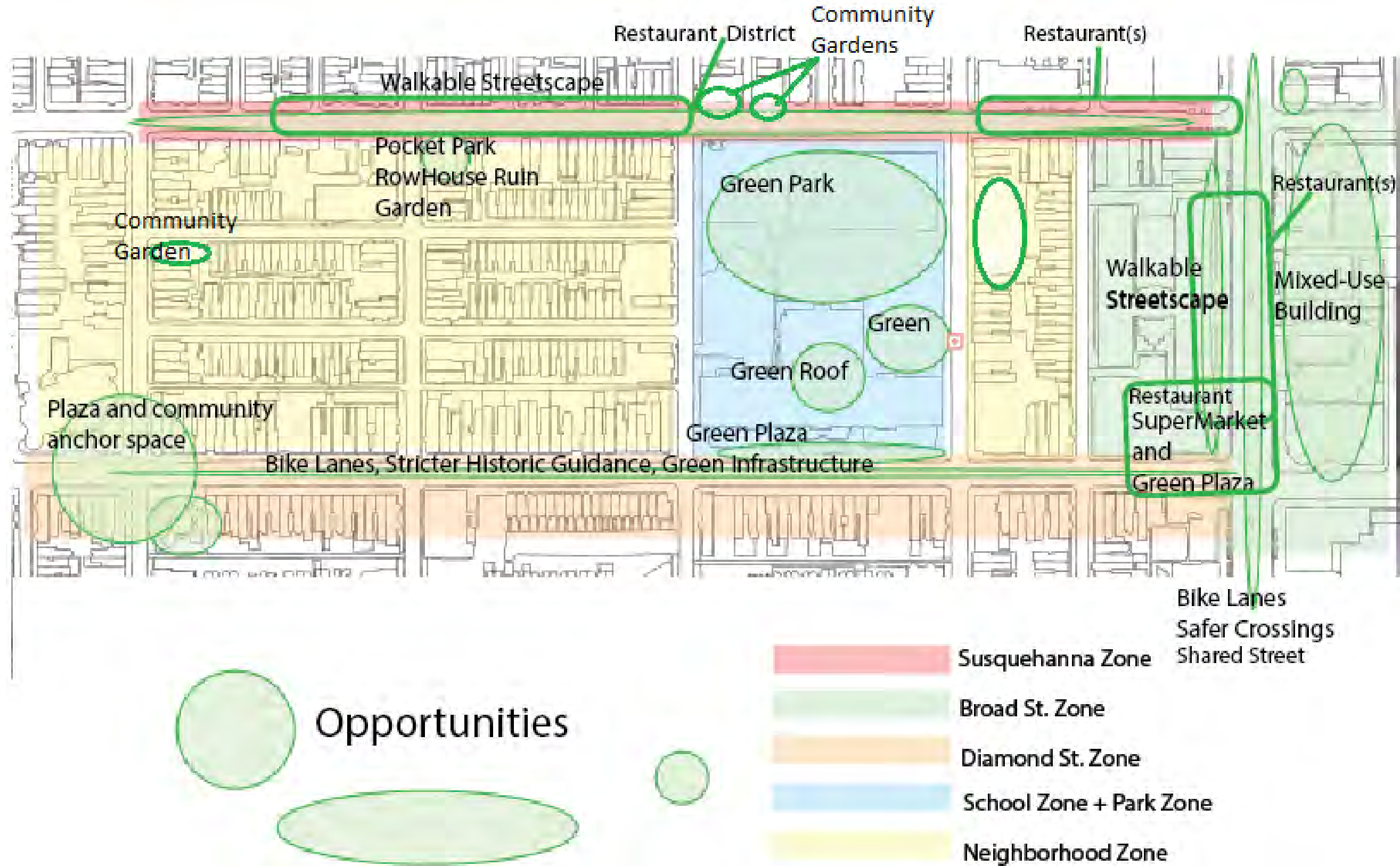




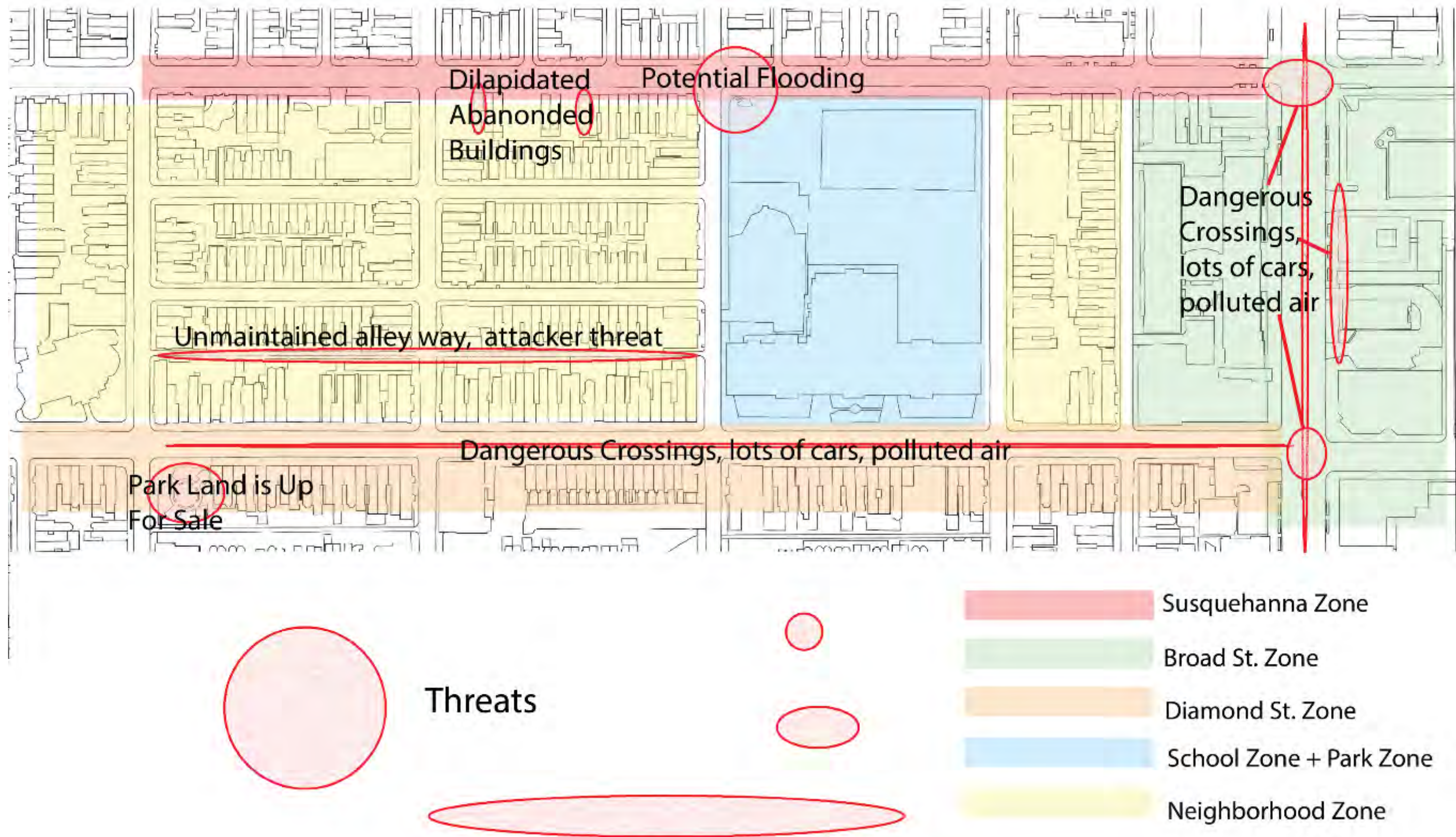






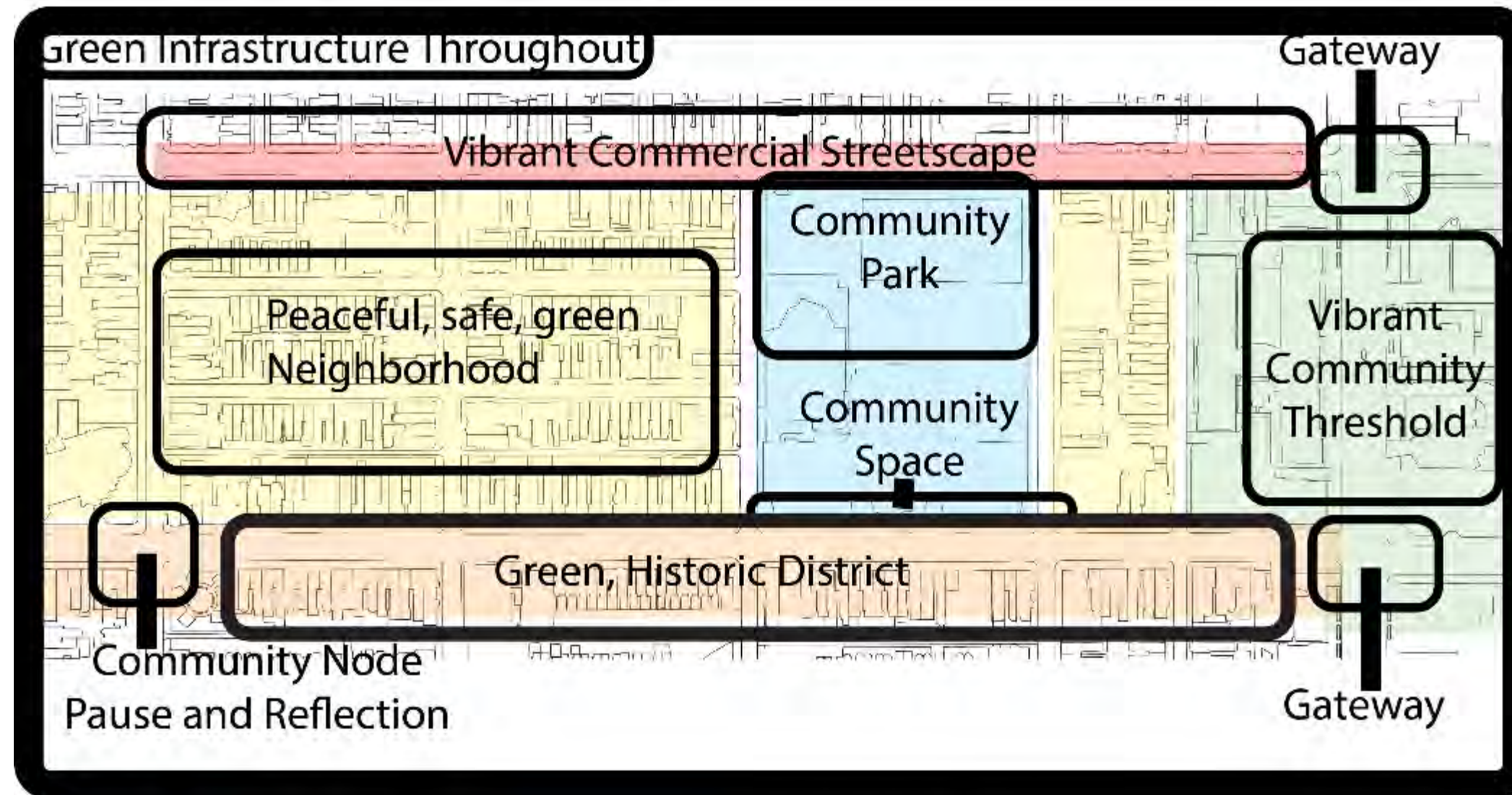



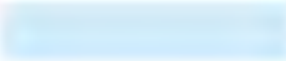






# Conceptual Masterplan



- |  |   |
|--|---|
|  Susquehanna Zone |  Diamond St. Zone        |
|  Broad St. Zone   |  School Zone + Park Zone |
|  |  Neighborhood Zone       |

Scale 1" = 200'



