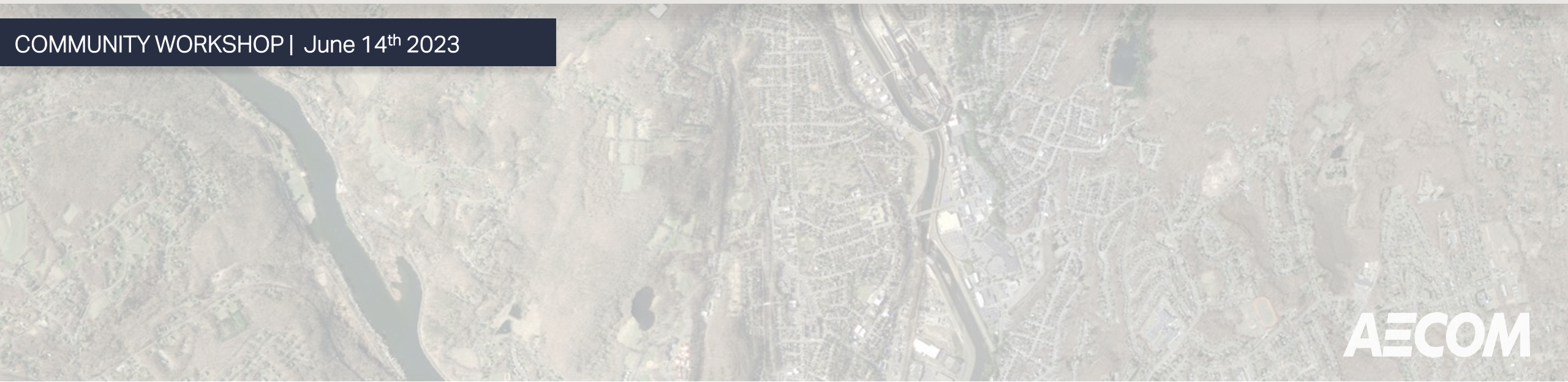




# Resilient Ansonia

RESILIENCY STRATEGIES

COMMUNITY WORKSHOP | June 14<sup>th</sup> 2023



**AECOM**

# Agenda

## Project Overview

**What is Resilient Connecticut**

**Study Area**

**What is a Resilient Community**

## Resilient Ansonia

**- Heat, Cooling and Flood**

**- Applied Strategies**

**- Creating a Kit of Parts**

## Discussion

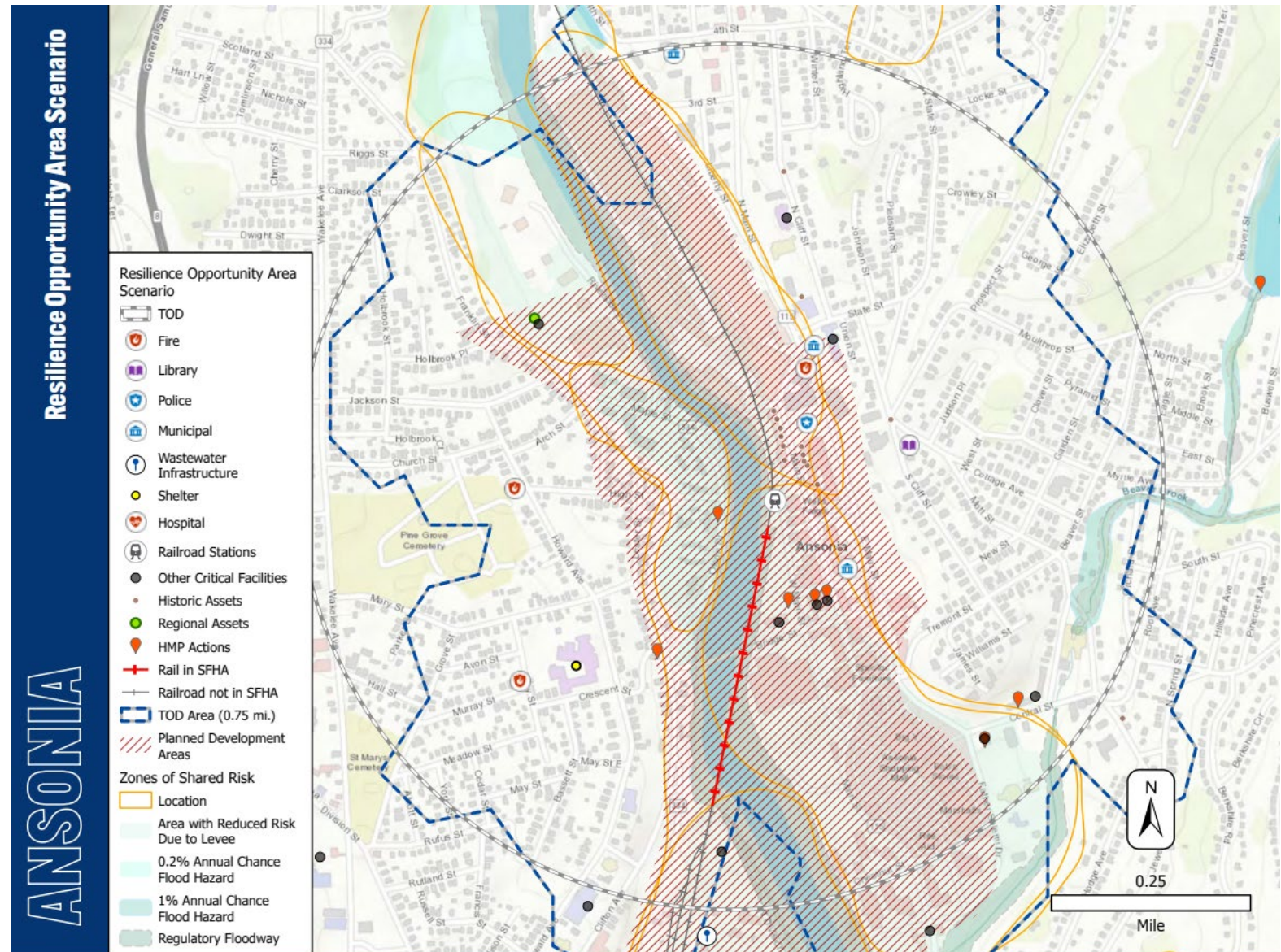
## Next Steps

# Project Overview

## Resilient Connecticut Planning Framework

## Resilient Connecticut Vulnerability Assessment Report

Fall 2021



## Core of Downtown

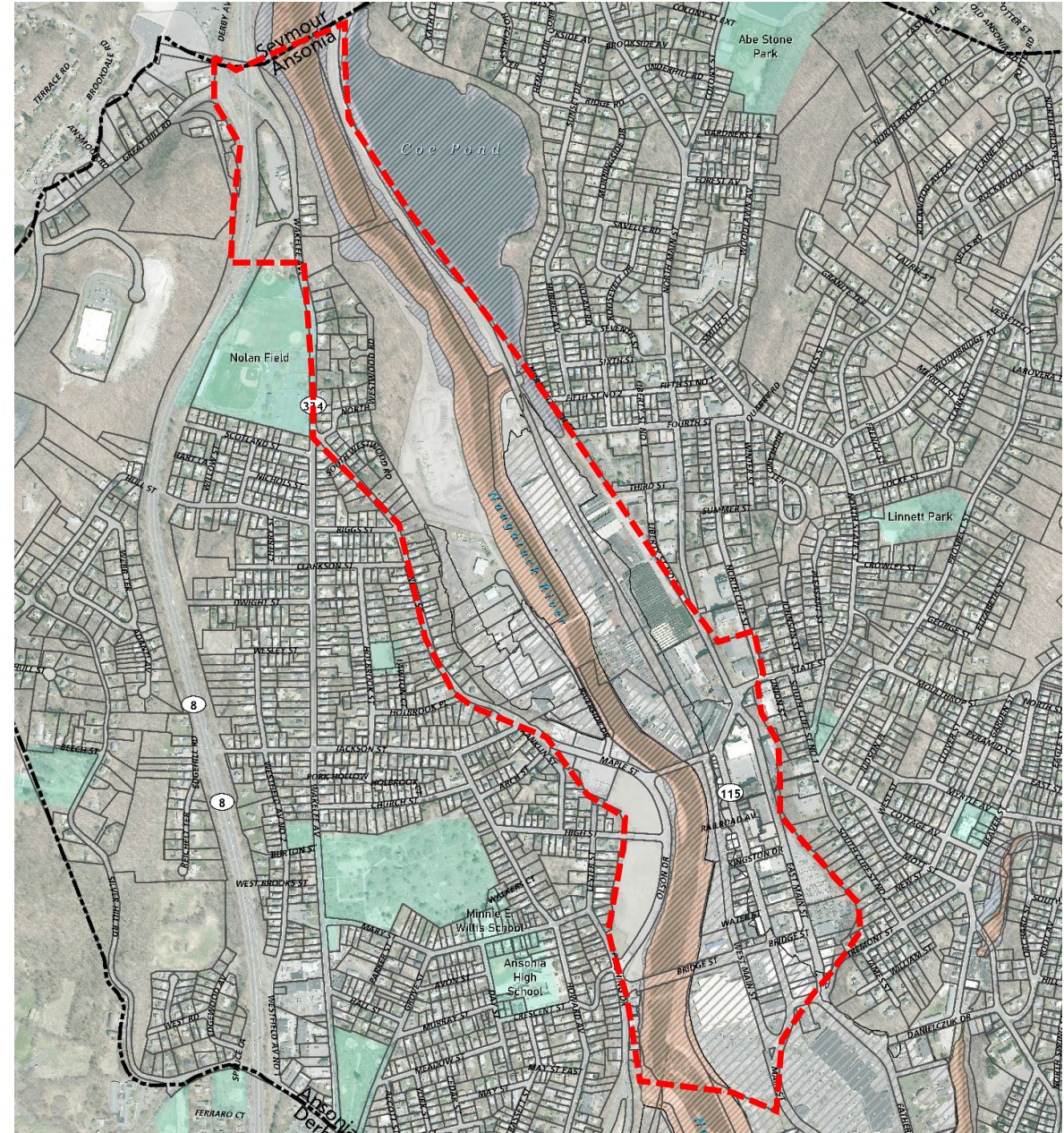
- East Main
- West Main
- Main Street

## Ansonia Brass and Copper

## Route 8

## East & West Sides of River

## Train Station Area



## Focusing on Community Development

Preserving and enhancing the quality of life of existing affordable communities

## “Resilient Corridors”

Creating accessible roadways resilient to climate change and increasing transit connectivity

## Promote Healthy Ecosystems

Protecting communities through healthy buffering ecosystems

## Develop Energy, Economic, & Social Resilience

Fostering independent development by encouraging green energy and economic growth

## Promote Flood & Heat Resilient Infrastructure

Adapting Critical Infrastructure to withstand Flood and Heat Risks

# Resilient Ansonia

**Part 1: Heat, Cooling and Flood**

**Part 2: Applied Strategies**

**Part 3: Creating a Kit of Parts**

## PART I: Heat, Cooling and Flood



**Regional Trends Heat Increase & Cooling Center Analysis**



**Regional Tree Canopy & Impervious Surfaces**



**Flood Protection System Analysis**

## PART II: Applied Strategies



### Resiliency Strategies

1. Main St @ Ansonia Train Station
2. East Main St @ Ansonia City Hall & Veterans' Memorial Park
3. Olson Drive @ Nolan Field Sports Center
4. Riverside Drive @ Connection to Ansonia Copper & Brass Facility

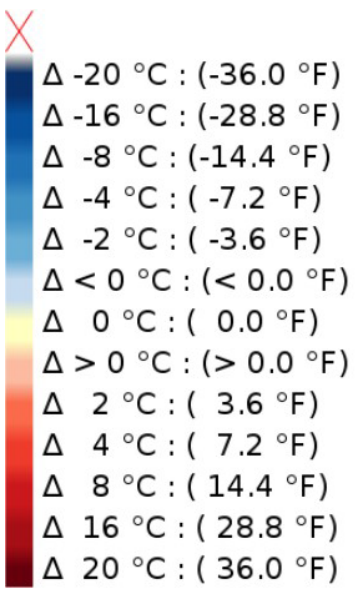
## PART III: Creating a "Kit of Parts"



