

Resilient Ansonia

May, 2023





HEAT RISK & COOLING CENTER

TREE CAMOPY AND IMPERVIOUS SURFACES

RESILIENCY CASE STUDIES

ROUTE 8 CONNECTION ANALYSIS

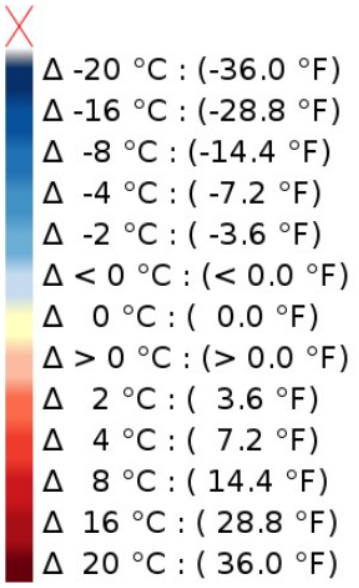
APPLIED KIT OF PARTS



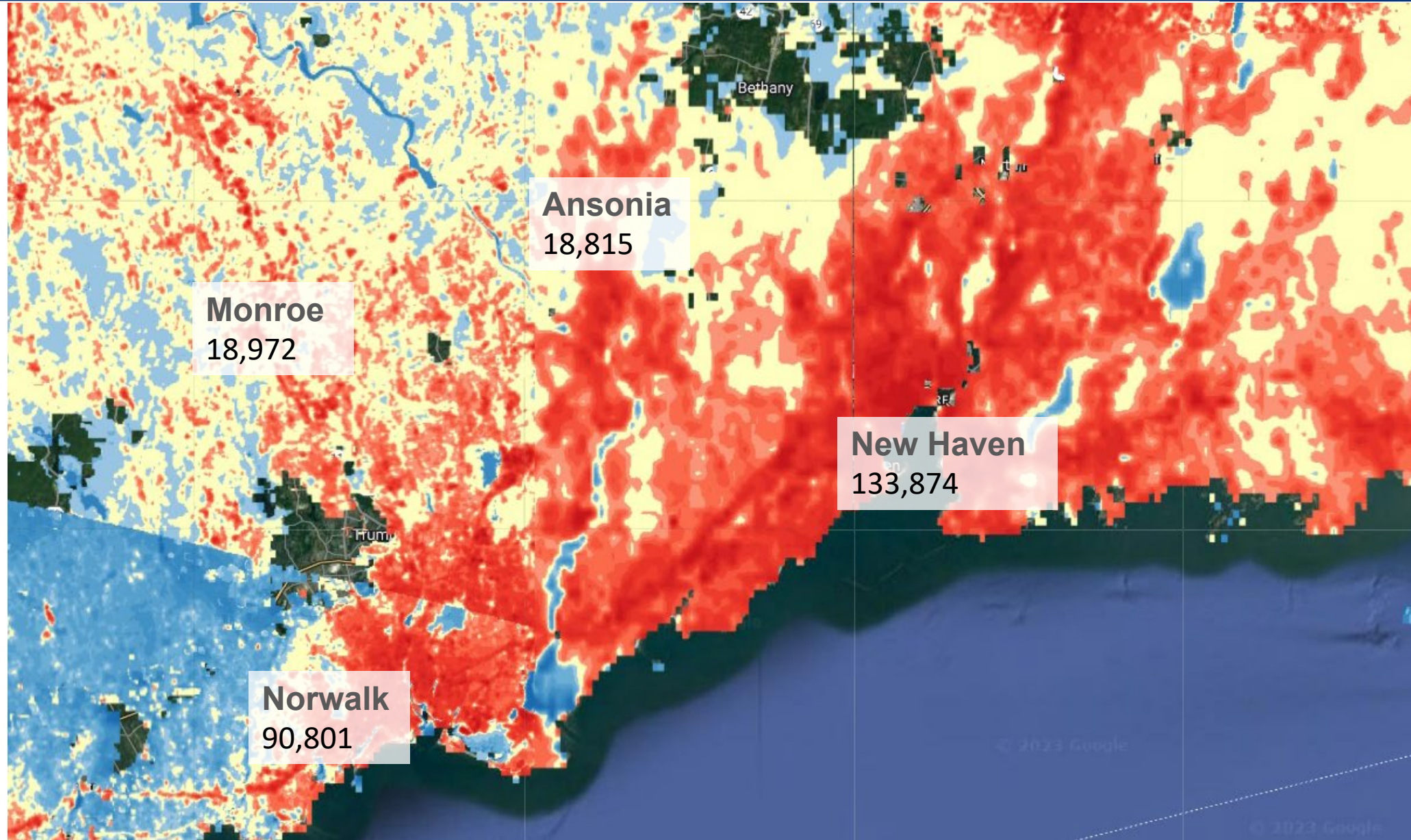
HEAT