SCALE BAR 1:200





# Detail Designs

## **Diamond North Gateway**

Jacob Zurilla

## **Susquehanna Ave Corridor**

Zach Cross

## **Duckrey Park and School Zone**

Katie Bartling

## **Diamond St. Historic Corridor**

Elizabeth Krohn

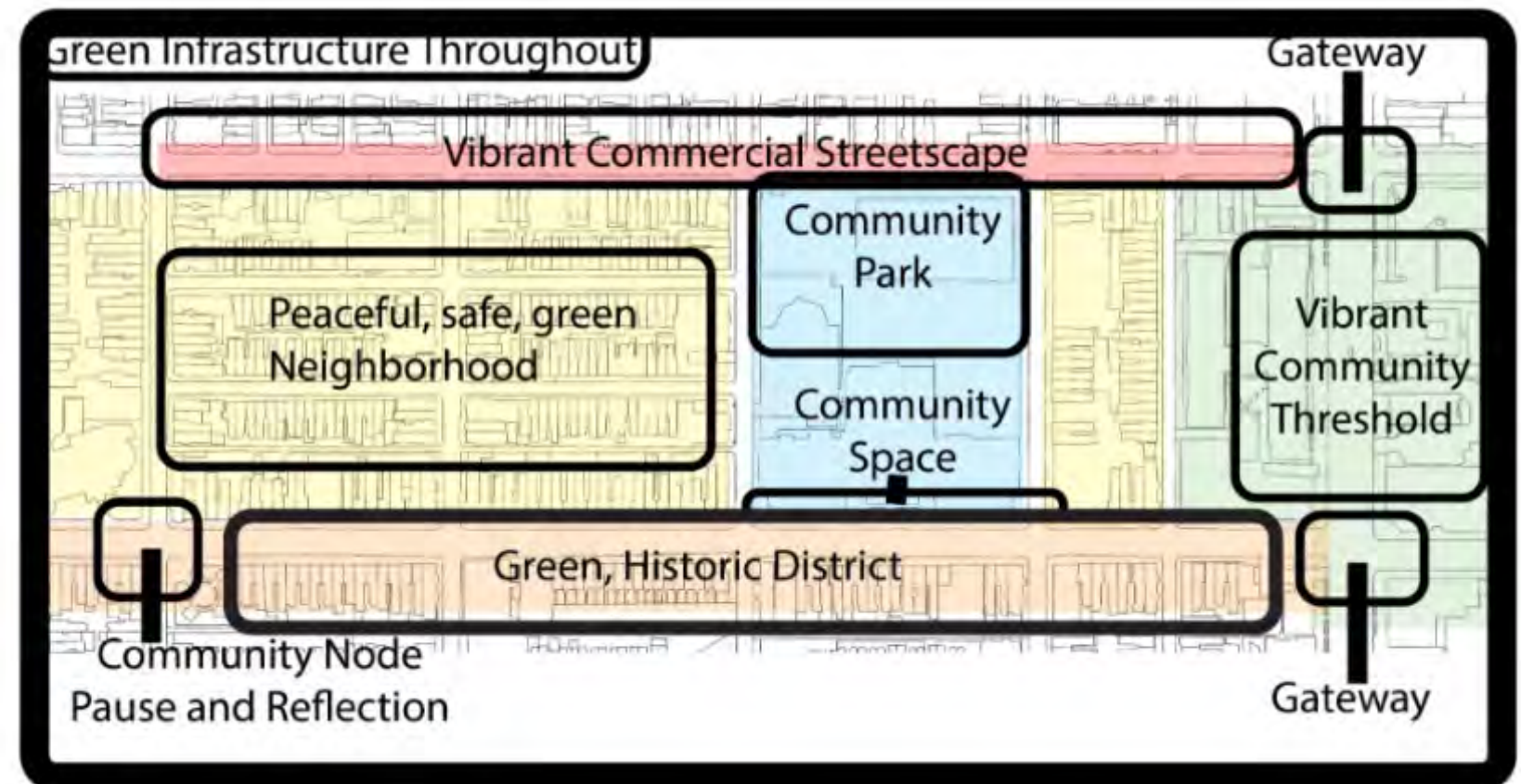




# Diamond North Gateway

## Design Objectives

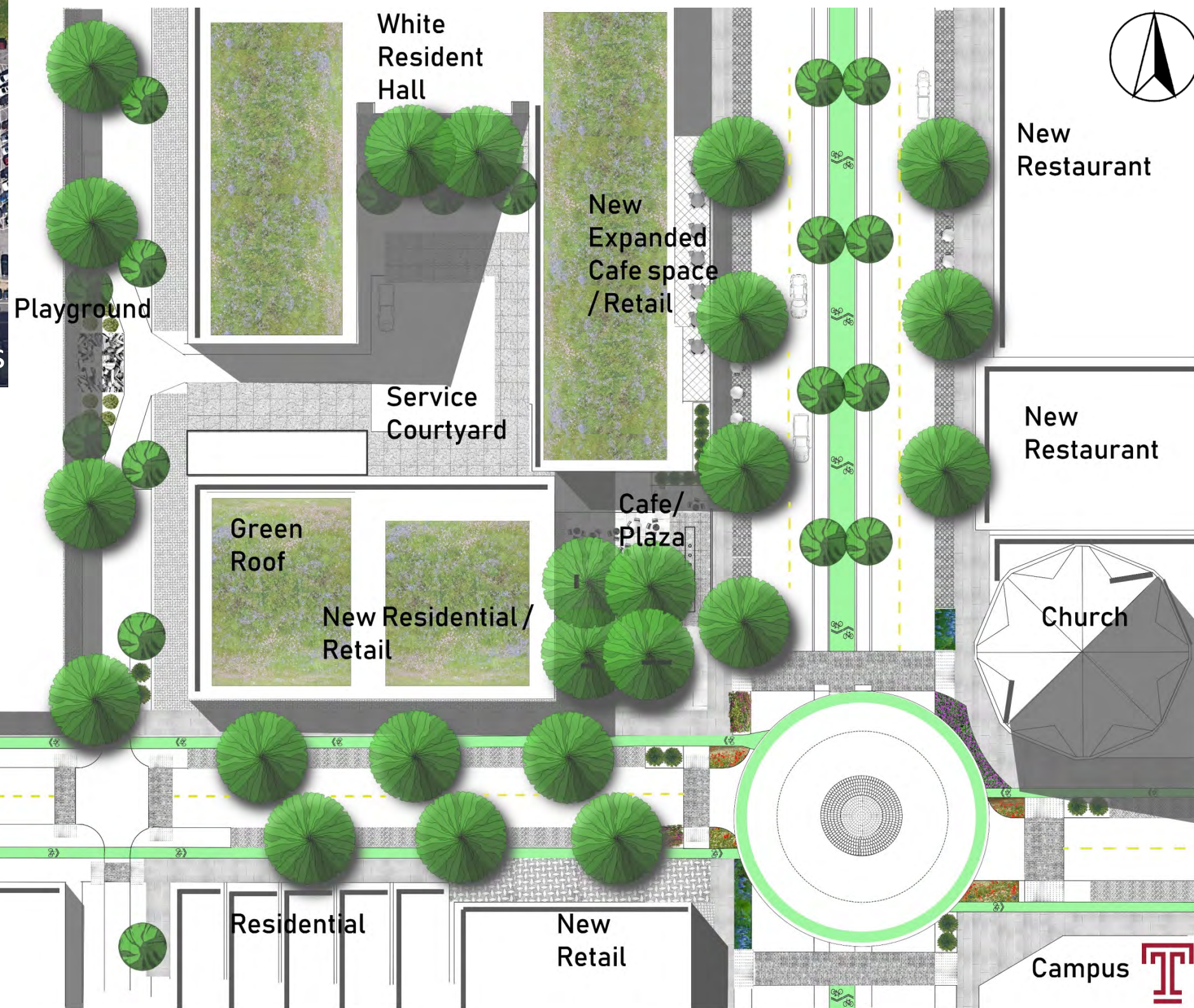
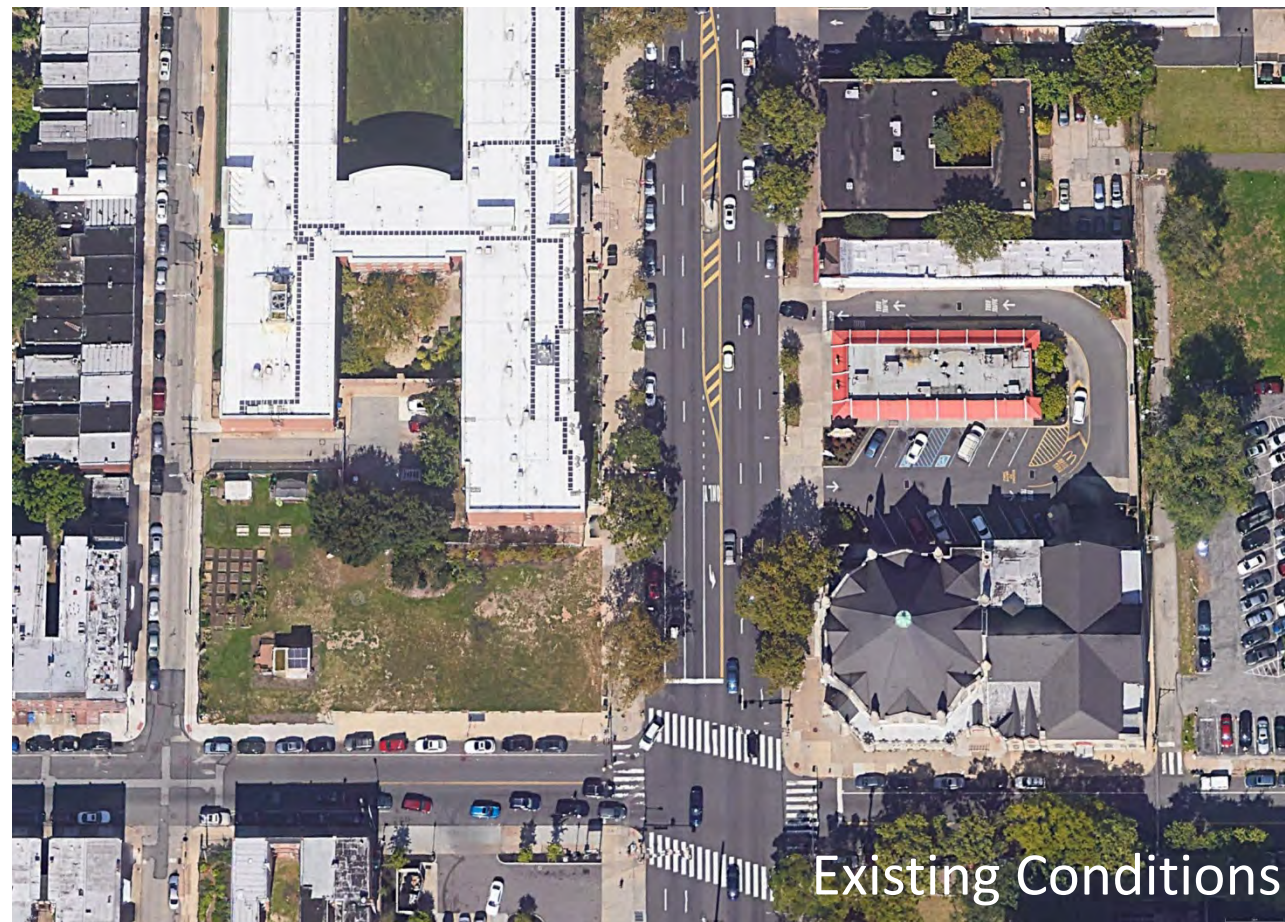
- ◇ Create a Northern campus gateway
- ◇ Initiate economic development
- ◇ Increase storm water infiltration
- ◇ Build a destination community
- ◇ Create a walkable restaurant Zone
- ◇ Facilitate partnership opportunities between Temple and the Community
- ◇ Initiate a shared street concept
- ◇ Develop a safe regional Bike Lane System