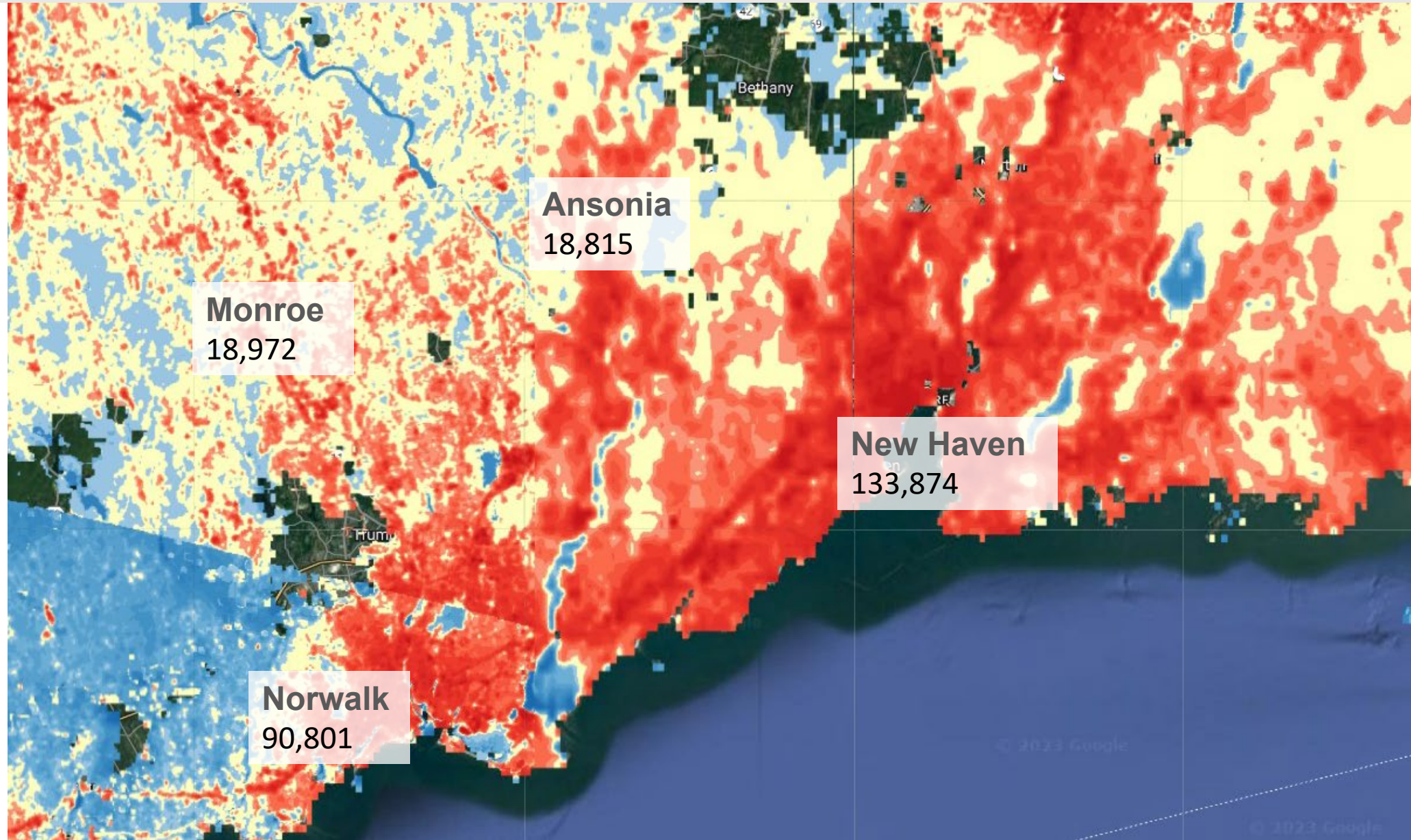
**How can climate resilient strategies serve future development in Ansonia?**



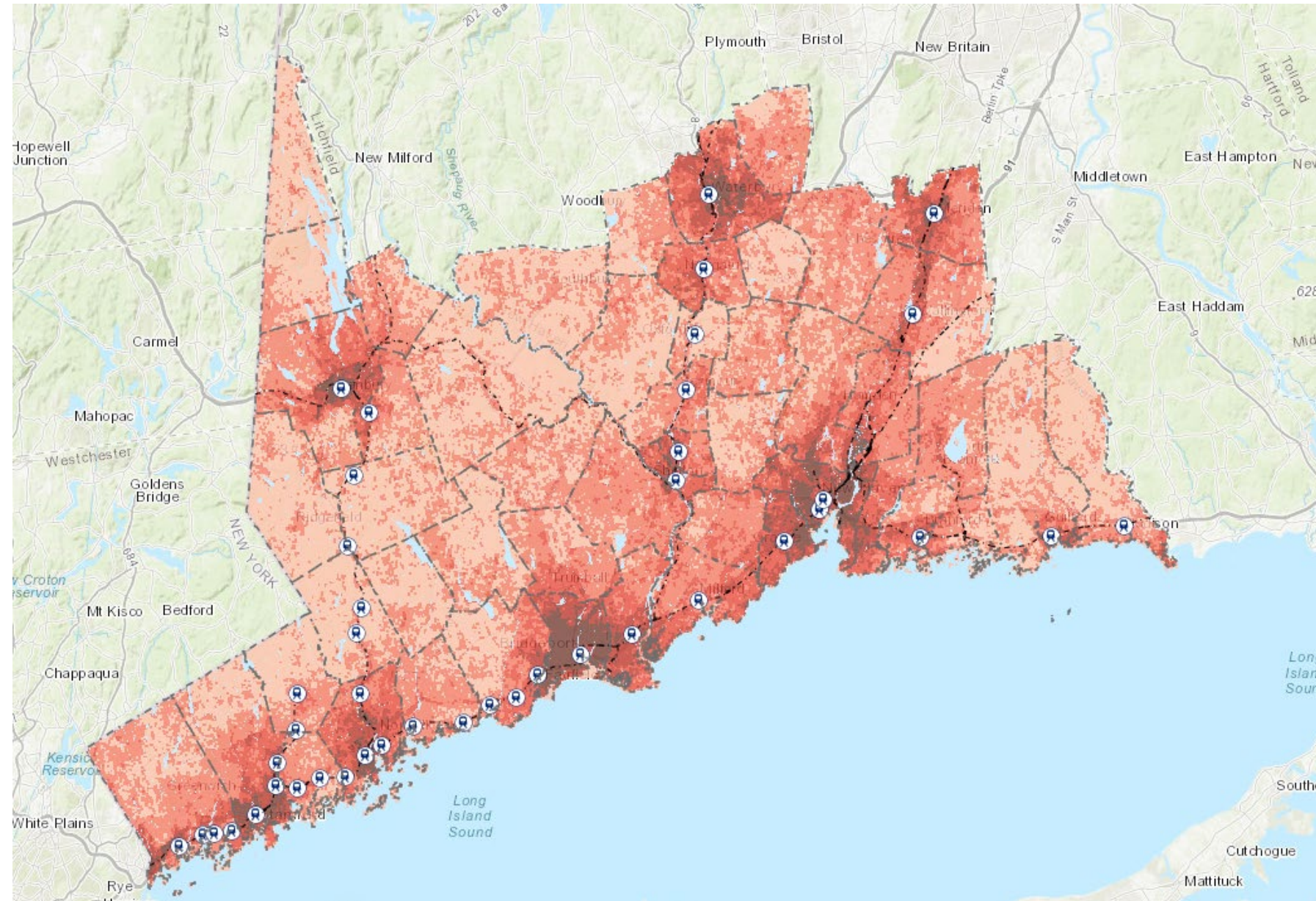
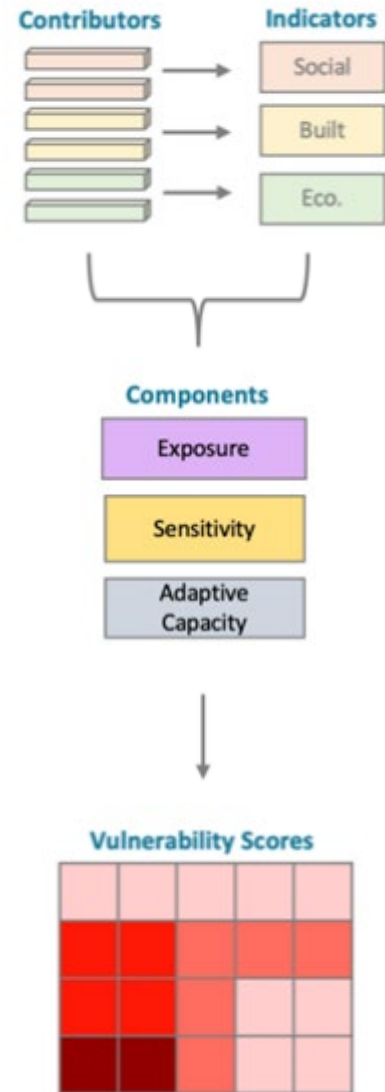
# **PART I: Heat, Cooling and Flood**



● Temperature increase compared with population count



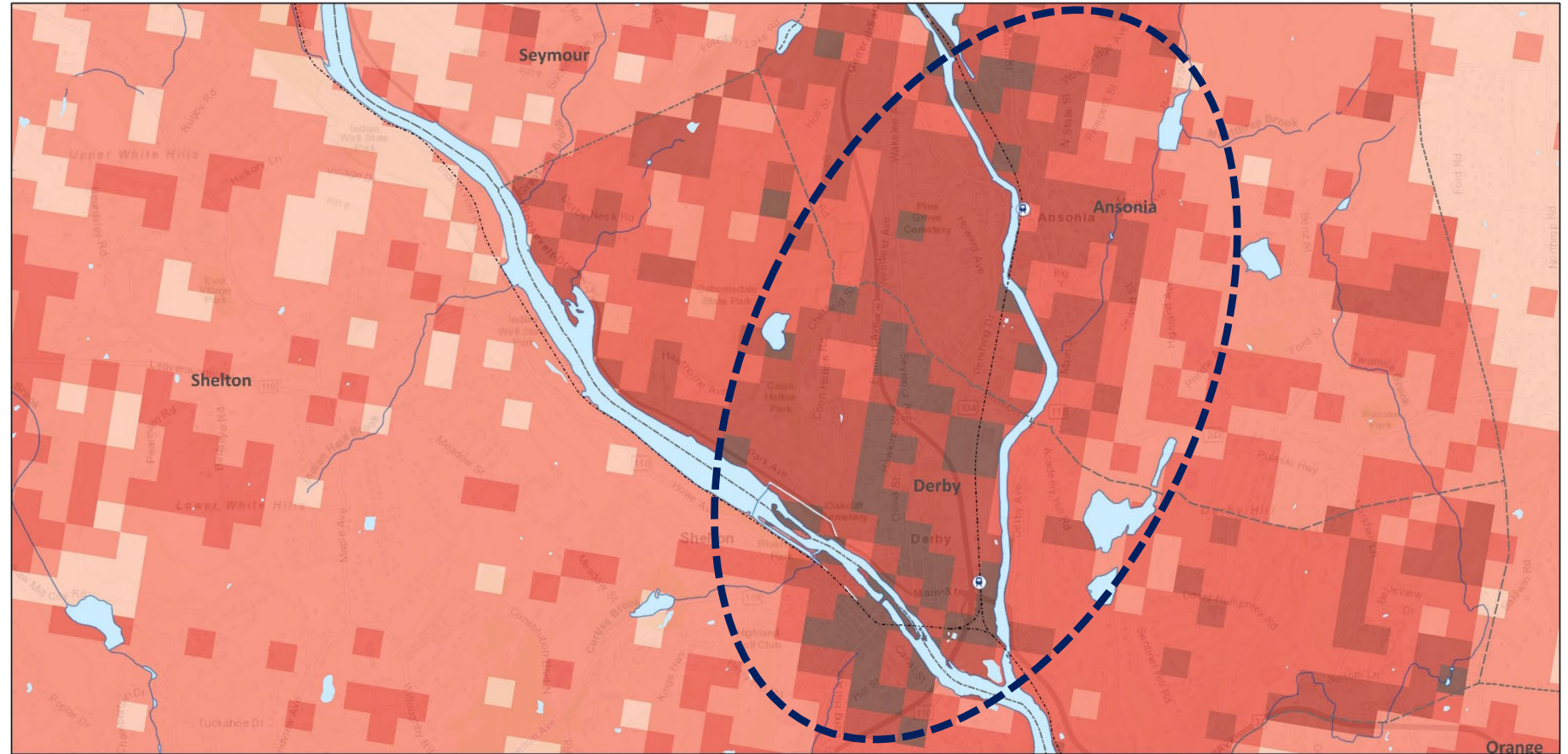
## CCVI Scoring: Regionally



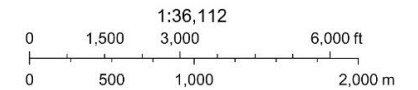
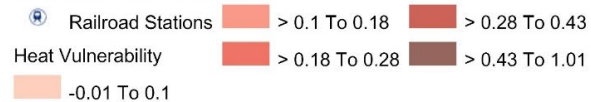
## CCVI Scoring: Ansonia & Derby