REGIONAL TRENDS

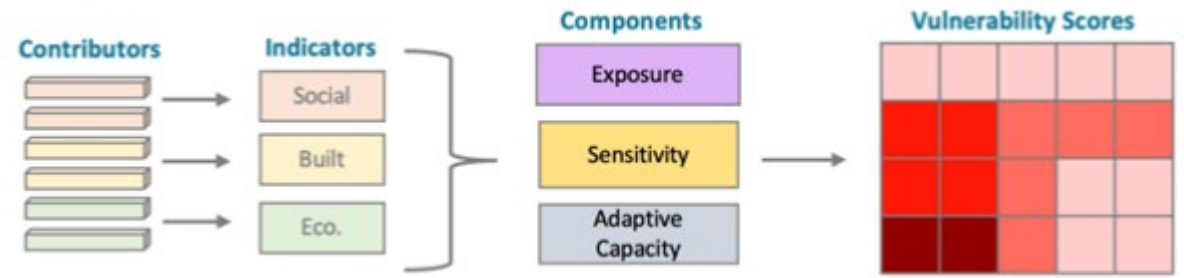
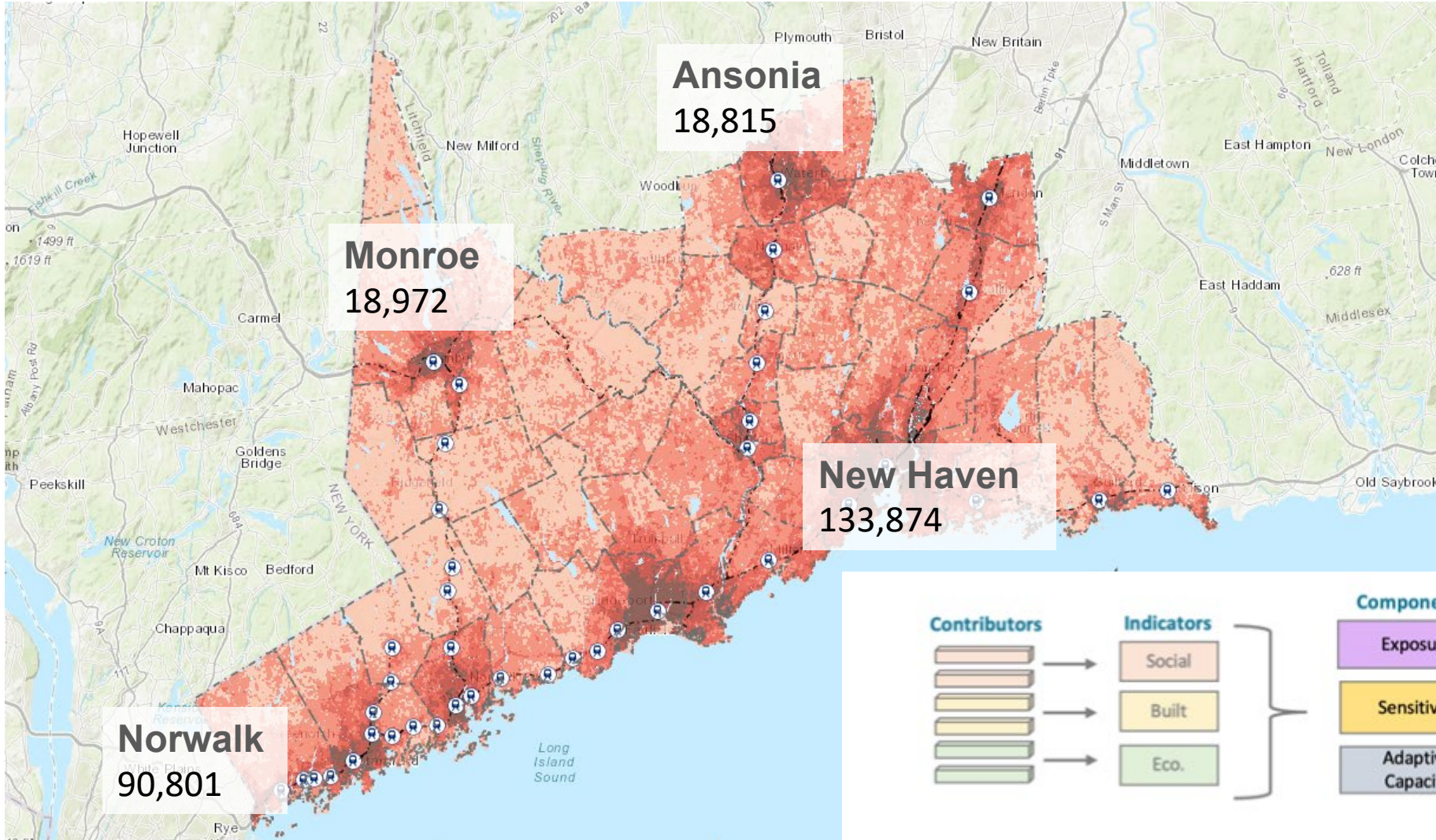
Heat Risk: Land Surface Temperature