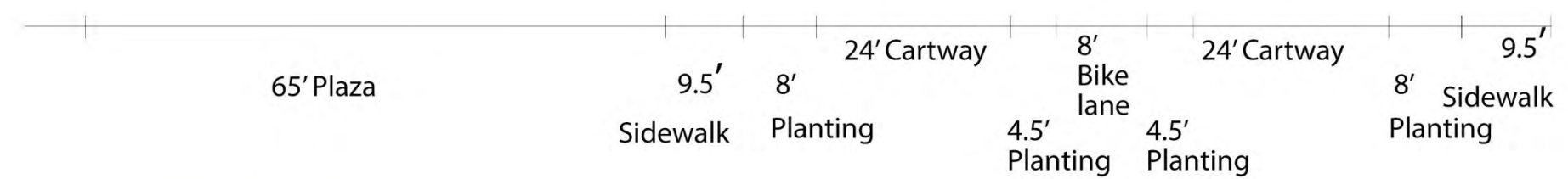
Jacob Zurilla  
LARC 8146 Spring 2018



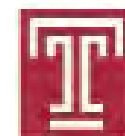








A1 Section Drawing







Existing Conditions



Diamond North Gateway

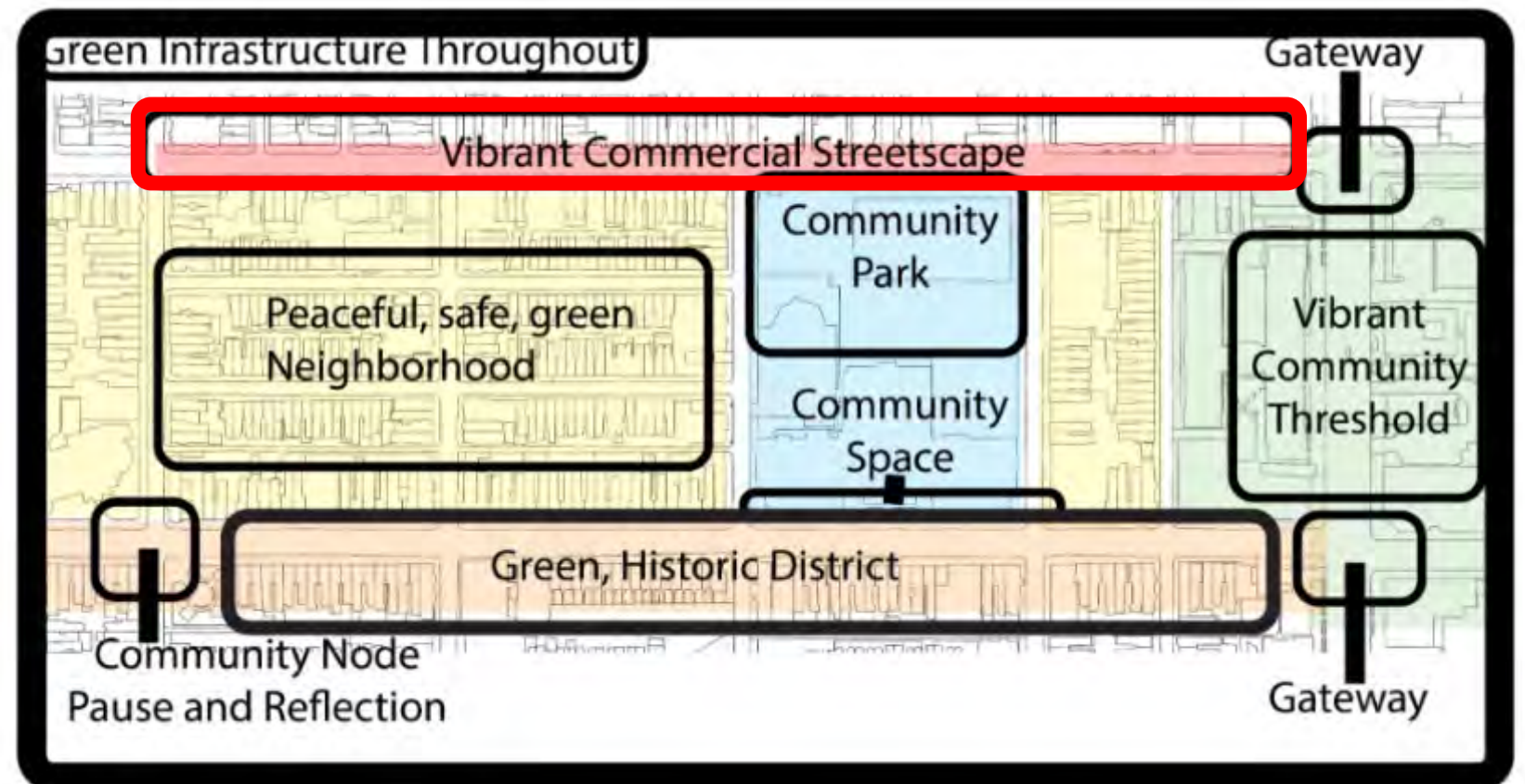




# Susquehanna Ave. Corridor

## Design Objectives

- ◇ Create a vibrant *Shared Streetscape*
- ◇ Enhance with *Green Infrastructure*
- ◇ Increase *Noise Mitigation*
- ◇ Reduce *Heat Island Effect*
- ◇ Encourage movement via *Visual Bounce*
- ◇ Engender *Economic Development*
- ◇ Build *Community*



Zach Cross  
LARC 8146 Spring 2018

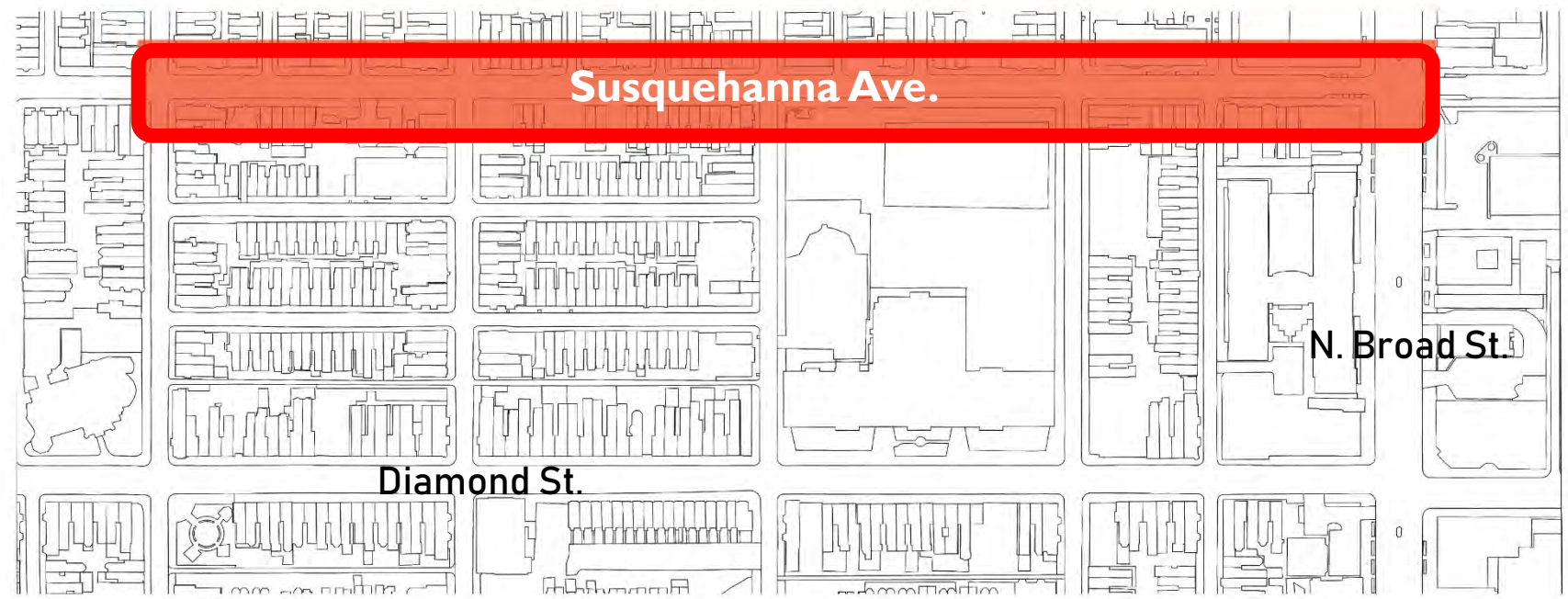




# Susquehanna Ave. Commercial Area

## Design Objectives

- Create a *Shared Streetscape*
- Enrich with *Green Infrastructure*
- Increase *Noise Mitigation*
- Reduce *Heat Island Effect*

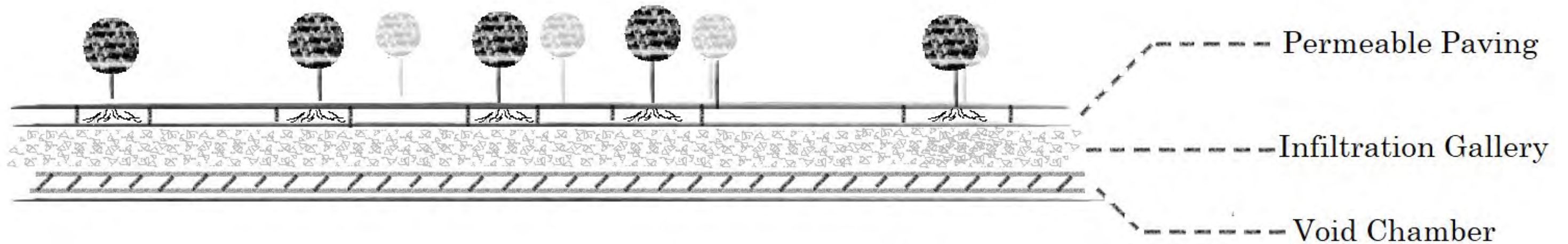




# Green Infrastructure



- Tree Well
- Permeable Paving
- Curb Cut  
Rain Garden
- Tree





# Master Plan

## Susquehanna Ave. Corridor

### Key Elements

Wider Sidewalks  
Cafe Seating  
Permeable Paving

Bike Lane  
Park Gateway

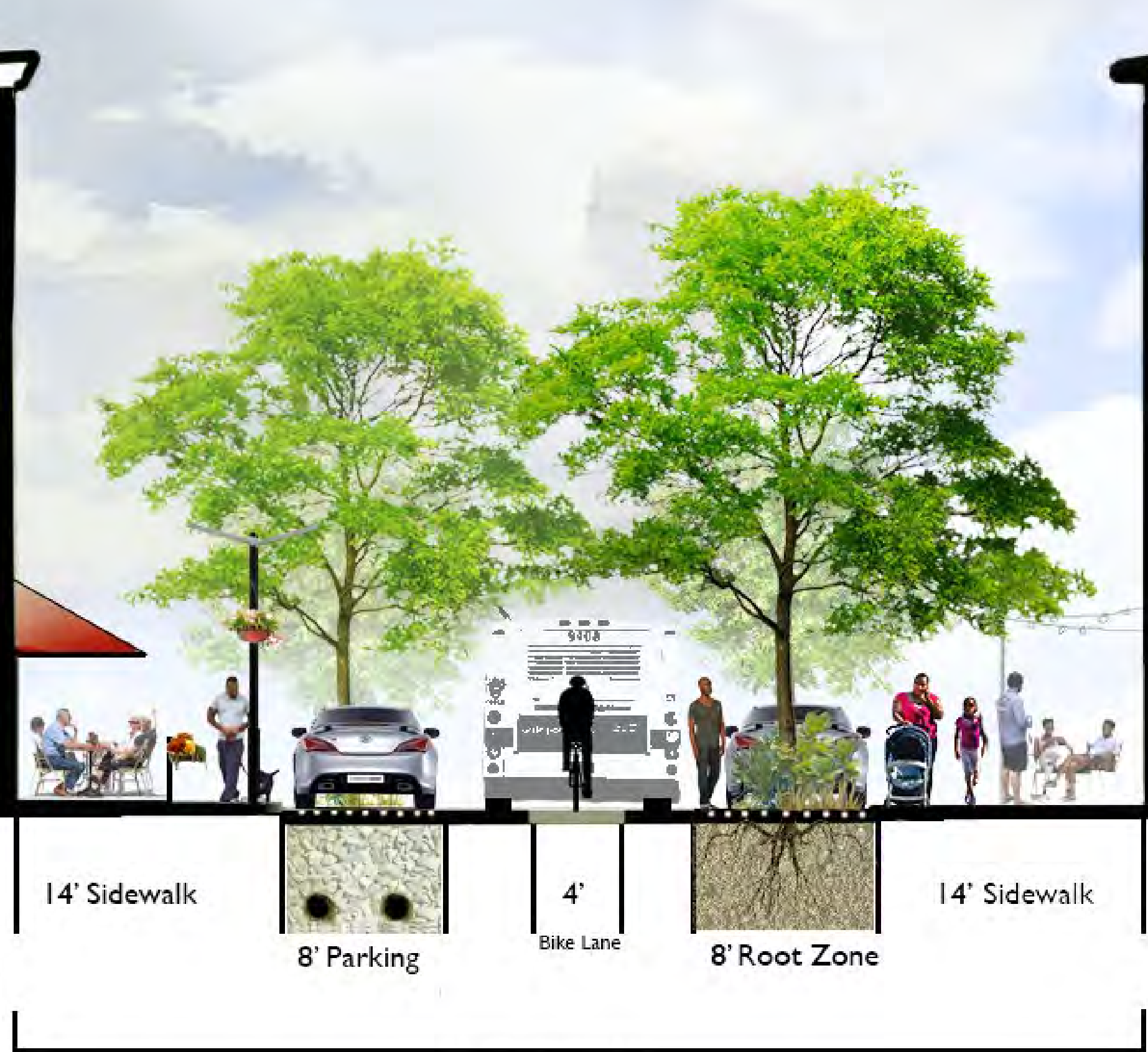


Scale 1" = 10'-0"





Section A-A'



14' Sidewalk



8' Parking

4'