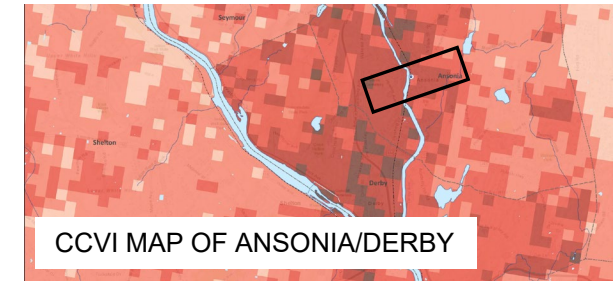
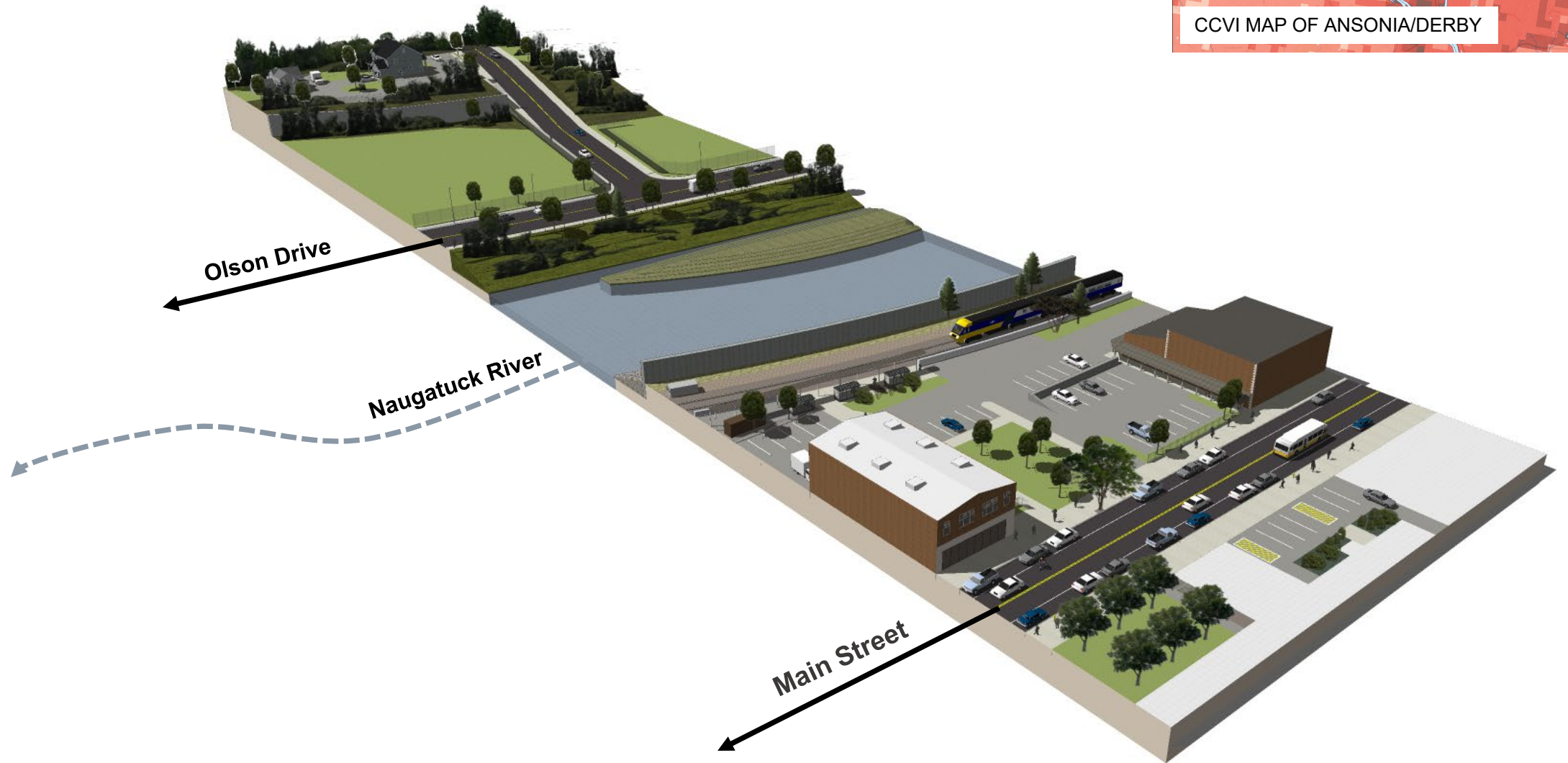
Areas demonstrating greatest heat vulnerability



3/17/2023, 4:41:24 PM

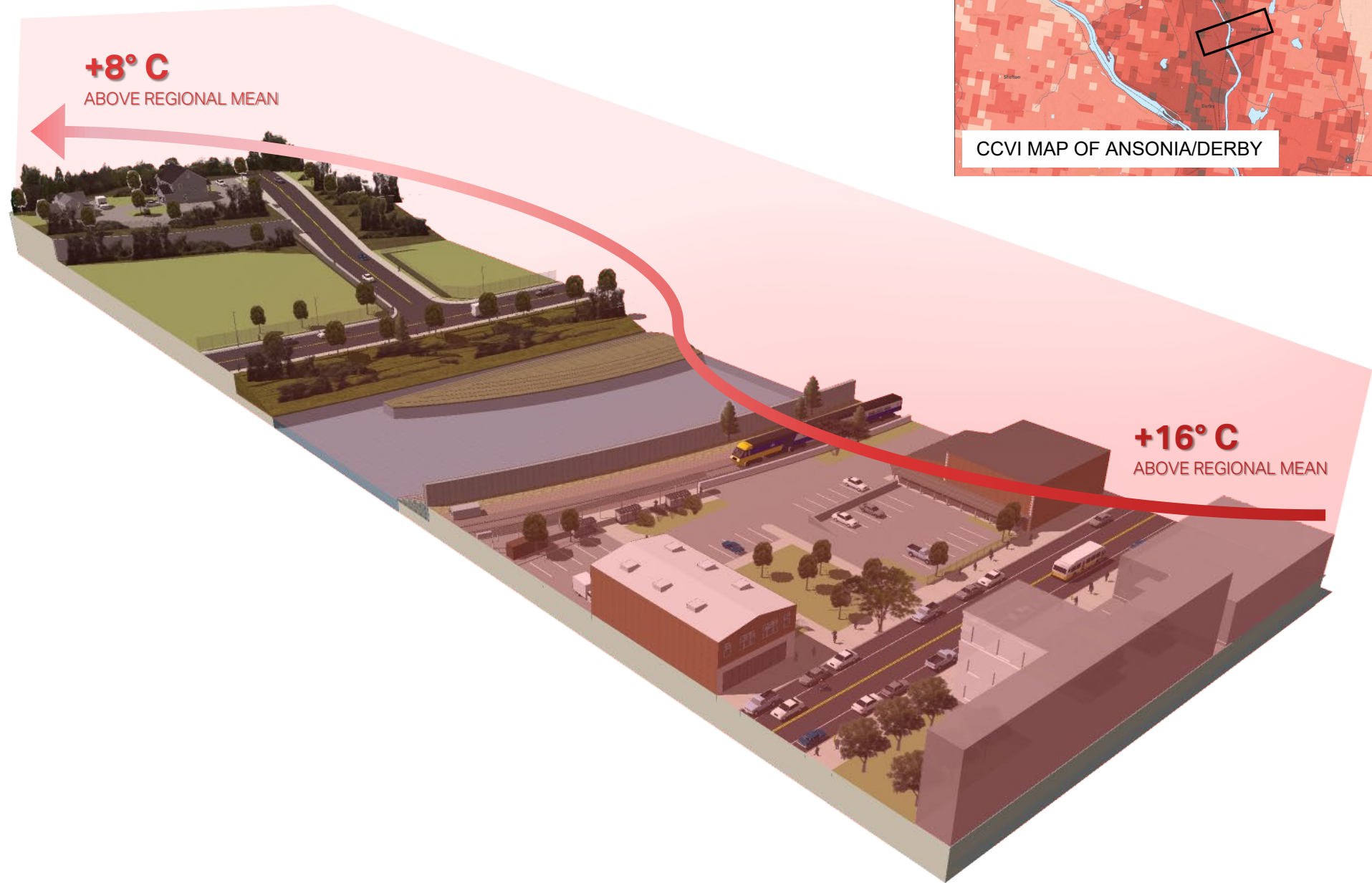


GBRC, MassGIS, UConn/CTDEEP, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



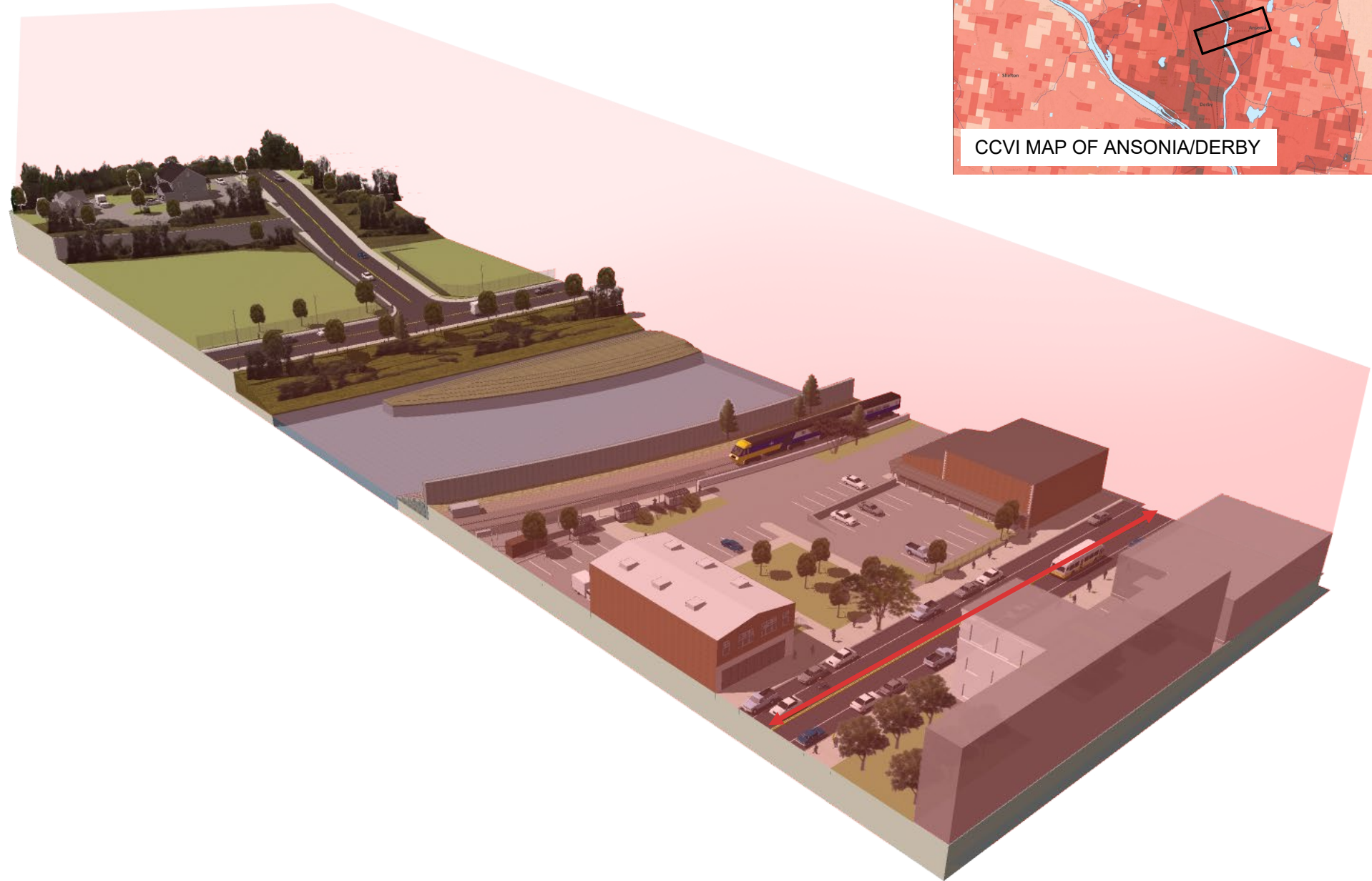
## What urban conditions contribute to rising temperatures in Ansonia?