● Temperature increase compared with population count

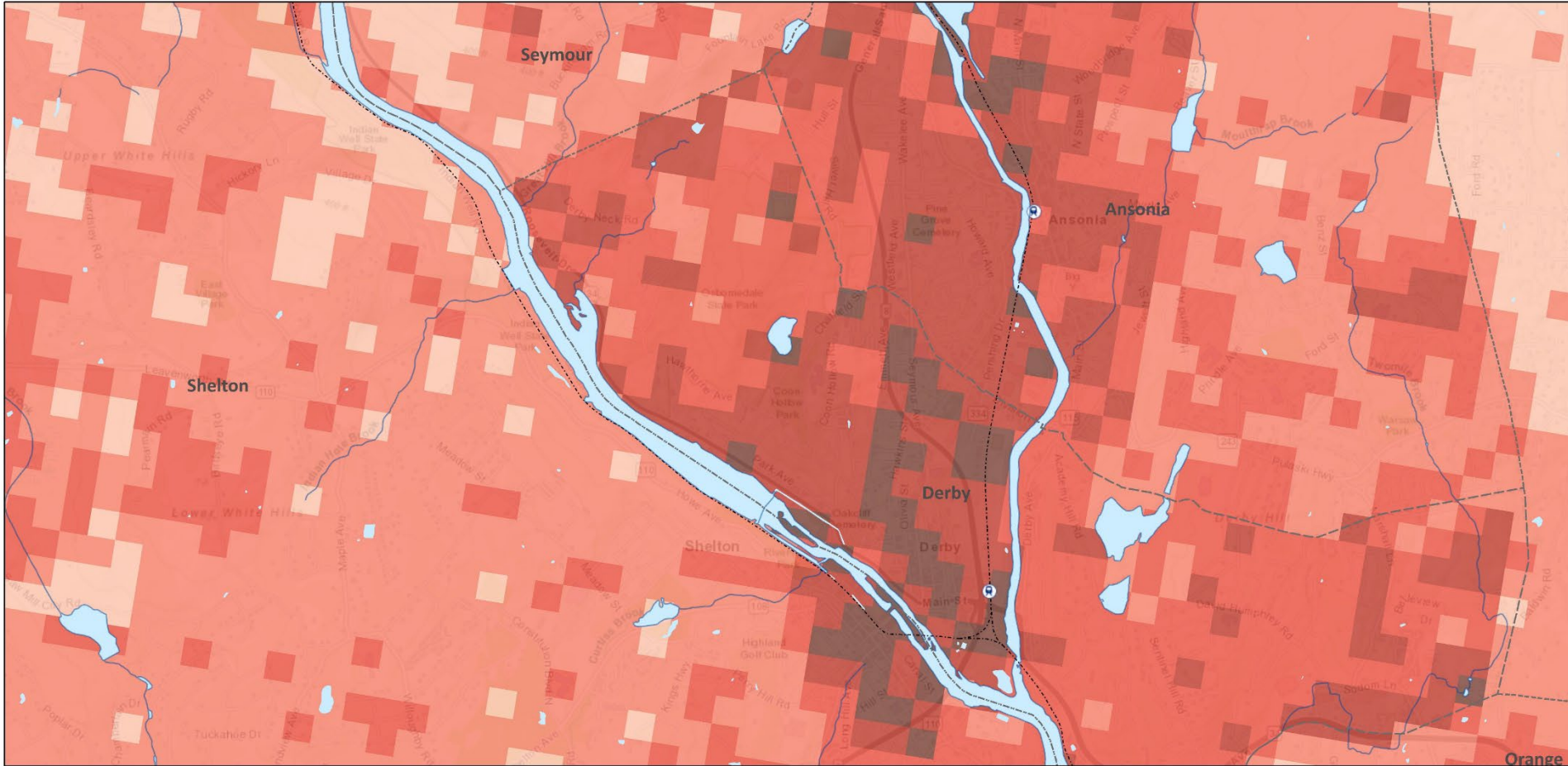


Heat Risk: CCVI – Climate Change Vulnerability Score


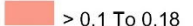
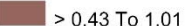



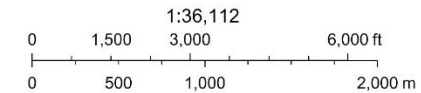
Heat Risk: CCVI – Climate Change Vulnerability Score

ArcGIS Web Map



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-  Railroad Stations
-  > 0.1 To 0.18
-  > 0.28 To 0.43
- Heat Vulnerability**
-  > 0.18 To 0.28
-  > 0.43 To 1.01
-  -0.01 To 0.1