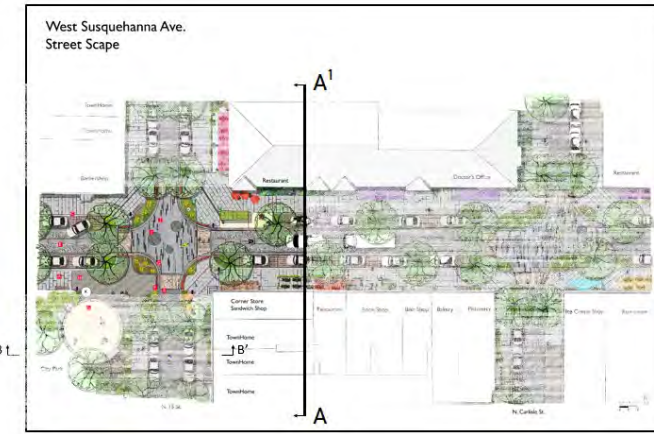
Bike Lane



8' Root Zone

14' Sidewalk

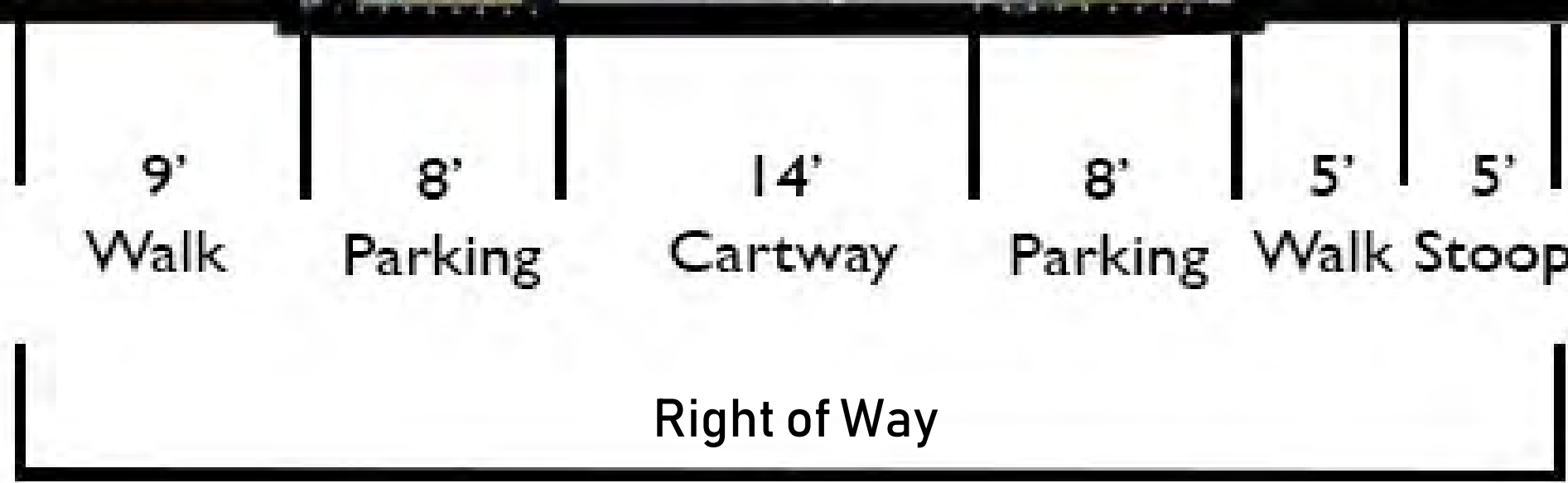
58' Right of Way





Section B-B'

Susquehanna Ave. Corridor



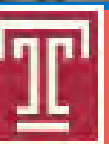
49'







Existing - W. Susquehanna Ave.







Parking Lane

Bike Lane

Parking Lane

----- Cart Way -----



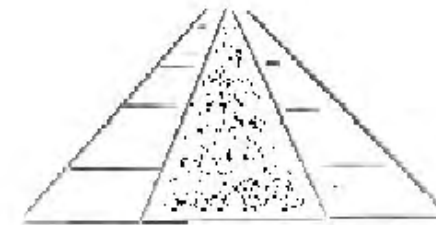
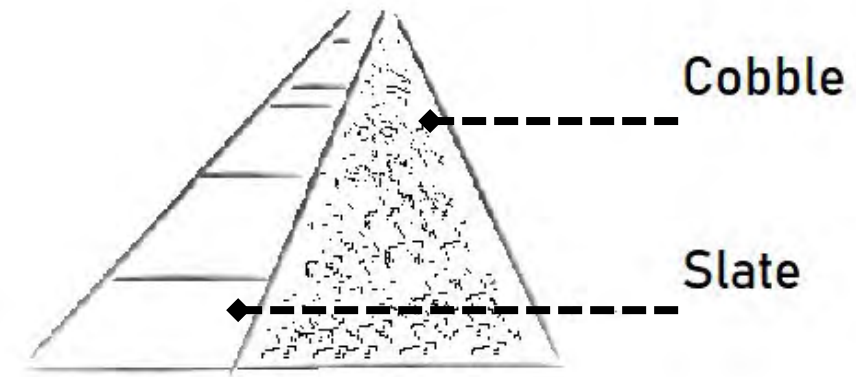
# Design Detail



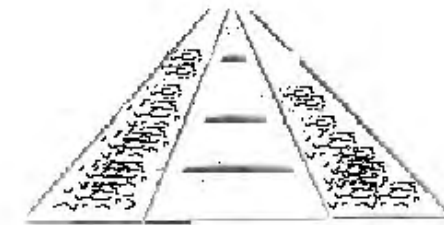
Elfreth's Alley



## Regional Precedent - Form and Materiality



Existing material



Flipping the material



Cobble

Concrete

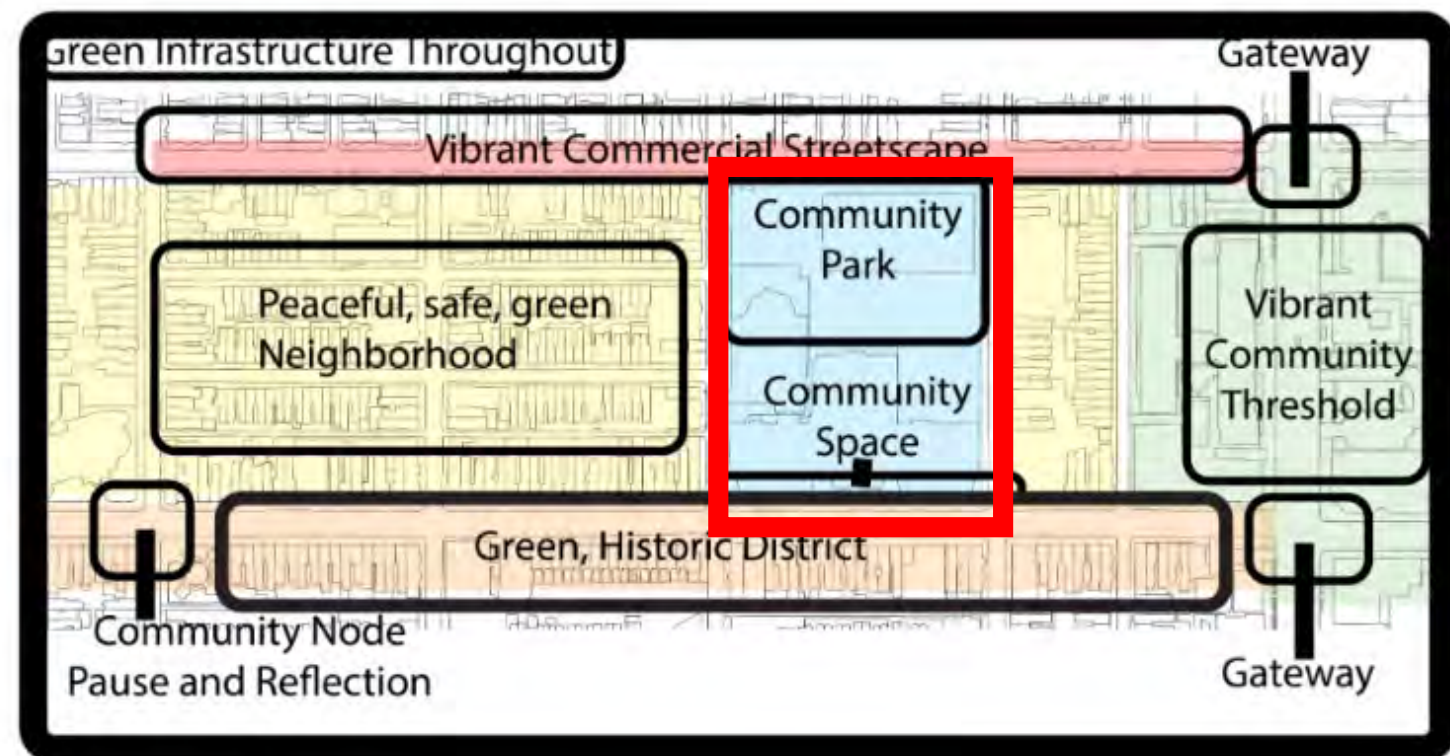




# Duckrey Park and School Zone

## Design Objectives

- ◇ Duckrey Park:
  - ◇ Create a vibrant *shared streetscape*
  - ◇ Enhance *green infrastructure/stormwater management*
  - ◇ Create a *neighborhood destination*
  - ◇ Provide a *community gathering space*
  - ◇ *Community garden space*
  - ◇ *Development of diverse ecosystems*
- ◇ Elementary School:
  - ◇ Outdoor classrooms
  - ◇ Multiple nature play areas
  - ◇ Drop off zone for students
  - ◇ Active and passive play areas
  - ◇ Gathering space



Katie Bartling  
LARC 8146 Spring 2018





# Duckrey Park and School Zone



## Approximately 5 Acres

### Site History

1940-1965: Row homes

1967: construction of school

1970- baseball diamond in NE corner of site

1981- additional sports field added

Has remained largely unchanged since 1981.



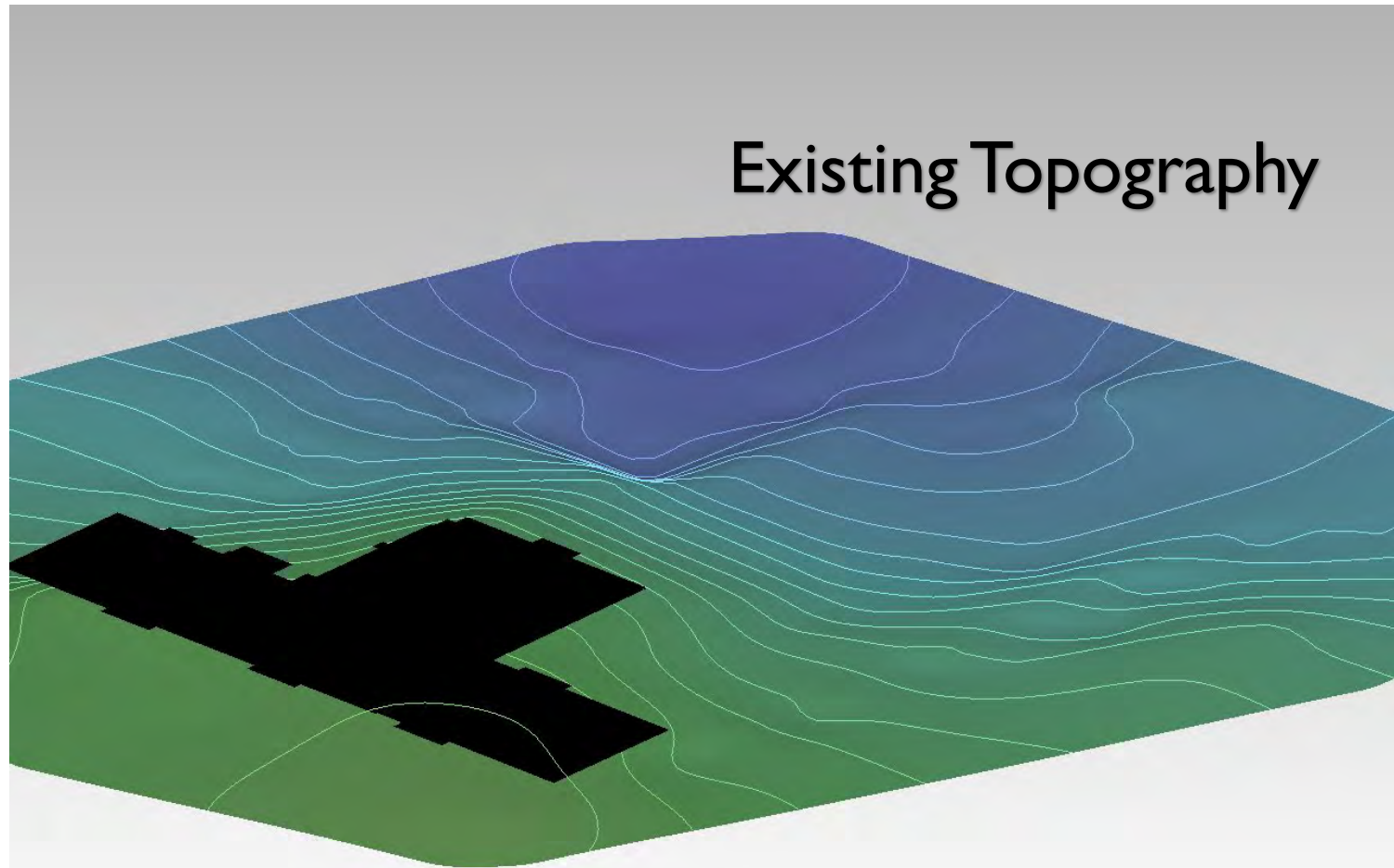
**Dr. Tanner Grant Duckrey was an educator in Philadelphia, and the first African-American in Philadelphia to become a District Superintendent.**