- Temperature increase throughout Ansonia ranges from +16° east of the river and +8° west of the river



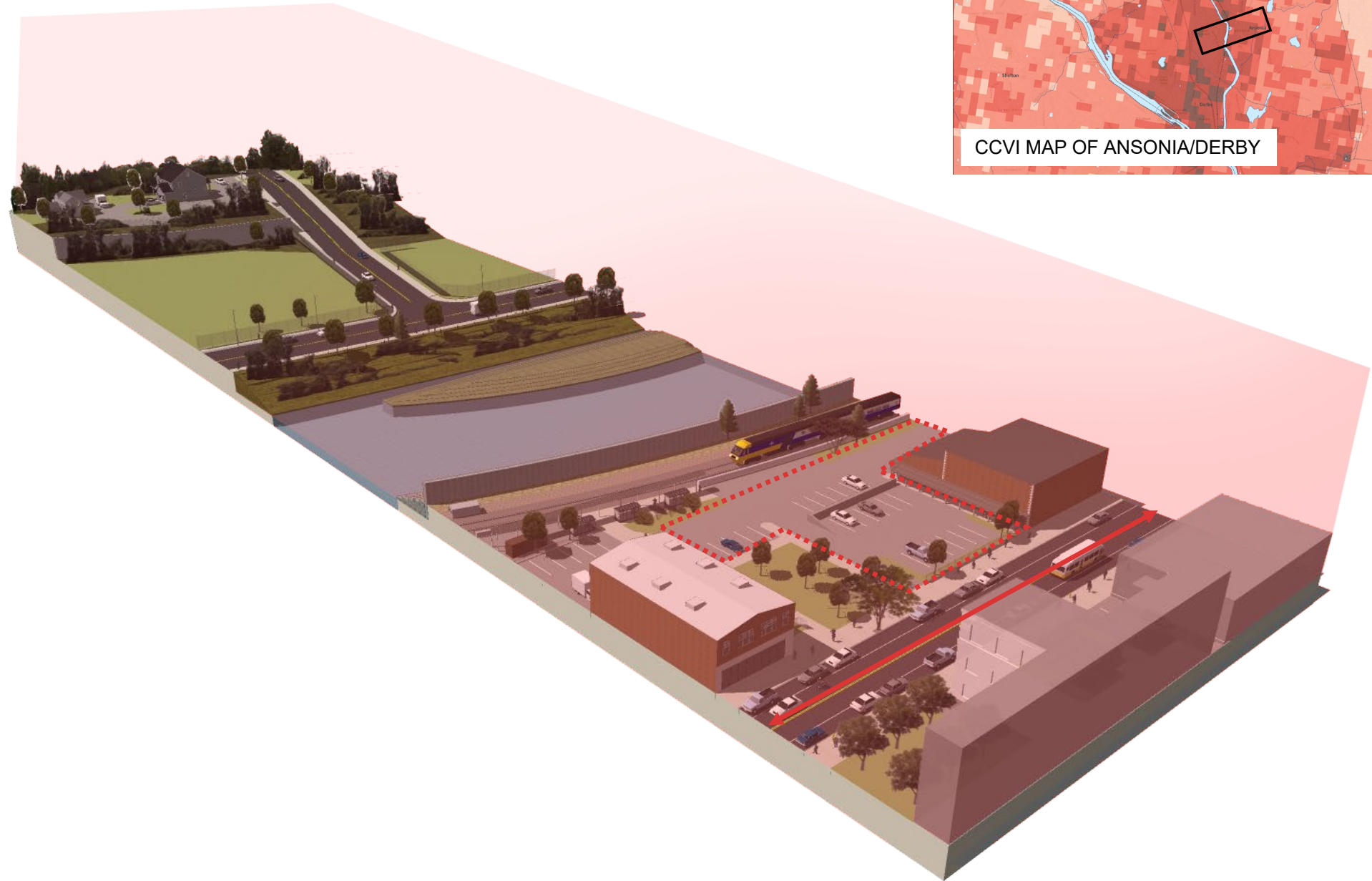
## HEAT RISK FACTORS

- Heavy vehicular traffic traps solar radiation



## HEAT RISK FACTORS

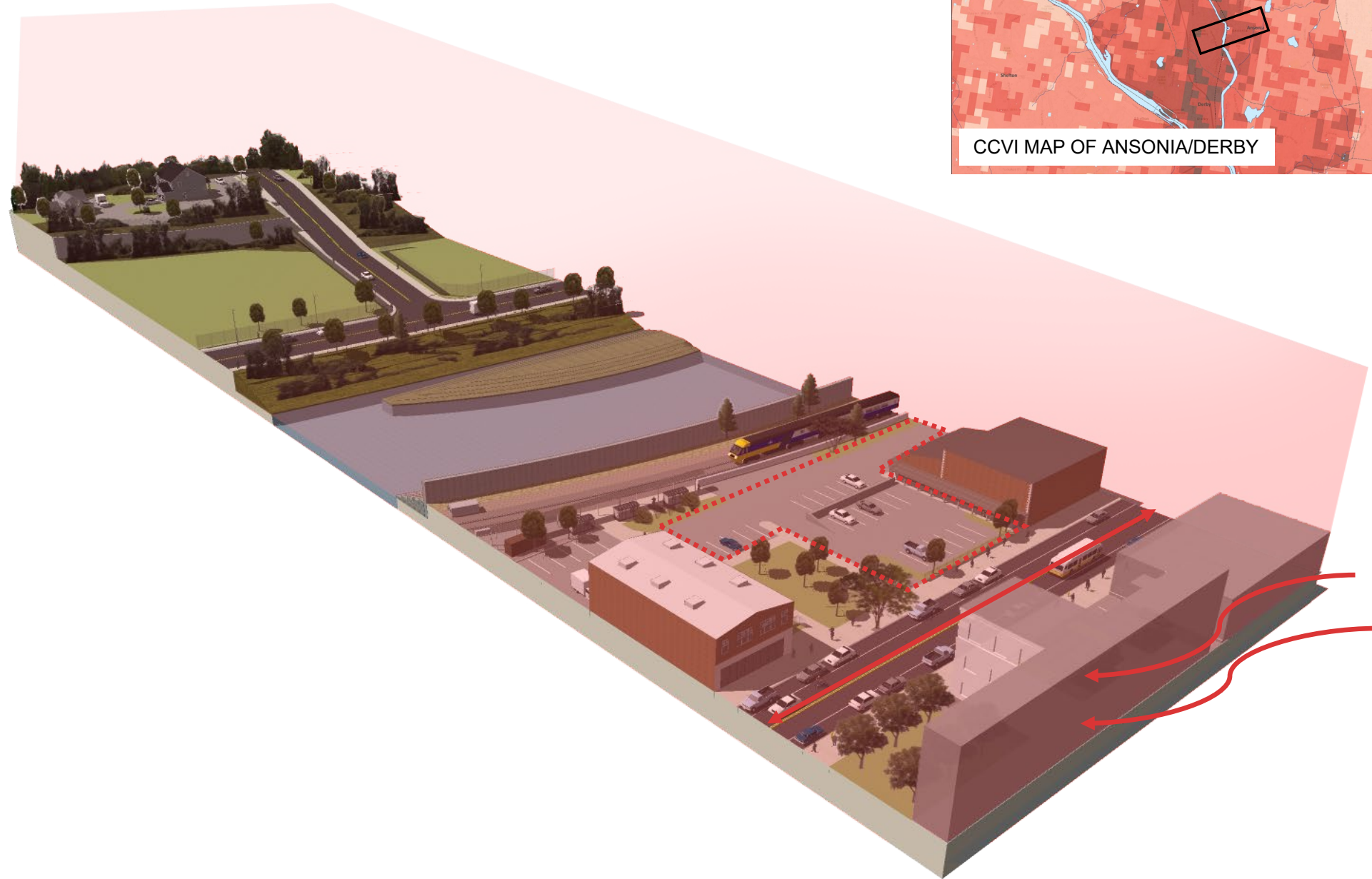
- Heavy vehicular traffic traps solar radiation
- Large blocks of impervious pavement & darker surface colors create a heat island effect





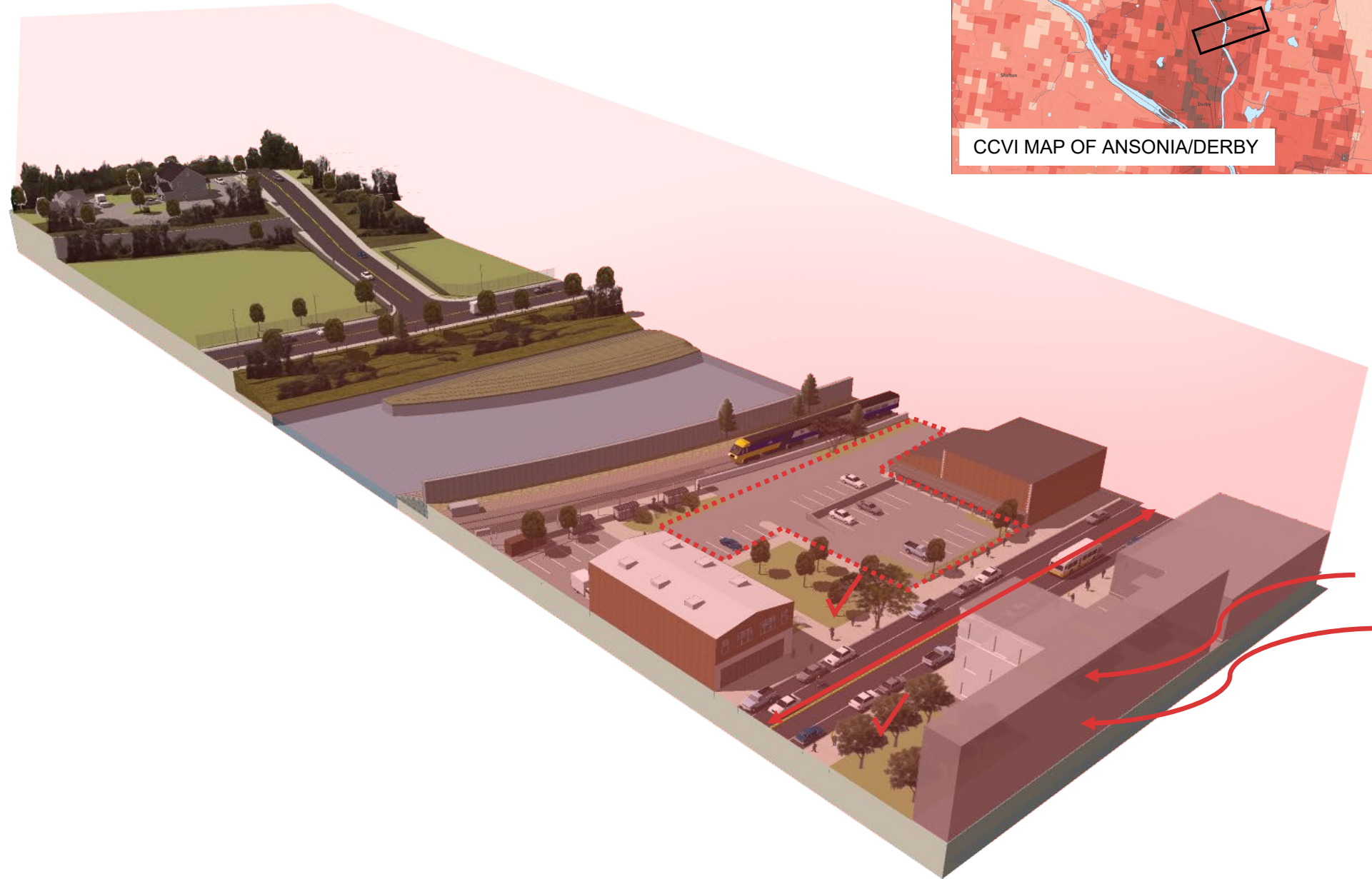
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- Heavy vehicular traffic traps solar radiation
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- Large buildings absorb heat & block out wind