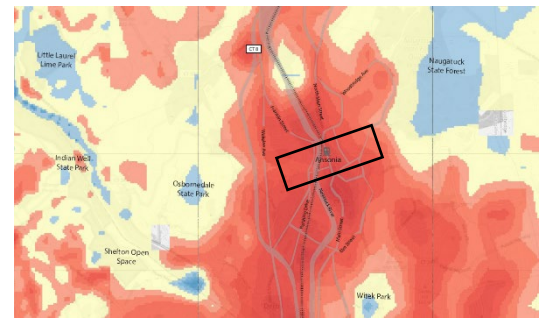
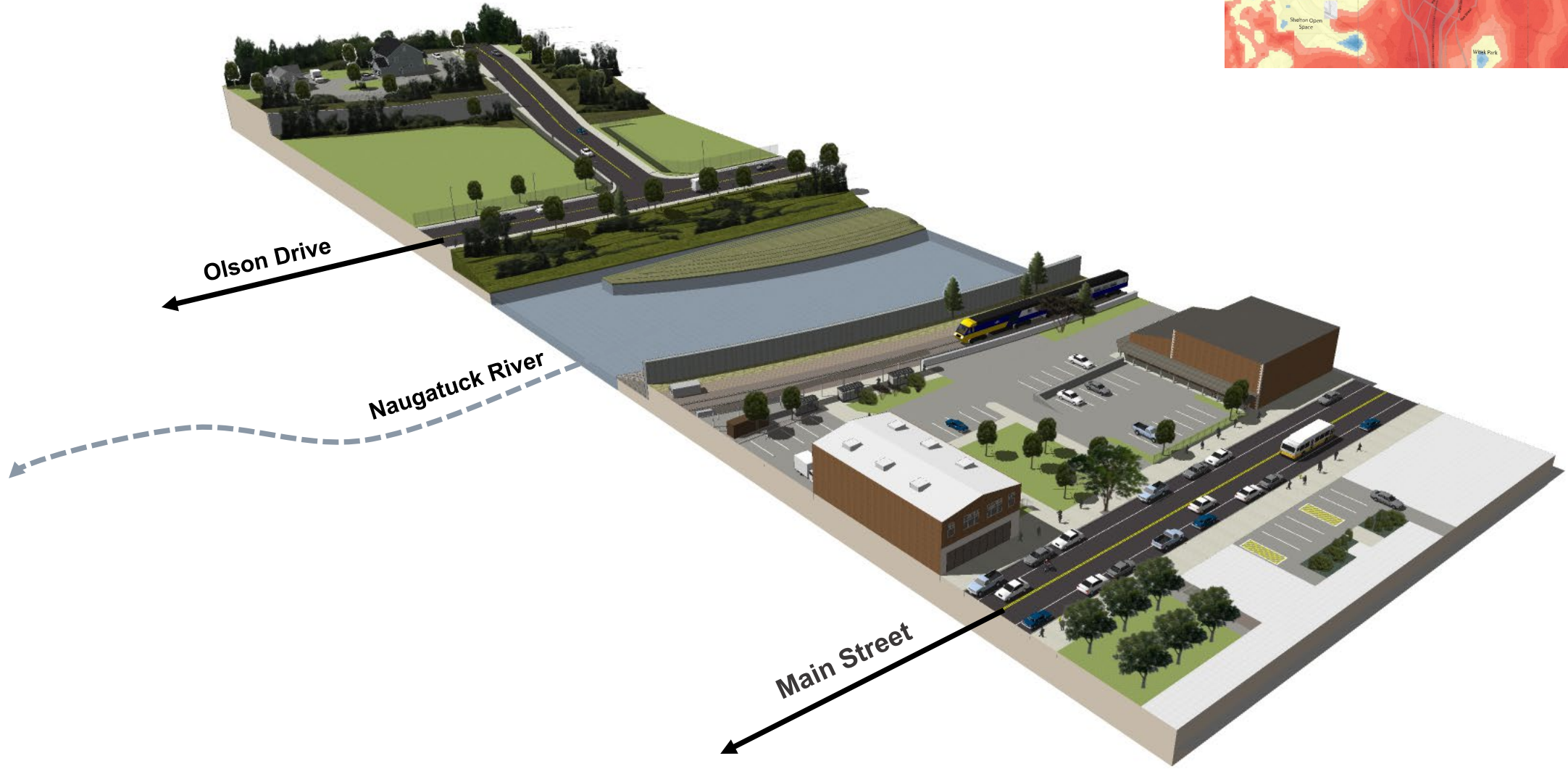


GBRC, MassGIS, UConn/CTDEEP, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