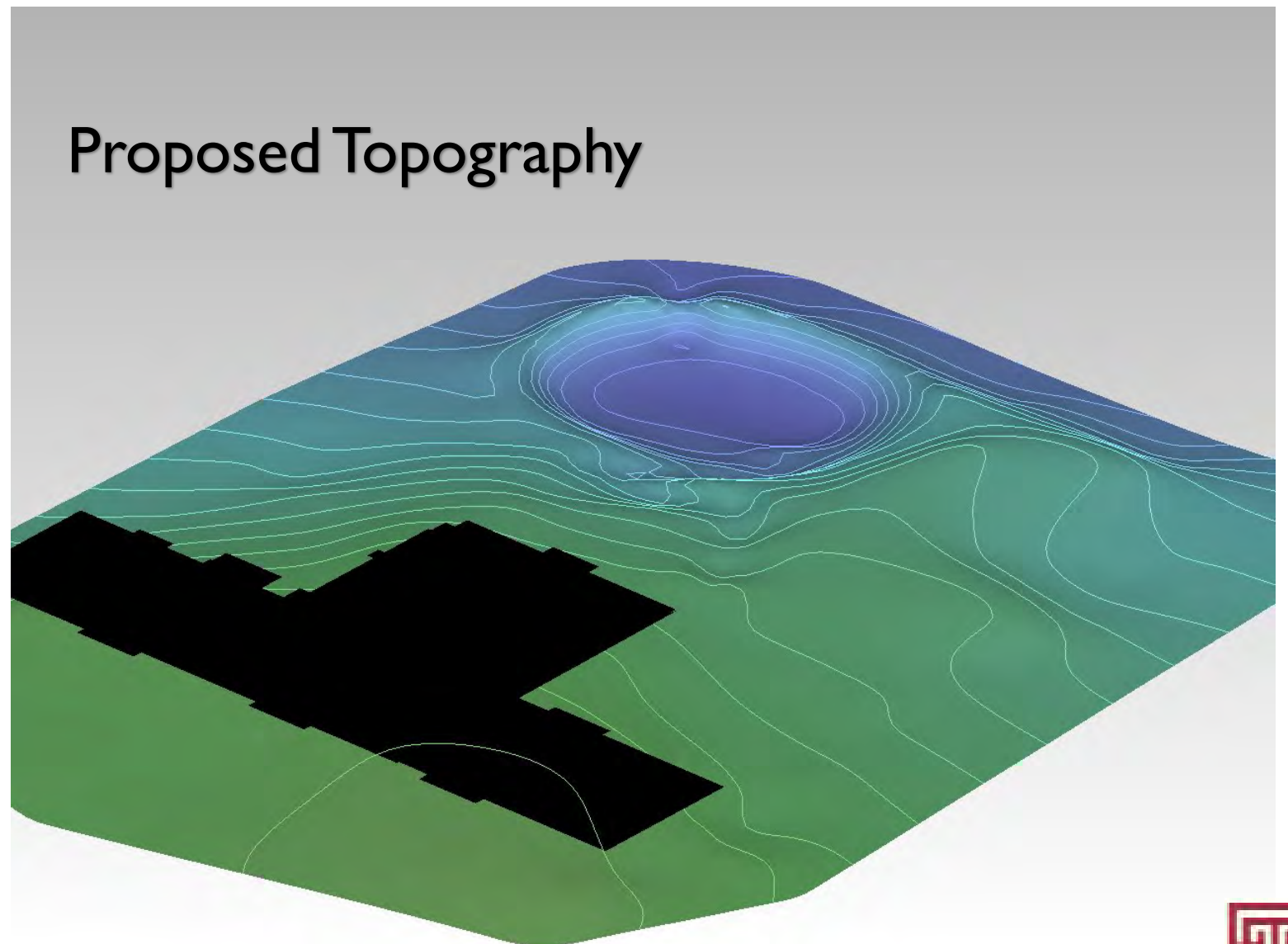


# Duckrey Park and School Zone

Existing Topography



Proposed Topography





# Duckrey Park



- 18 - Pervious Pavement Parking Area
- 19 - Native Shrubs
- 20 - Science Garden and Observatory
- 21 - Native Shrubs and meadow plantings
- 22 - Patio and School Entrance
- 23 - Porous Playground Material with Play Equipment
- 24 - Native Trees and Shrubs
- 25 - Walking Path from Entrance to Pond
- 26 - Nature Play area
- 27 - Porous asphalt walking path
- 28 - Trellis with Native Vines
- 29 - Porous Pavement Basketball Courts
- 30 - Shade Area with Seat Wall and Meadow Plantings
- 31 - Lawn
- 32 - Stage
- 33 - Patio with Information Kiosk
- 34 - Shade Structures and Outdoor Classroom
- 35 - Porous Pavement Patio
- 36 - Community Garden, work with Philadelphia Orchard Project
- 37 - Garden Shed
- 38 - Bike Parking
- 39 - Ampitheater and Outdoor Classroom
- 40 - Vegetated Swale
- 41 - Shallow Pond
- 42 - Observation Deck with benches and learning space
- 43 - Entrance \* Perspective Location

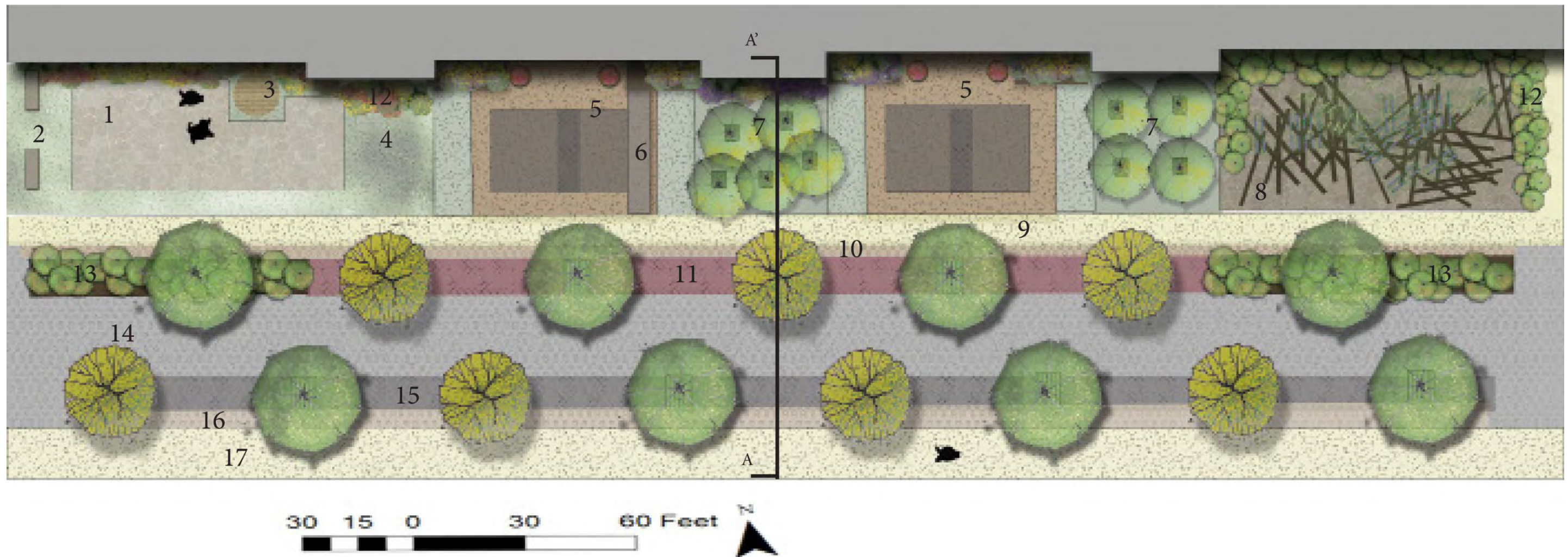




- 1 - Pervious pavement patio area with moveable furniture
- 2 - Seatwalls
- 3 - Art wall nook
- 4 - Grass area
- 5 - School Entrance
- 6 - Paved Ramp
- 7 - Tree Trenches with seating for gathering space
- 8 - Nature Play Area with low fence
- 9 - Pervious pavement sidewalk
- 10 - Pervious bike lane
- 11 - Pervious Pavement Drop Off Zone for school children
- 12 - Native Plantings
- 13 - Rain Garden Depression for stormwater infiltration
- 14 - Pervious asphalt travelway
- 15 - Parking Lane with Street Trees
- 16 - Bike Lane
- 17 - Pervious Pavement Sidewalk

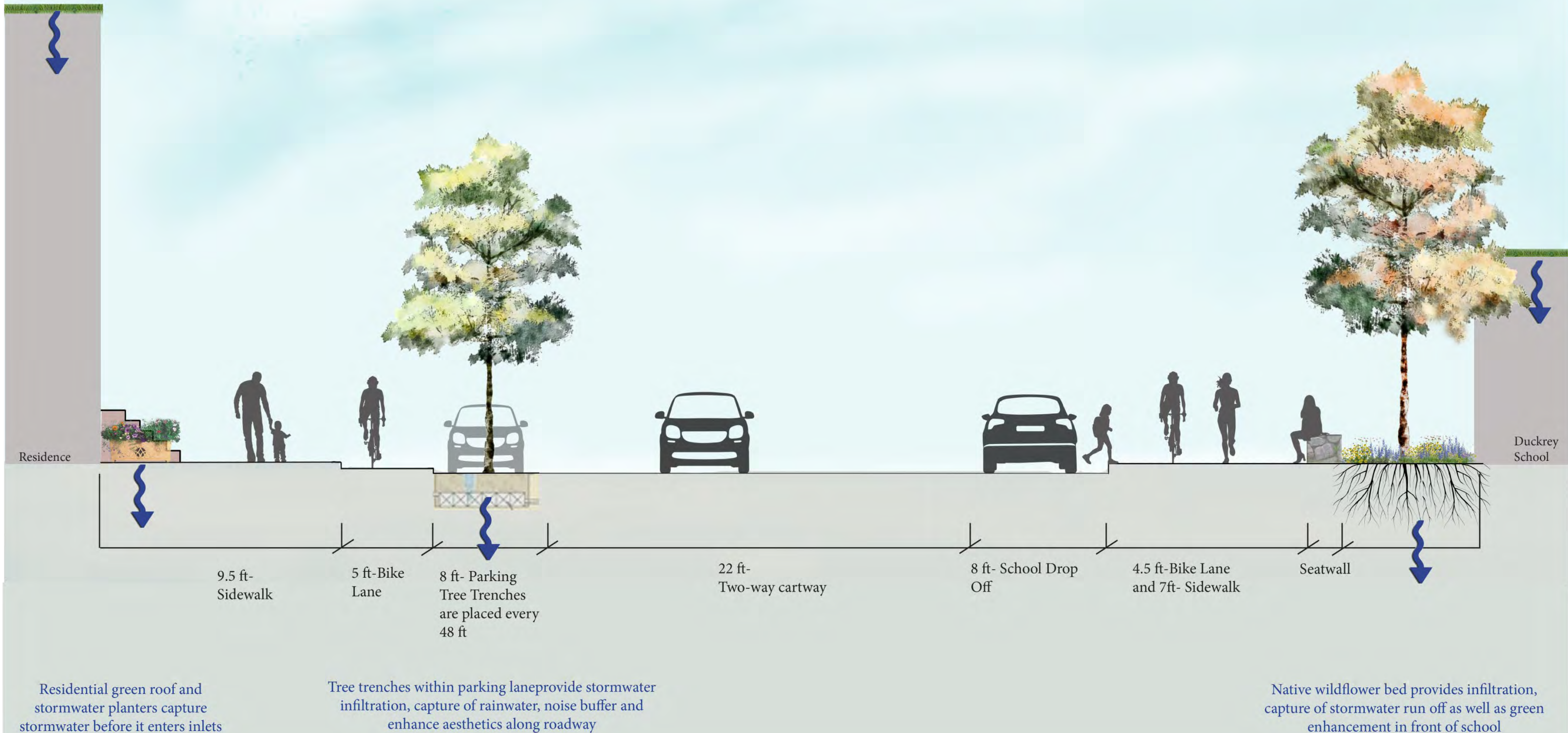


# Duckrey School Zone





Diamond Street Section A-A'



Residential green roof and stormwater planters capture stormwater before it enters inlets

Tree trenches within parking lane provide stormwater infiltration, capture of rainwater, noise buffer and enhance aesthetics along roadway

Native wildflower bed provides infiltration, capture of stormwater run off as well as green enhancement in front of school