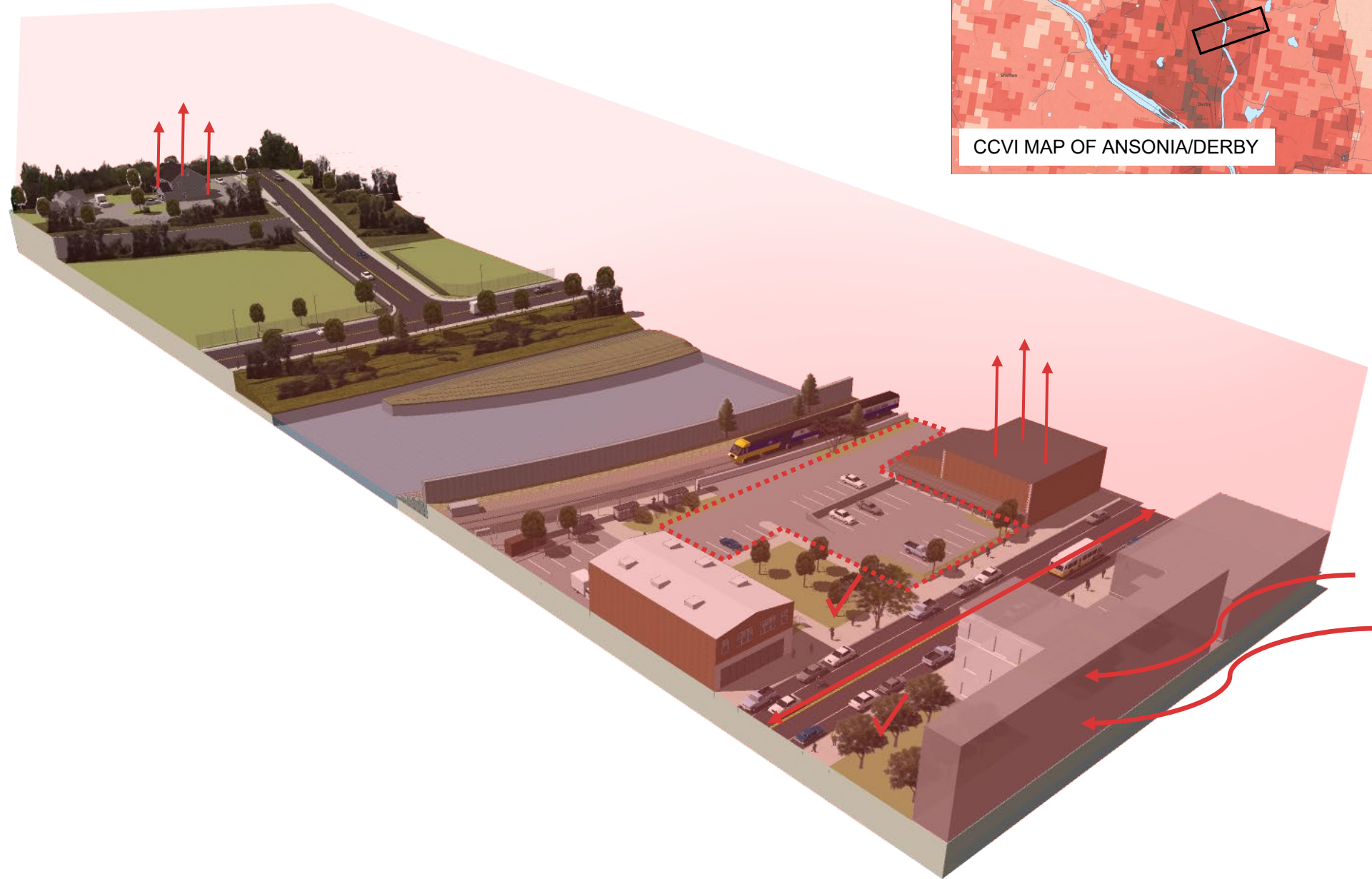
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- Heavy vehicular traffic traps solar radiation
- Large blocks of impervious pavement & darker surface colors create a heat island effect
- Large buildings absorb heat & block out wind
- Reduced tree canopy along street & lack of shade structures lessens heat relief



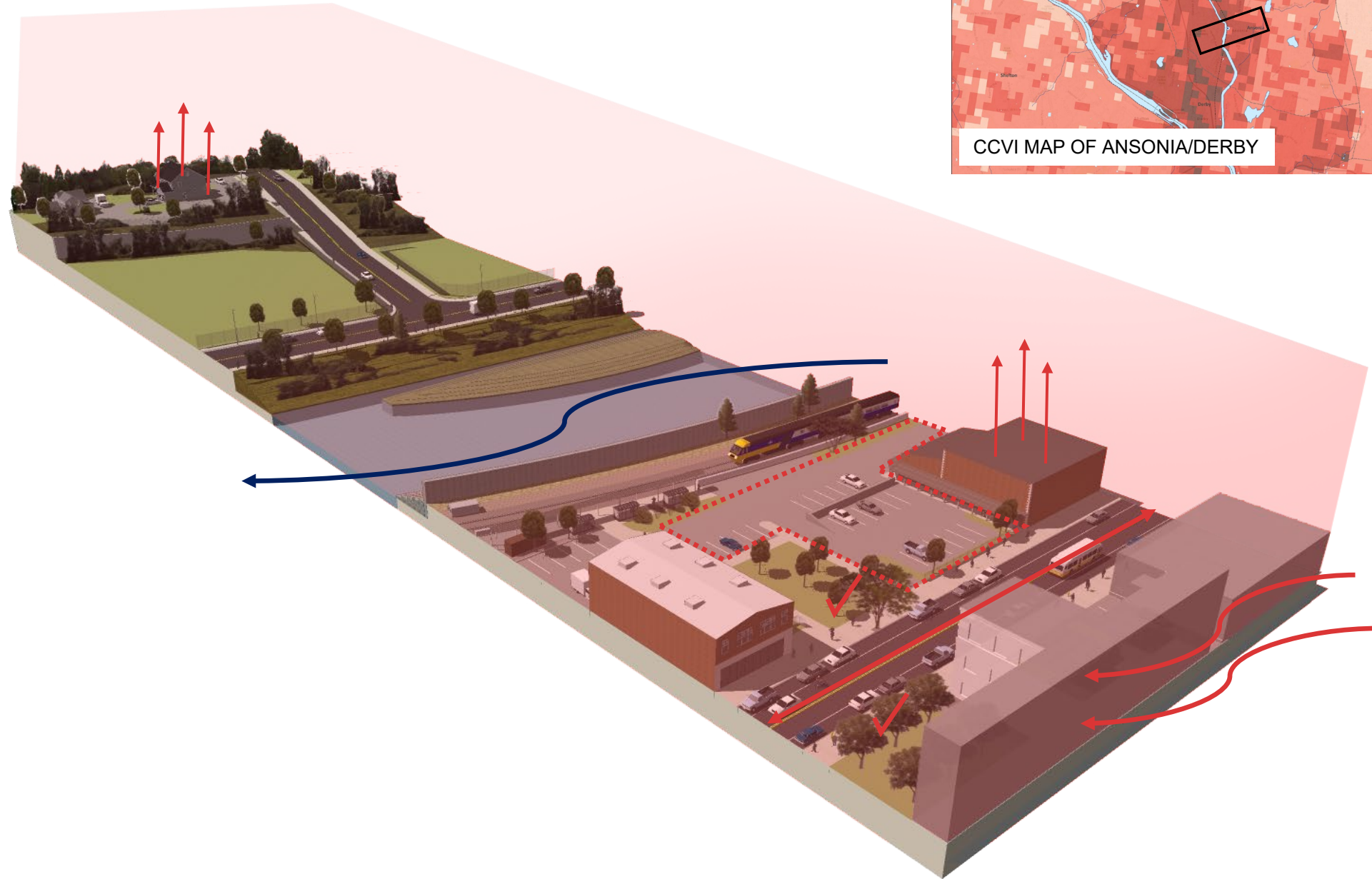
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- Increased atmospheric pollution VIA HVAC systems in commercial and residential areas



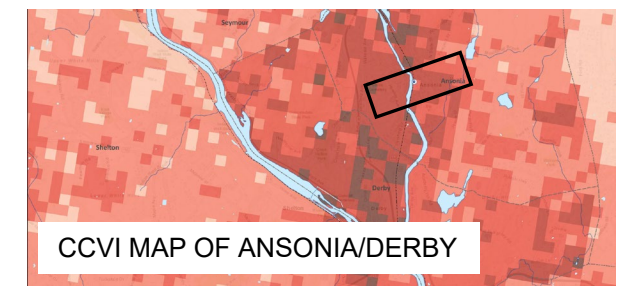
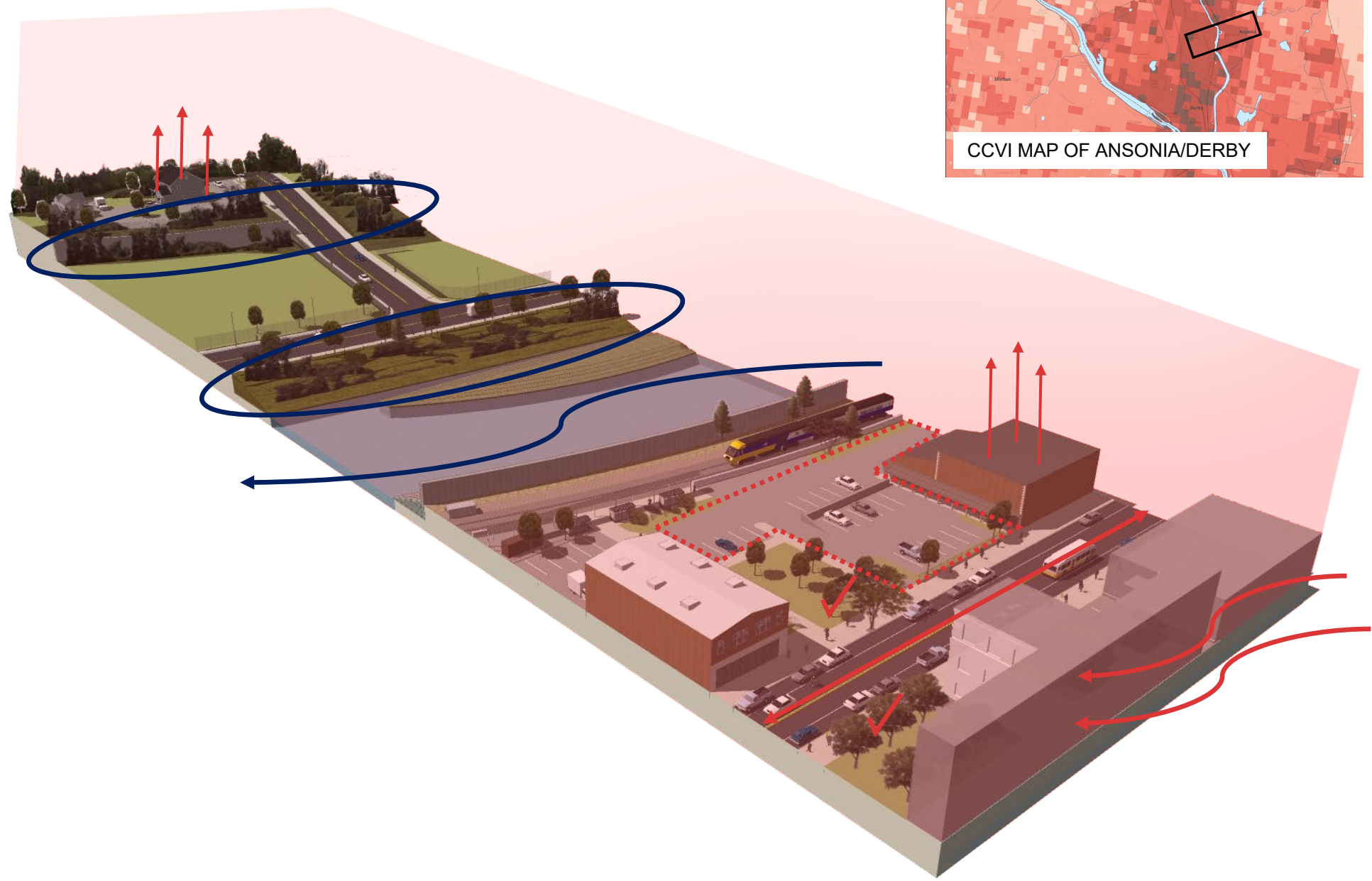
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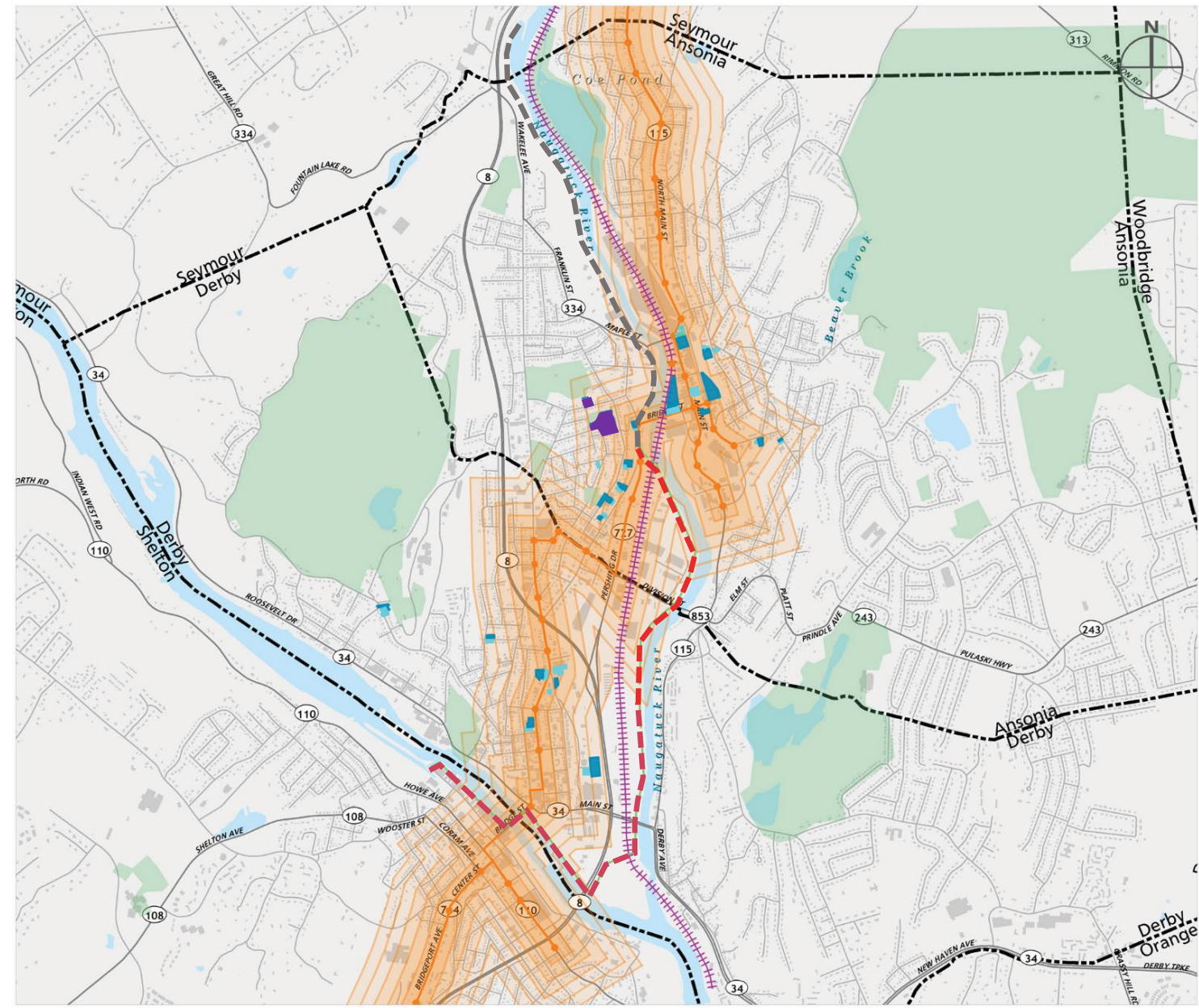
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- Water warms at a slower rate than land











## HEAT RISK FACTORS

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- Increased atmospheric pollution VIA HVAC systems in commercial and residential areas
- Water warms at a slower rate than land
- Increased green space & tree canopy





-  EXISTING COOLING CENTER
-  POTENTIAL COOLING CENTER
-  PARKING AREAS
-  BUS ROUTE & STOPS
-  250FT INTERVALS, 1250 FT MAX. REASONABLE WALKING DISTANCE
-  TRAIN ROUTE
-  BIKE PATH
-  BIKE PATHS IN DEVELOPMENT



NAME	AREA (sqft)	AREA RANKING	PARKING LOT AREA (sqft)	PARKING RATING	DISTANCE FROM NEAREST BUS STOP	BUS ROUTE RANKING	HEAT VULNERBILITY RANKING	CULTURAL NEUTRALITY RANKING	FINAL RANKING
Ansonia High School/Middle School	97326	5	46037	5	750	3	3	5	4.2
Ansonia Armory	14250	5	22042	5	0	5	4	5	4.8
Ansonia Arms Department	8981	4	103966	5	0	5	4	4	4.4
Senior Community Center (Ansonia Police Department)	24642	5	41054	5	0	5	4	3	4.4
Clinton AME Zion Church	1750	3	14406	4	250	5	3	3	3.6
St. Joseph's Parish	3944	3	3063	2	750	3	4	3	3
Three Saints Orthodox Church	6064	4	5553	3	250	5	3	3	3.6
The Boy's & Girls Club	4288	3	28497	5	250	5	3	5	4.2
Saint Peter & Saint Paul Ukrainian	8357	4	14549	4	0	5	3	3	3.8
Team, Inc. Early Care & Education Center	7257	4	15923	4	0	5	3	5	4.2
Liberty Hall	5290	4	0	1	1000	2	3	5	3
Macedonia Baptist Church	2313	3	9640	3	0	5	3	3	3.2
Ansonia Public Library	6669	4	0	1	500	4	4	5	3.6
City Hall	11171	5	95231	5	0	5	4	5	4.8
Derby Police Department	15138	5	68918	5	1250	1	5	3	3.8
Walnut Hill Community Church Valley	12125	5	9651	3	0	5	4	3	4
St. Mary St Michael School	15027	5	26348	5	0	5	4	5	4.8
Derby Public Library	4294	3	0	1	0	5	4	5	3.6
St. Mary's Church	9018	4	21827	5	0	5	5	3	4.4
Irving School	30781	5	11485	4	0	5	4	5	4.6

### Rational For Calculating Score:

Area: above 10,000sqft (5), 5,000sqft (4), 1,00sqft0 (3)

Parking Area: above 20,000sqft (5), 10,000sqft (4), 5,000sqft (3), 2,000sqft (2)

Public Transit Distance: 0-250sqft (5), 500sqft (4), 750sqft (3), 1000sqft (2), 12500+ (1)

Cultural Neutrality: Place of Worship/Police Station (3), Library/School/Community Center (5)

NAME	FINAL RANKING
Ansonia High School/Middle School	4.2
Ansonia Armory	4.8
Ansonia Arms Department	4.4
Senior Community Center (Ansonia Police Department)	4.4
Clinton AME Zion Church	3.6
St. Joseph's Parish	3
Three Saints Orthodox Church	3.6
The Boy's & Girls Club	4.2
Saint Peter & Saint Paul Ukrainian	3.8
Team, Inc. Early Care & Education Center	4.2
Liberty Hall	3
Macedonia Baptist Church	3.2
Ansonia Public Library	3.6
City Hall	4.8
Derby Police Department	3.8
Walnut Hill Community Church Valley	4
St. Mary St Michael School	4.8
Derby Public Library	3.6
St. Mary's Church	4.4
Irving School	4.6