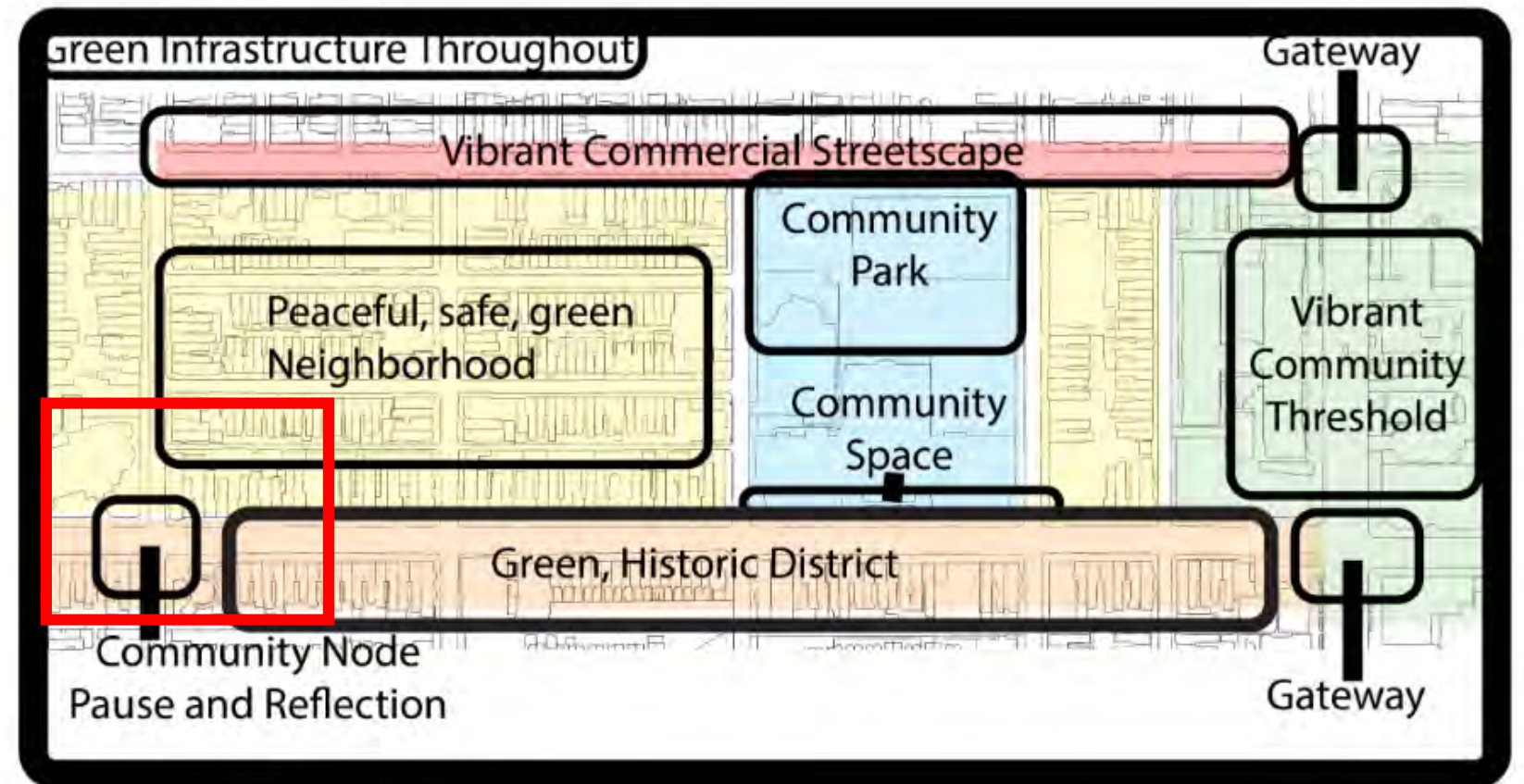




# Diamond Street Historic Corridor

## Design Objectives

- ◇ Historic preservation
- ◇ Destinations - Community gathering spaces
- ◇ Greening/ green infrastructure
- ◇ Shared streets/ traffic calming
- ◇ Safety
- ◇ Neighborhood identity/ pride



Liz Krohn

LARC 8146 Spring

2018





Existing





# Proposed

Church of the Advocate

Existing Trees

Permeable Parking Spaces

Seat Wall and Planting Beds

Bollards

Permeable Cobblestone

Rain Gardens

N. Gratz St.

Bike Rack

N. 18<sup>th</sup> St.

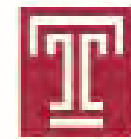
Sunken Splash Pad

Seat Wall and Planting Beds

Bike Lane

Diamond St.

Brick Sidewalk



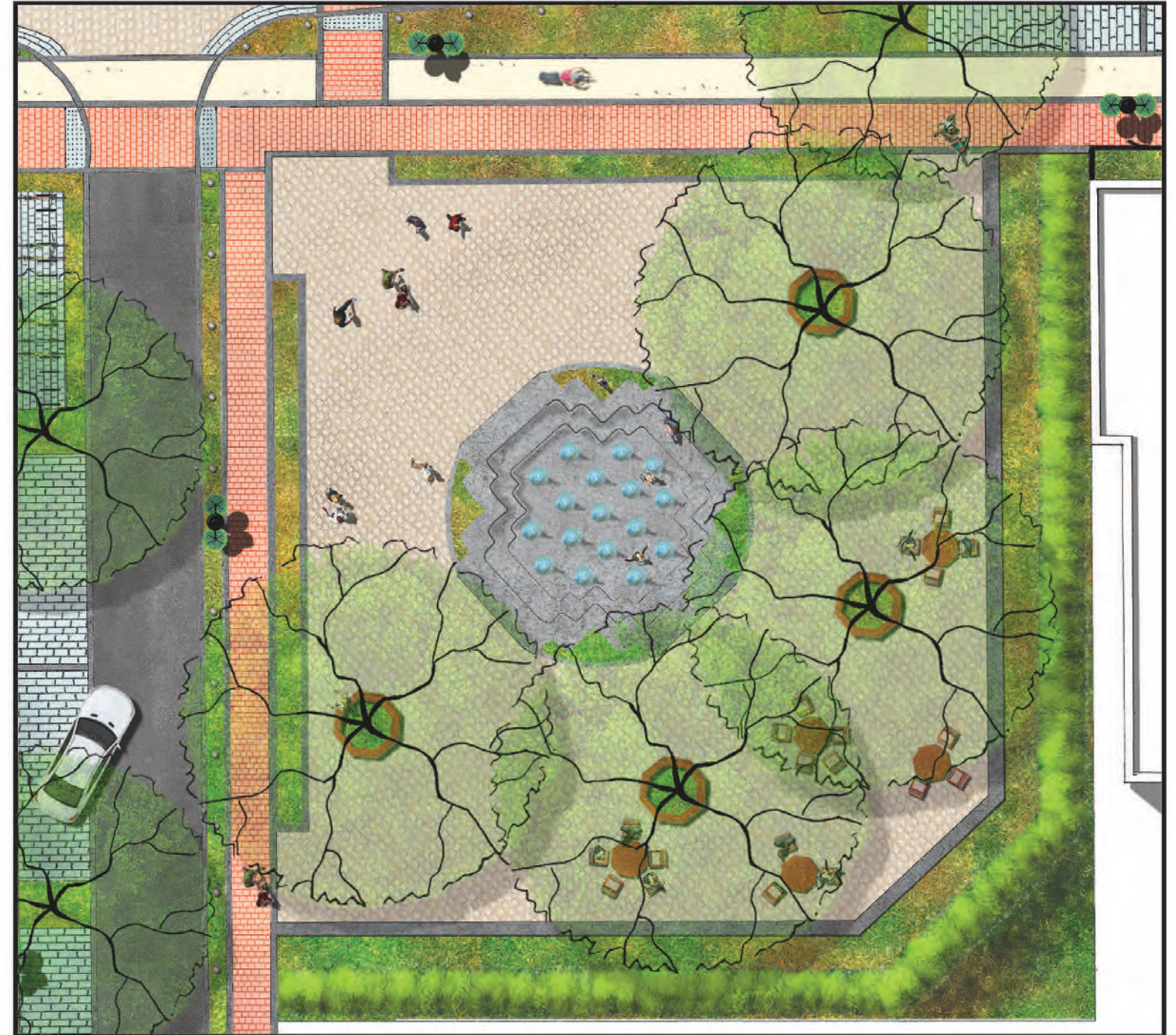
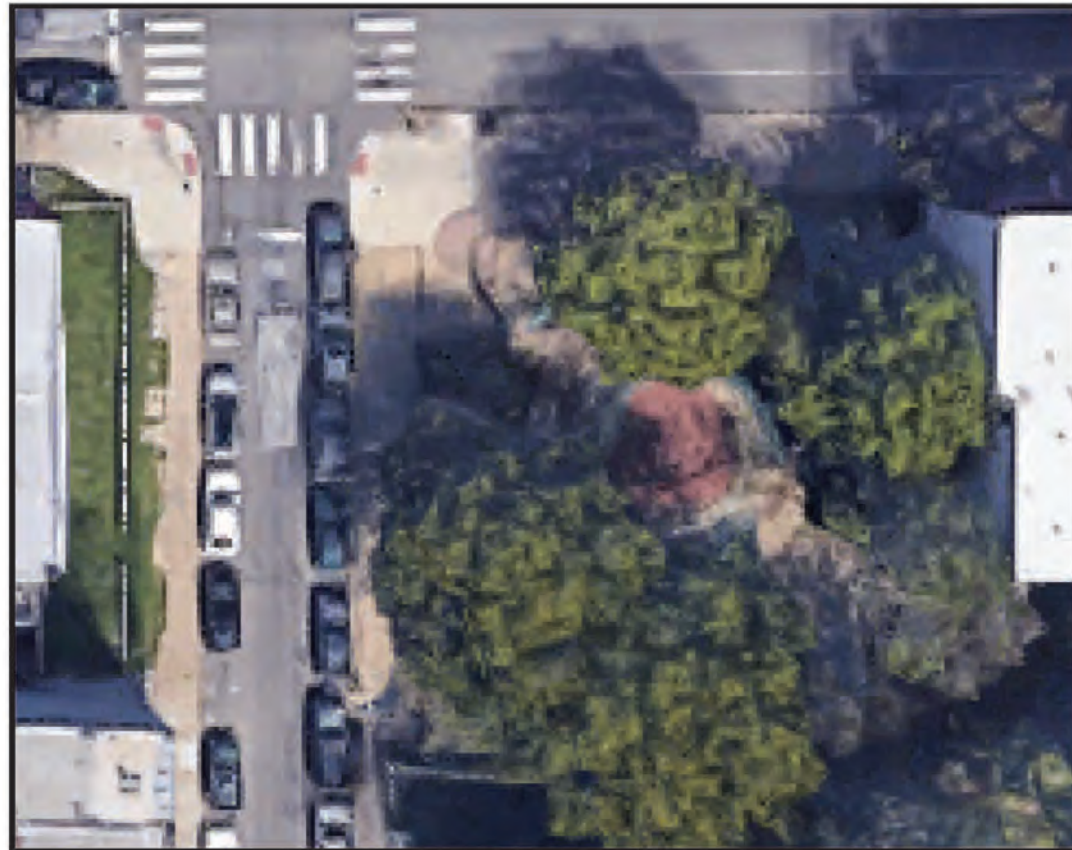