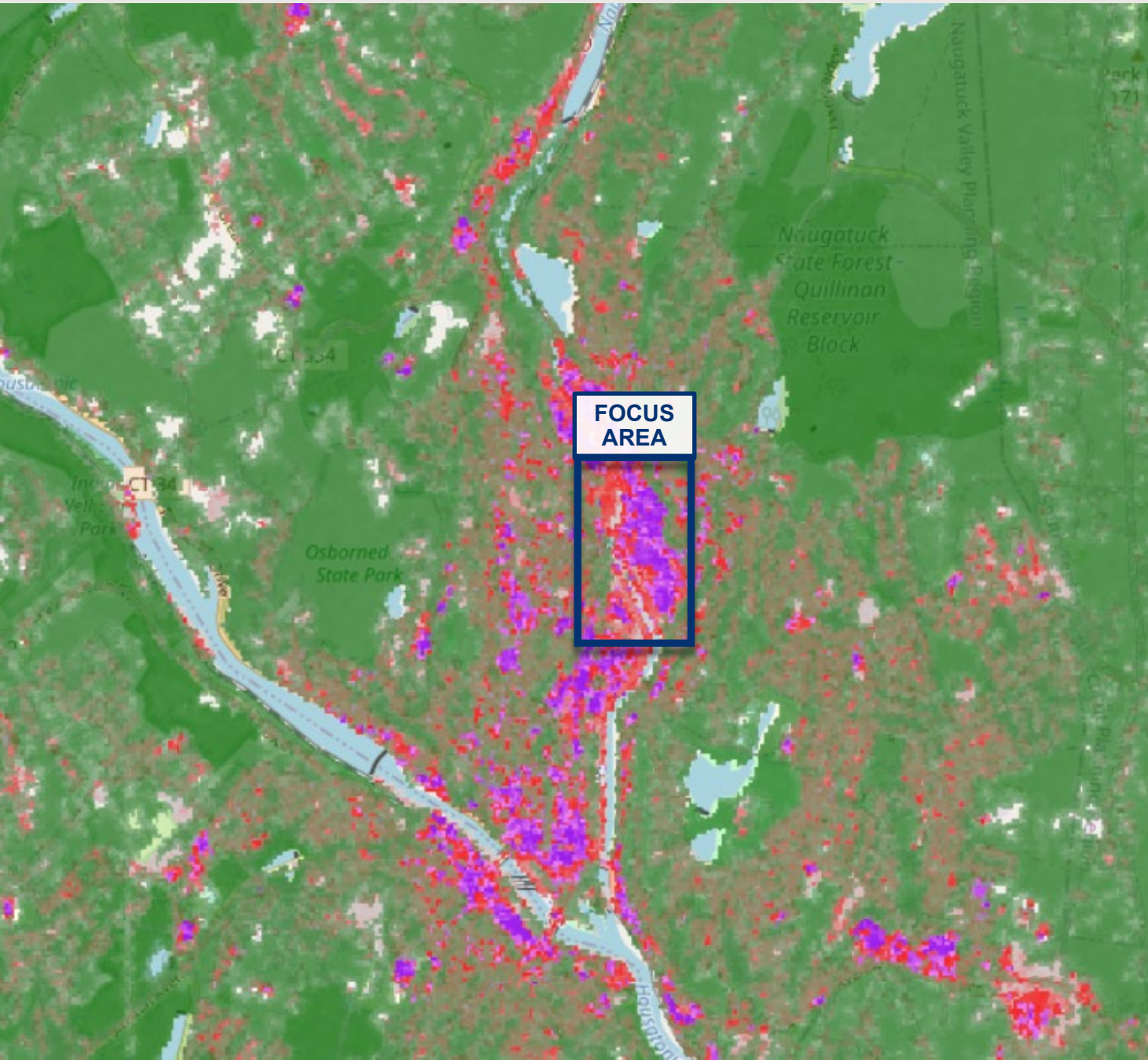
## Locations Ranking Over 4.5

- Ansonia Armory
- City Hall
- St. Mary St Michael School
- Irving School

## Locations Ranking Over 4.0

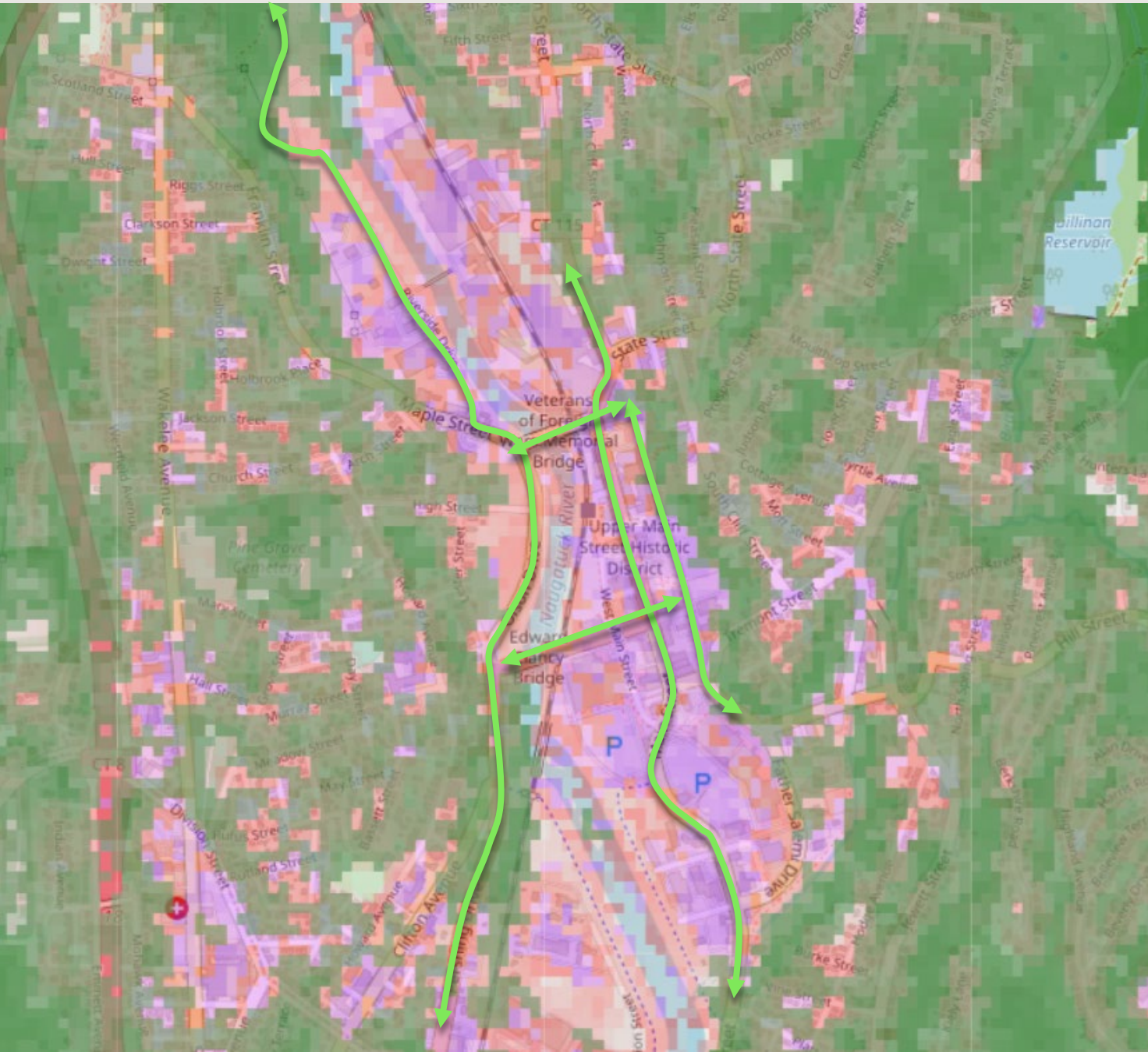
- Ansonia High School/Middle School (Existing Cooling Center Location)
- Ansonia Arms Department
- Ansonia Police Department (Existing Cooling Center Location)
- The Boy's & Girls Club
- St. Mary's Church





*\*Land cover classifications are from the MRLC NLCD 2011 (mrlc.gov) and locally collected high resolution maps*

# Tree Canopy & Impervious Surfaces | Density of Coverage



**Shade Canopy Covered**  
*Density Scale*



**Impervious Surfaces**  
*Density Scale*



**Proposed Green Corridors**

- Main Street
- East Main Street
- Pershing Drive/Olson Drive/Riverside Drive –  
*Naugatuck Greenway River Link*

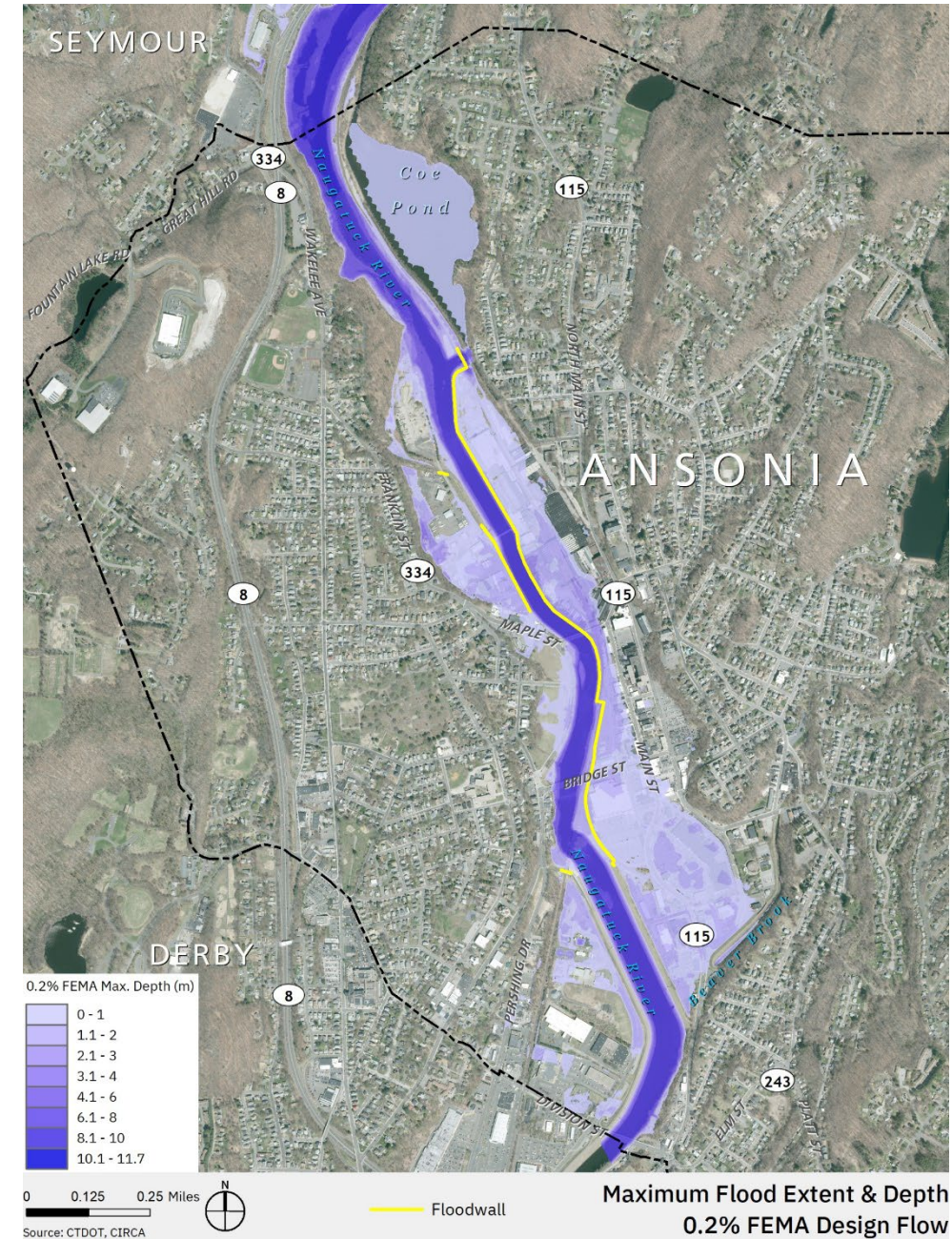
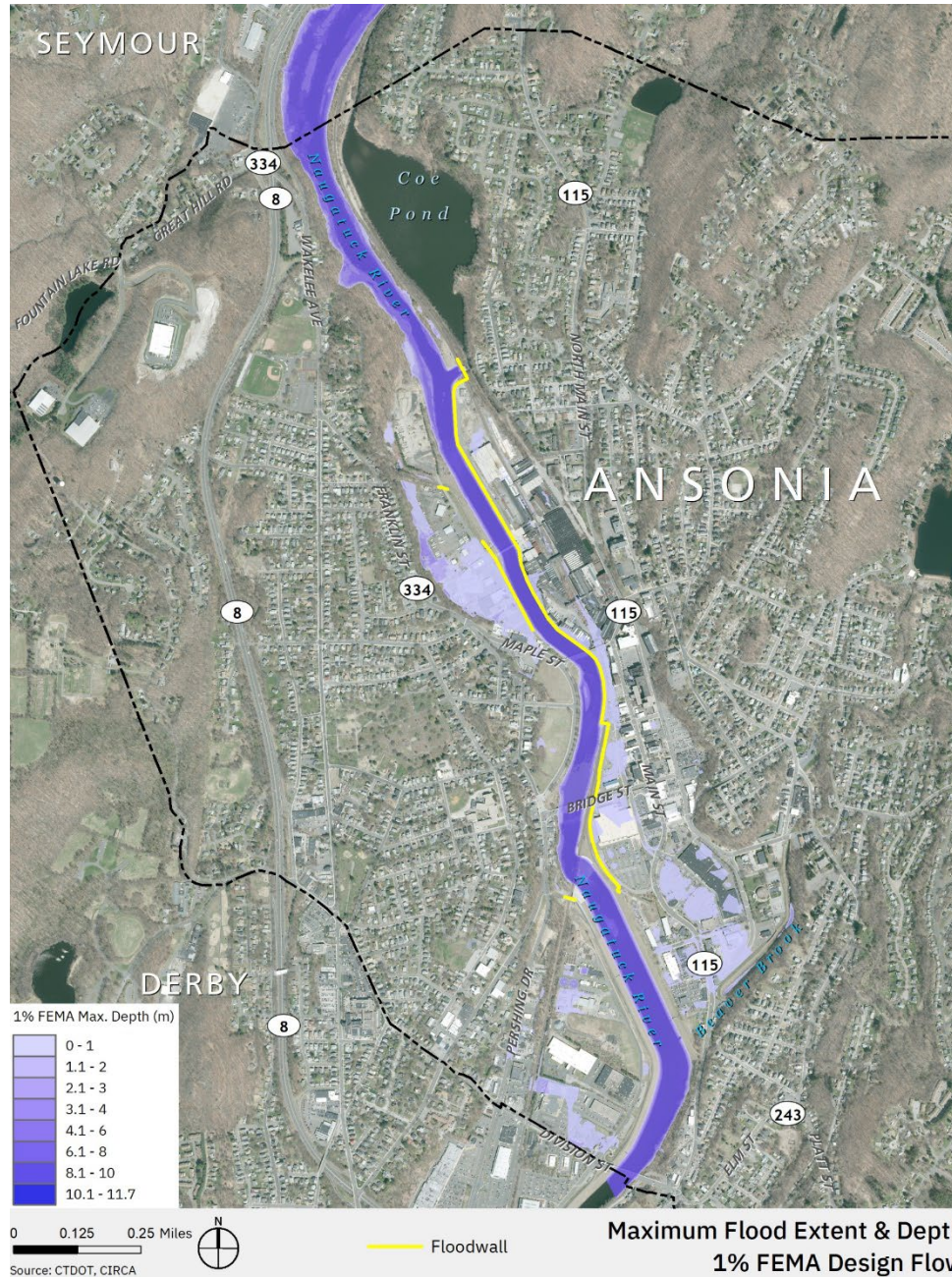
*\*Land cover classifications are from the MRLC NLCD 2011 (mrlc.gov) and locally collected high resolution maps*