# Goal: Historic Preservation/ Destination - Church of the Advocate Plaza



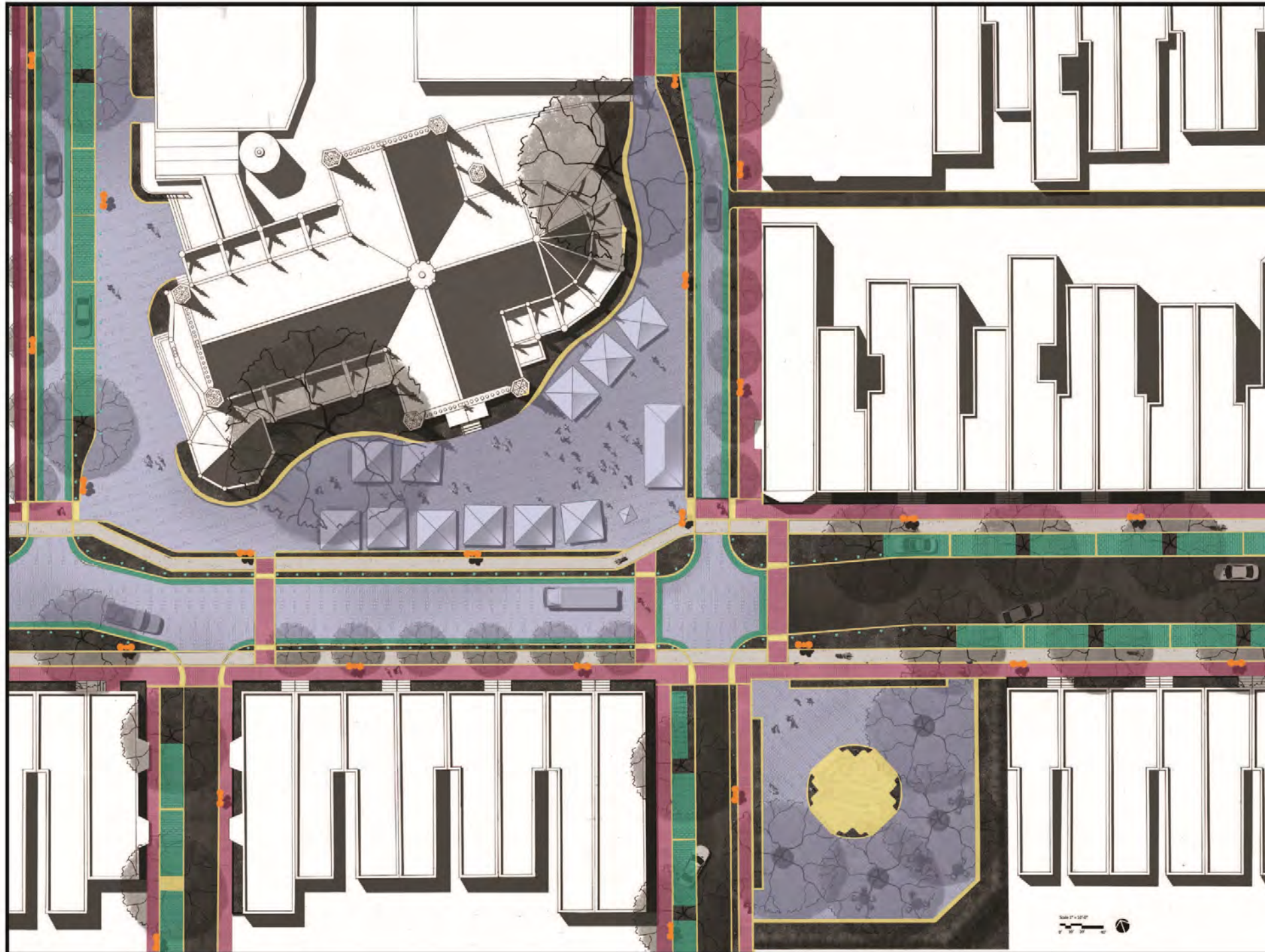


# Goal: Historic Preservation/ Destination - Diamond Park







# Goal: Historic Preservation - Design Features



## Paving

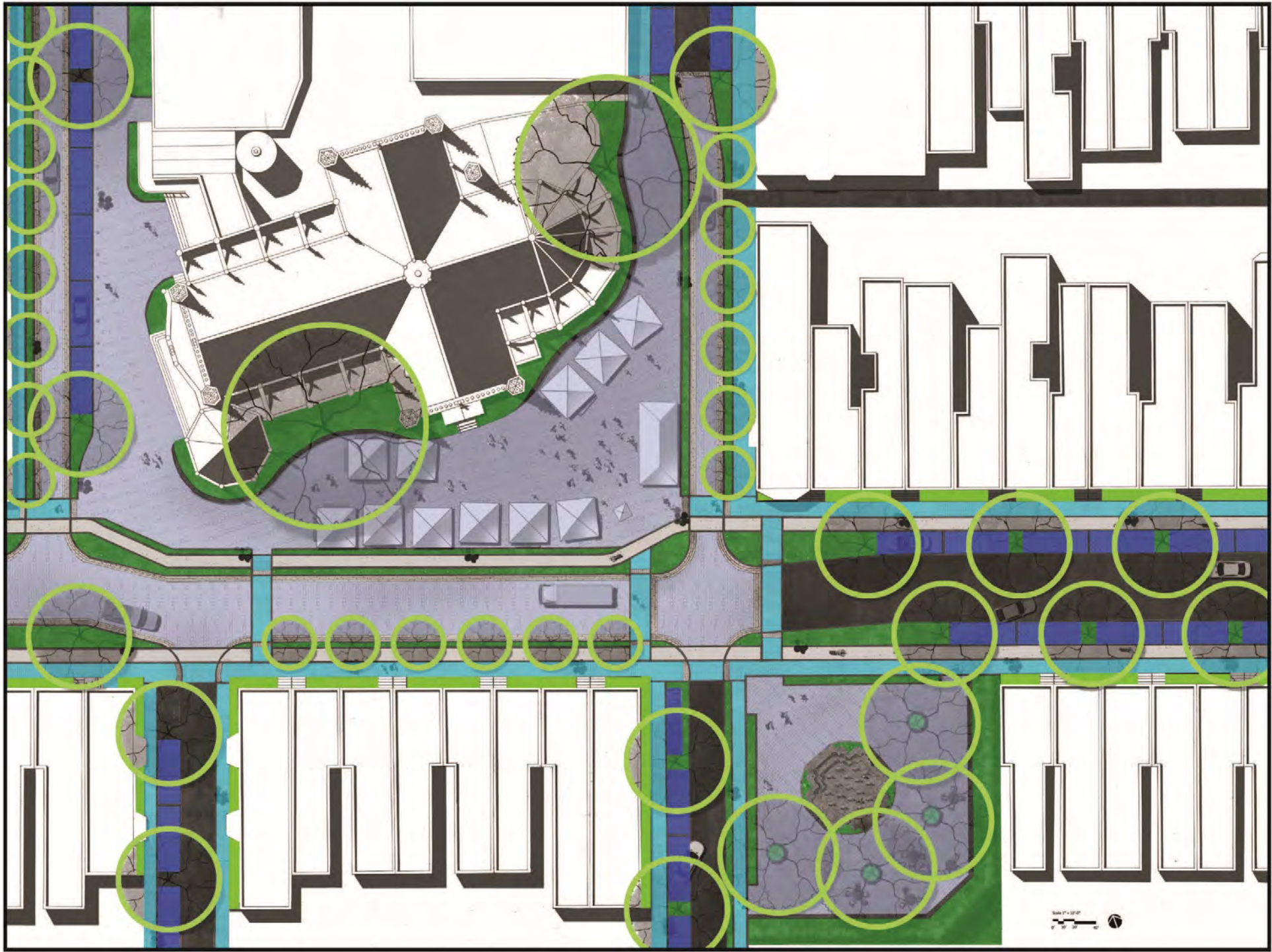
-  Brick Sidewalks
-  Cobblestone Plaza
-  Granite Edging, Seatwalls
-  Slate Parking, Street Gutters

## Features




-  Victorian Lighting/  
Hanging Baskets
-  Historic Bollards





# Goal: Green Infrastructure

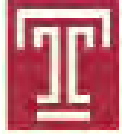


## Greening

-  Rain Gardens
-  Home Planting Zones
-  Trees

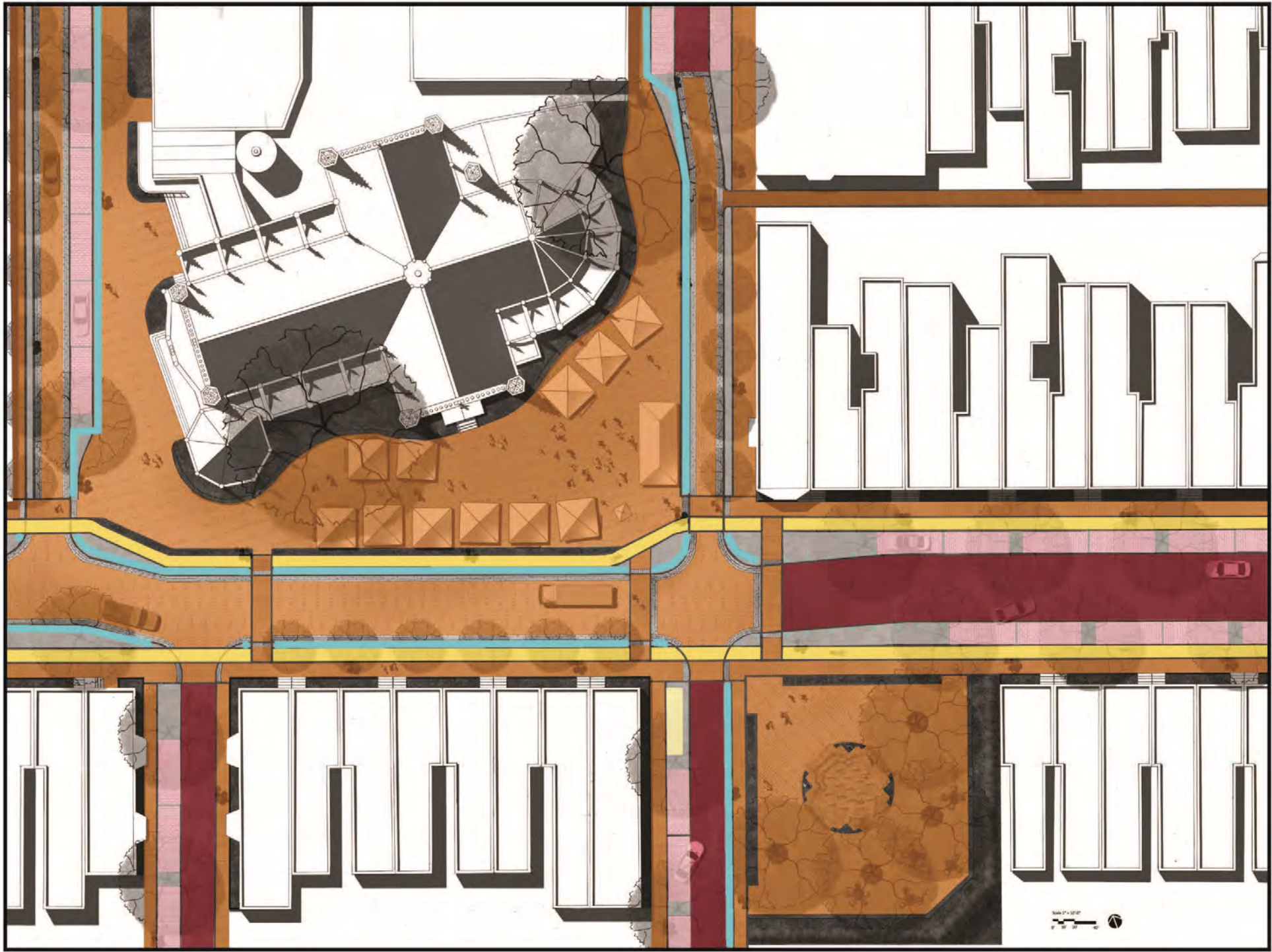
## Pervious Paving

-  Cobblestone
-  Brick Sidewalks
-  Slate Paver Street Parking










# Goal: Shared Streets - Enhanced Pedestrian and Bike Zones



## Zones

-  Pedestrian Zone
-  Bike Lane/ Bike Rack
-  Primarily Vehicular Zone

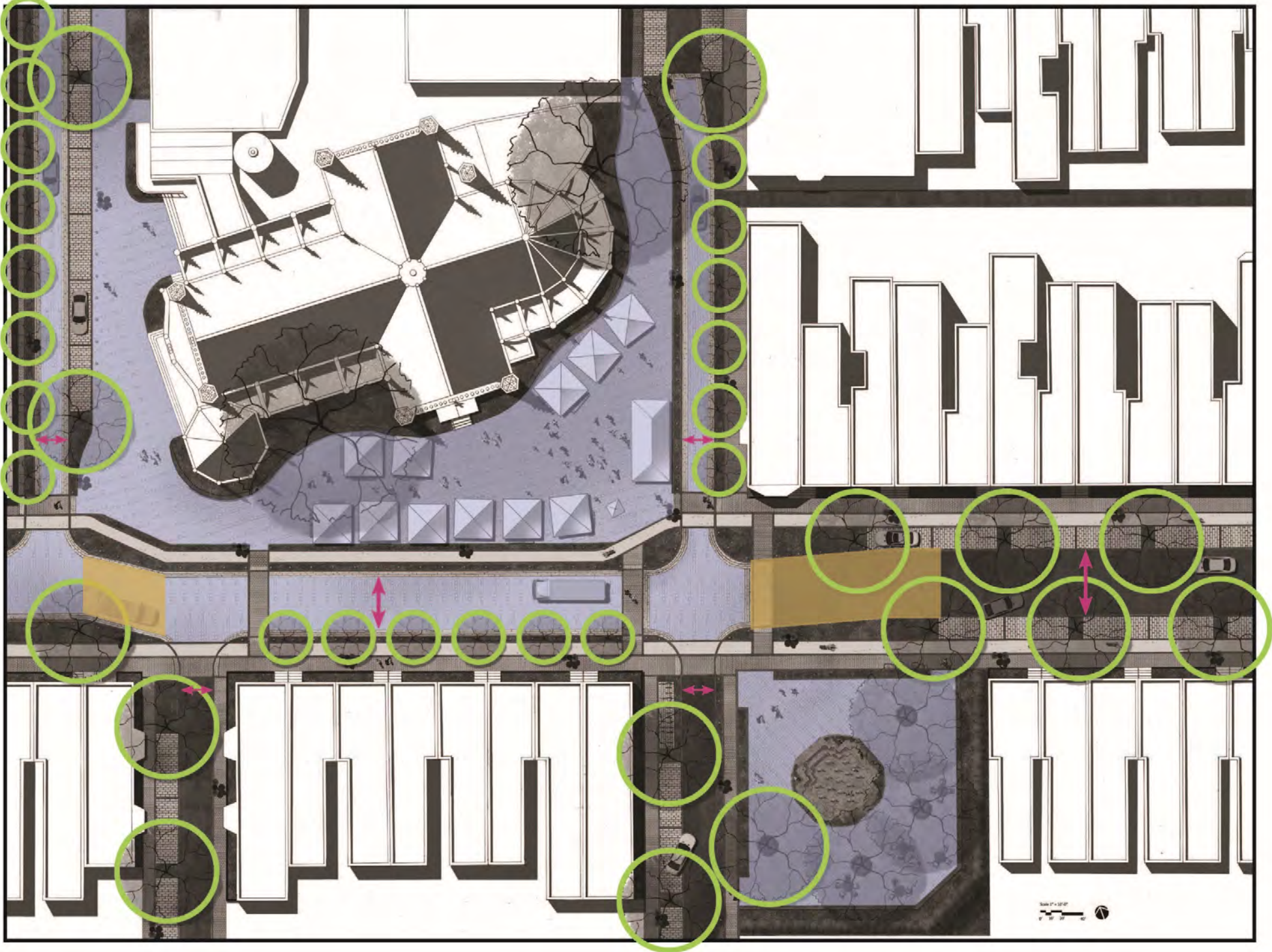
## Safety Measures





-  Line of Bollards
-  Rain Garden, Parking Buffer





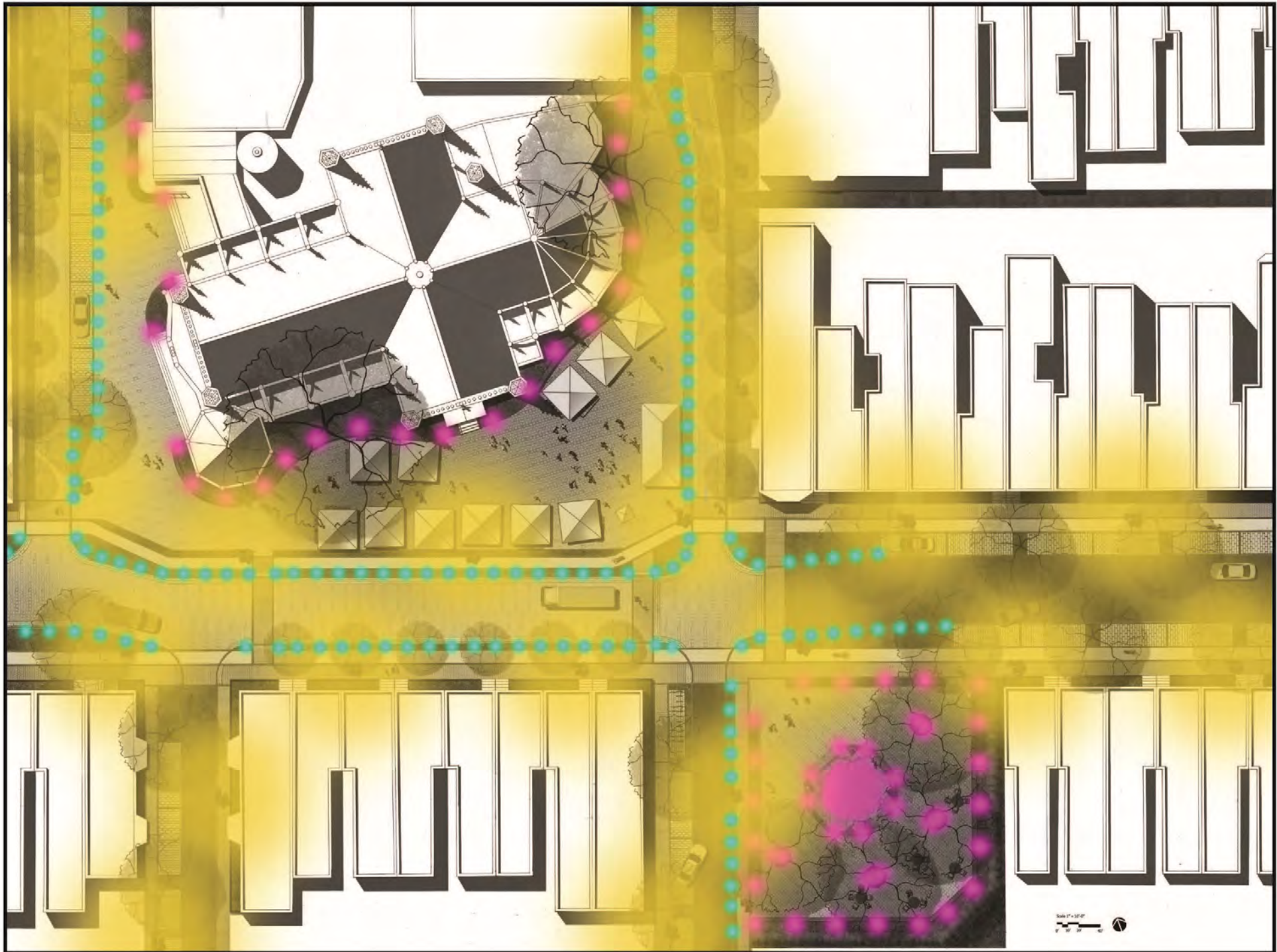
# Goal: Traffic Calming



-  Narrower Cartway for Wider Pedestrian and GI Zones
-  Chicanes
-  Cobblestone
-  Trees



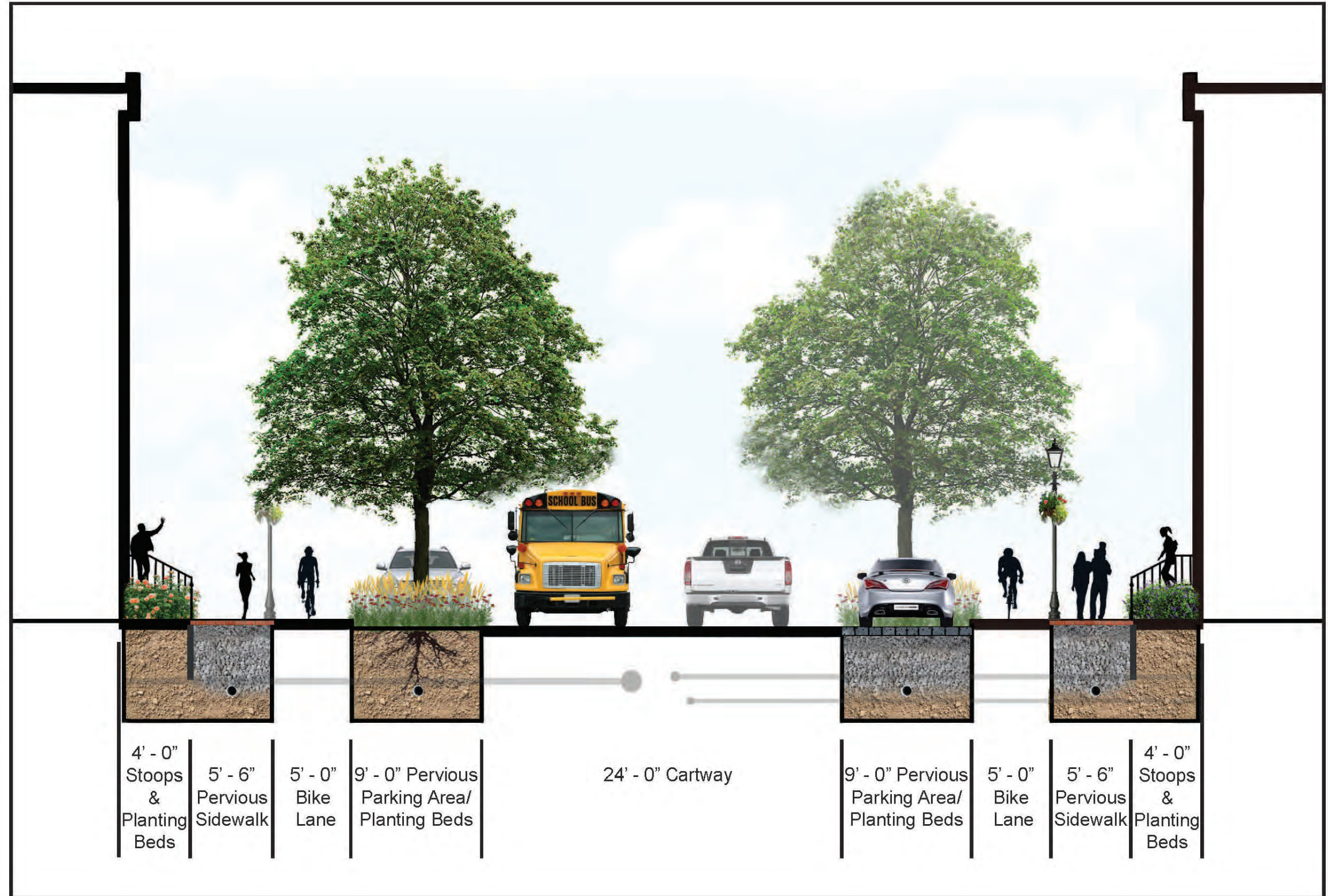
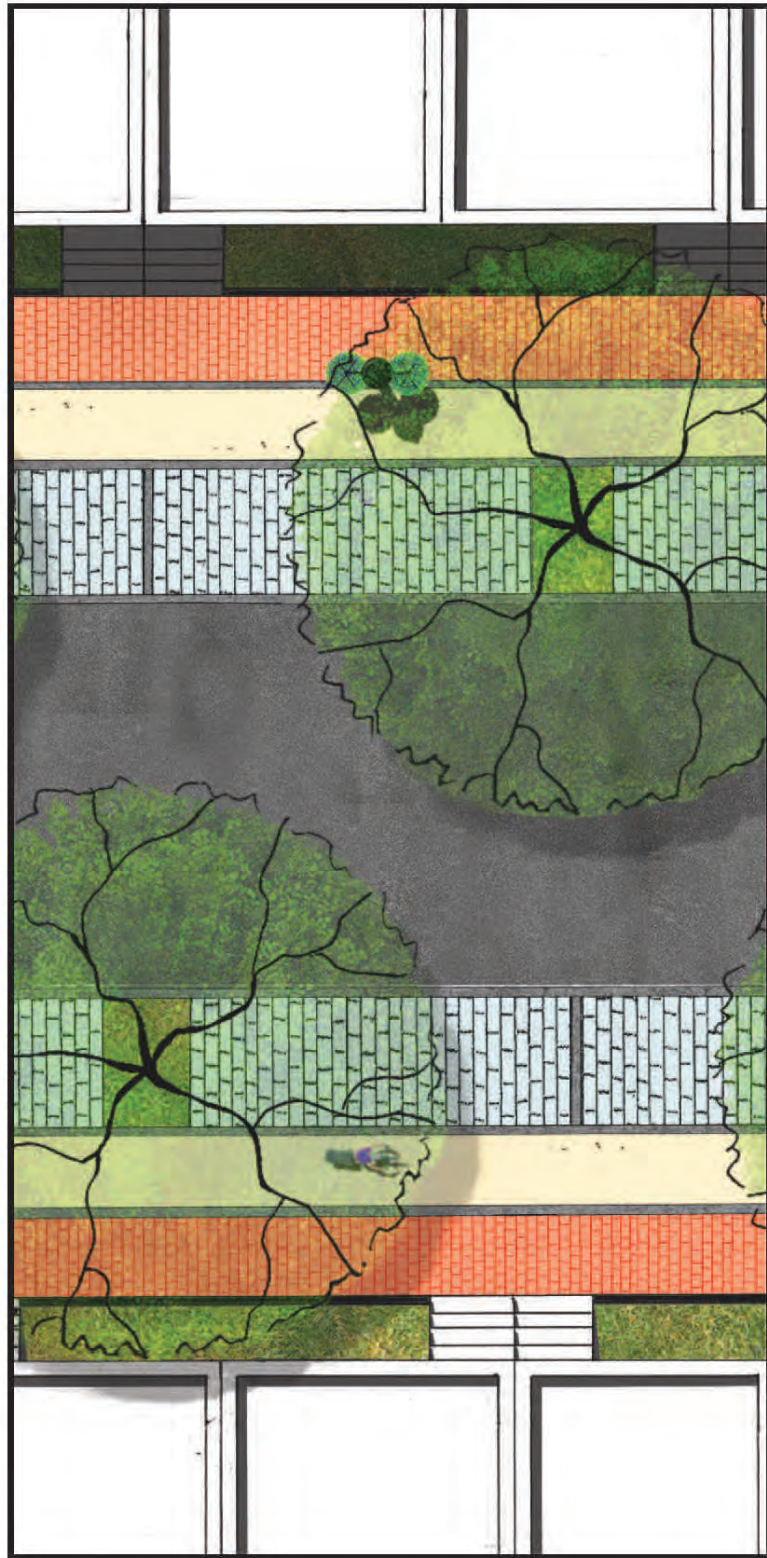
Goal: Increased Safety - Open Sight Lines, People's Presence, Enhanced Lighting



- Overhead Lighting
- Path Lights/ Uplights/ In-grade Lights
- Bollard Lights



# Diamond Street Historic Corridor





# Church of the Advocate Existing Streetscape





# Church of the Advocate Proposed Streetscape





# REIMAGINING THE TOWN AND GOWN EXPERIENCE

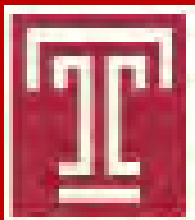
Diamond Street Corridor Neighborhood

# Discussion

Department of Landscape Architecture

LARC 8144 - Spring 2018 - Prof. Carter van Dyke

Jacob Zurilla, Liz Krohn, Zach Cross, and Katie Bartling





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