## 100-Year Storm vs 500-Year Storm Risk

- Maps comparing 1% Storm event (100-Year Storm) to 0.2% Storm Event (500-Year Storm)

### Existing Storm Protection System is appropriate

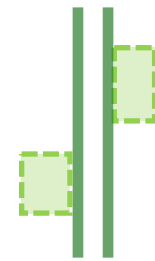
- This analysis revealed that the existing flood protection system will protect the city against future storm events, therefore we believe the existing storm protection system is appropriate



## **PART II:** Applied Strategies





## "KIT OF PARTS" APPLIED RESILIENCY STRATEGIES



### LINK

Link and enhance existing public parks through green infrastructure improvements and integration into green corridors

### INFRASTRUCTURE


-  Maintain existing flood protection system
-  Solar infrastructure and EV charging stations promotes green Ansonia



### ACCESSIBILITY

Bike path enhances accessibility and creates missing link in Naugatuck River Greenway path network

### ENGAGE

 Engaging with river's edge creates opportunity for new amenities, educational programming, and events





Planted bump-out and crossings for improved visibility and accessibility



### MULTI-USE

Multi-use spaces in ROW & flexible public parks encourage vibrant and resilient downtown

 Outlooks embrace Ansonia's relationship to the Naugatuck River

 Signage for public amenities & education



# GREEN CORRIDOR STUDY ZONES

MAIN ST @ ANSONIA  
TRAIN STATION



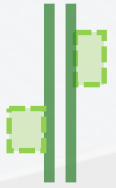
## Existing Conditions



## Resilient Strategies

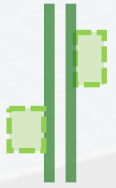






**Green Buffer**  
visually connects  
existing green spaces  
and allows for  
additional street trees





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**Planted Bump-Out**  
And crossing for  
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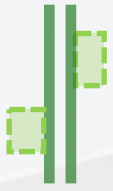




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**Permeable Paving**  
To help absorb  
stormwater run-off  
during flooding  
events



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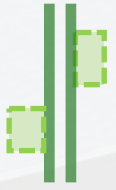
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**Signage**  
Emphasizing  
resiliency awareness  
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Emphasizing  
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**Solar Infrastructure**  
EV Charging Stations  
make electric vehicles  
more accessible to  
public



# GREEN CORRIDOR STUDY ZONES

EAST MAIN ST @ ANSONIA CITY  
HALL & VETERANS' MEMORIAL PARK



## Existing Conditions



Resilient Strategies

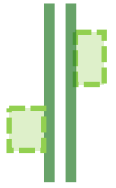






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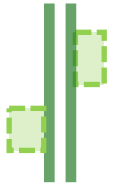


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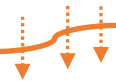




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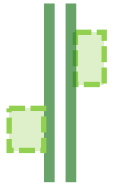


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**Rain Gardens in  
Public Park**  
Or "bioretention beds"  
help absorb stormwater  
run-off

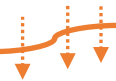




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**Rain Gardens in  
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**Shade Structures in  
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Provide additional  
cooling and creates  
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EV Charging Stations  
make electric vehicles  
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public





# GREEN CORRIDOR STUDY ZONES

OLSON DR @ NOLAN FIELD SPORTS CENTER





## Existing Conditions





Nolan Field with Greenway Connection



**Green Buffer**  
Preserve existing  
mature trees and  
create planted buffer





**Green Buffer**  
Preserve existing  
mature trees and  
create planted buffer



**Bike Path**  
path enhances  
accessibility and  
creates missing link in  
Naugatuck River  
Greenway path network





**Green Buffer**  
Preserve existing mature trees and create planted buffer



**Bike Path**  
path enhances accessibility and creates missing link in Naugatuck River Greenway path network



**Permeable Paving**  
Applied to new parking areas





**Green Buffer**  
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**Bike Path**  
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**Permeable Paving**  
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**Flood Barrier Awareness**  
Educate public on history of the flood barrier





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**Outlooks**  
Outlook embraces Ansonia's relationship to the Naugatuck River





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**Bike Path**  
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**Permeable Paving**  
Applied to new parking areas



**Flood Barrier Awareness**  
Educate public on history of the flood barrier



**Outlooks**  
Outlook embraces Ansonia's relationship to the Naugatuck River



**Engage**  
Ramp to lower ground creates opportunity for educational programming, water sports, and events





# ROUTE 8 CONNECTION

RIVERSIDE DRIVE CONNECTION TO  
DOWNTOWN ANSONIA





## ROUTE 8 CONNECTION KEY EVACUATION CORRIDOR

Route 8



Existing roads on route



Proposed Roadway Construction



Option 1:  
 Proposed Bike Path/Greenway Link  
*\*Following roadway construction*



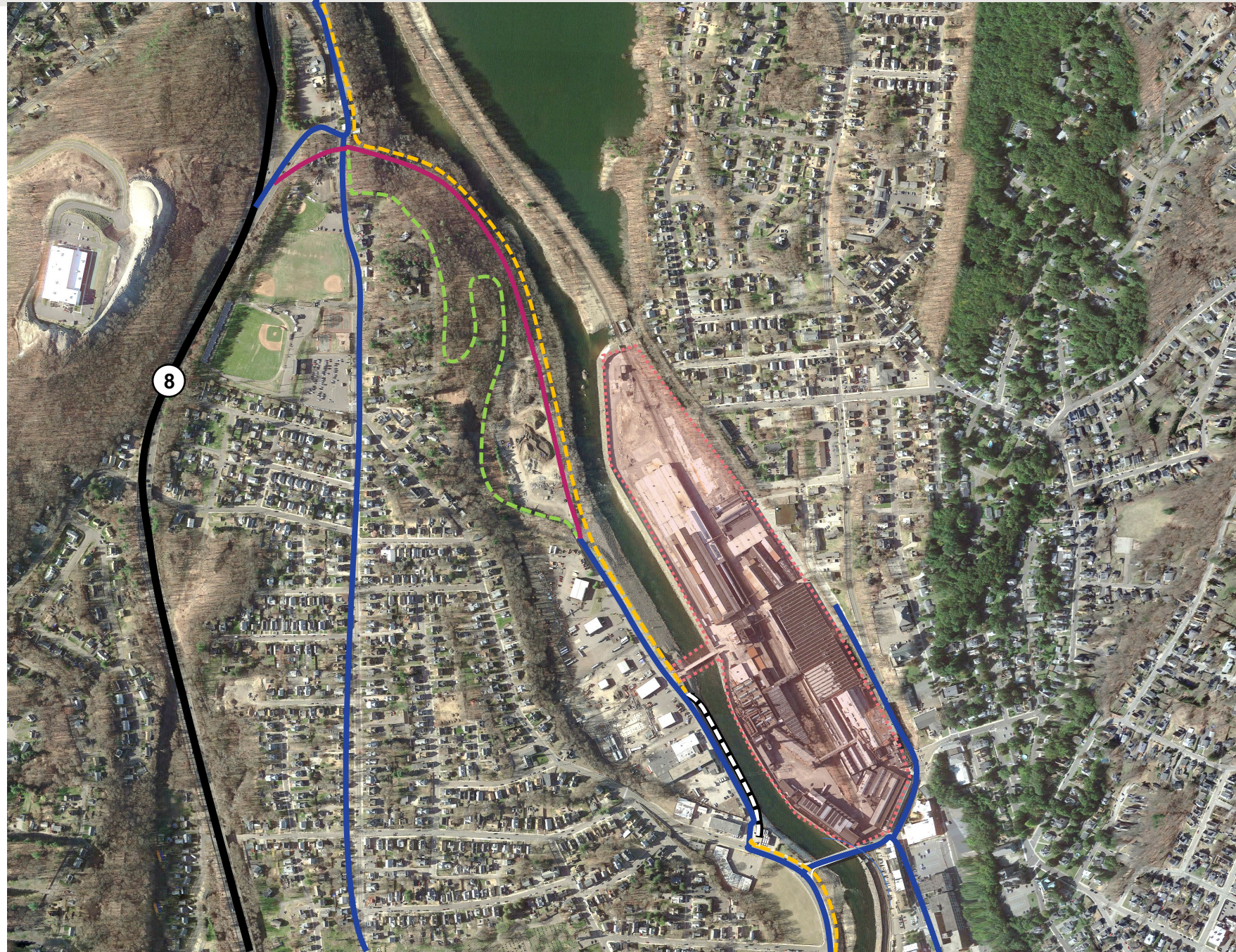
Option 2:  
 Proposed Bike Path/Greenway Link  
*\*Referenced: Naugatuck River Greenway Routing Study, 2023*



Bike Path unavailable and marked on main road



Ansonia Copper & Brass Mill Site Redevelopment



Existing Conditions



Route 8 Connection



To Route 8  
Connection

To Copper and Brass Mill &  
Downtown Ansonia

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Or "bioretention beds"  
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**Signage**  
Emphasizing  
resiliency awareness  
and public amenities

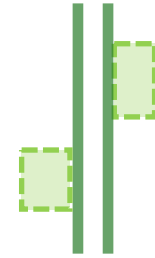


## **PART III:** Creating a "Kit of Parts"





## "KIT OF PARTS" APPLIED RESILIENCY STRATEGIES



### LINK

Link and enhance existing public parks through green infrastructure improvements and integration into green corridors



### ACCESSIBILITY

Bike path enhances accessibility and creates missing link in Naugatuck River Greenway path network



Planted bump-out and crossings for improved visibility and accessibility



### MULTI-USE

Multi-use spaces in ROW & flexible public parks encourage vibrant and resilient downtown

### INFRASTRUCTURE



Maintain existing flood protection system



Solar infrastructure and EV charging stations promotes green Ansonia

### ENGAGE



Engaging with river's edge creates opportunity for new amenities, educational programming, and events



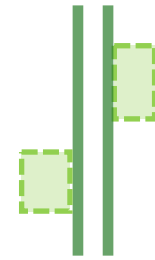
Outlooks embrace Ansonia's relationship to the Naugatuck River



Signage for public amenities & education



## "KIT OF PARTS" APPLIED RESILIENCY STRATEGIES



### LINK

Link and enhance existing public parks through green infrastructure improvements and integration into green corridors



### ACCESSIBILITY

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### MULTI-USE

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# Participating in Zoom



## Option 1:

- Raise your Zoom hand
- To raise your hand, click "Participants" then "Raise hand"
- On a telephone, press \*9 to raise your hand
- A member of the Project Team will say your name and ask you to unmute so that you can state your question or comment

After you speak, a member of the Project Team will lower your hand and you will once again be muted to allow the team to respond and to allow as many attendees as possible the opportunity to participate.



Q&A

## Option 2:

- Use the Zoom Q&A feature
- Type your questions in at any point during the meeting



**What do you think makes a climate resilient community?**

**How could these resiliency strategies improve connections for Ansonia?**

**What other strategies could be impactful for Ansonia?**

**What should be the top priorities?**



## Moving Forward:

- Incorporate comments and further develop resilient strategies with public feedback
- Schedule and prepare 2<sup>nd</sup>, virtual community workshop
- Prepare existing conditions summary