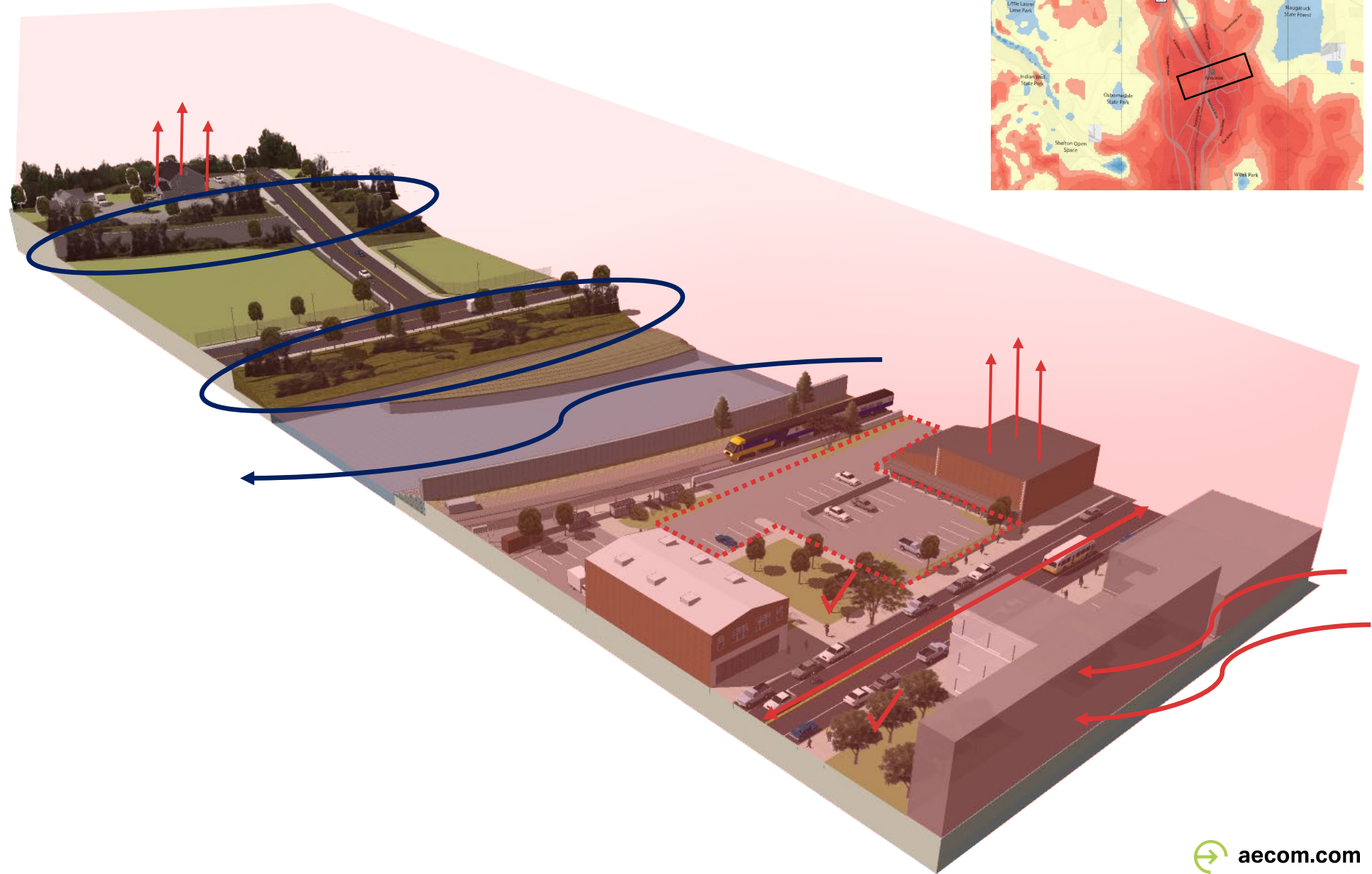
HEAT

RISK ANALYSIS IN
DOWNTOWN ANSONIA



HEAT RISK FACTORS

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

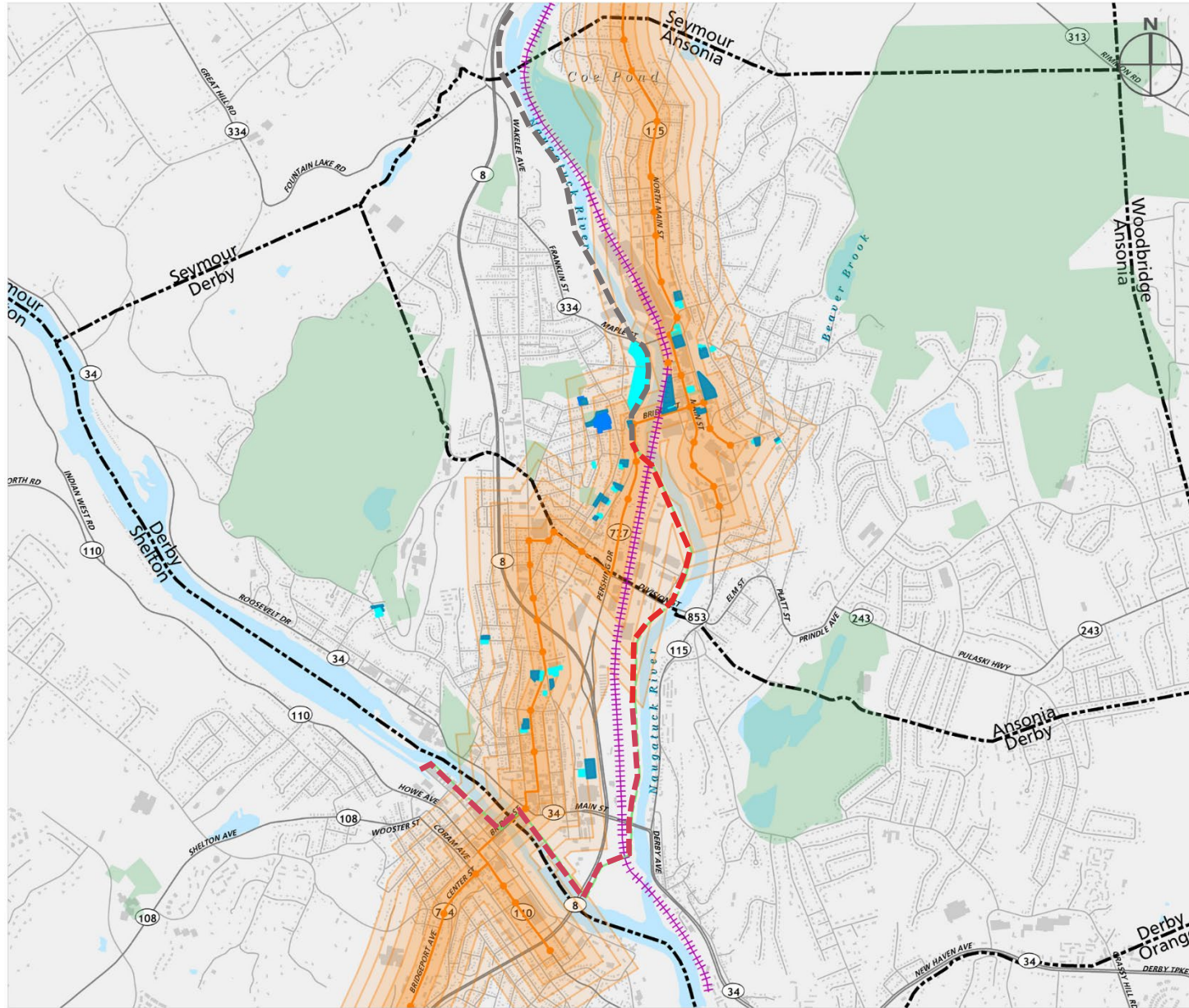




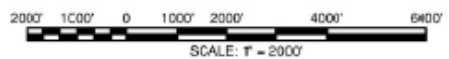
HEAT

COOLING CENTER ANALYSIS FOR ANSONIA/DERBY

Cooling Center Analysis



- 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



Cooling Center Analysis

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)



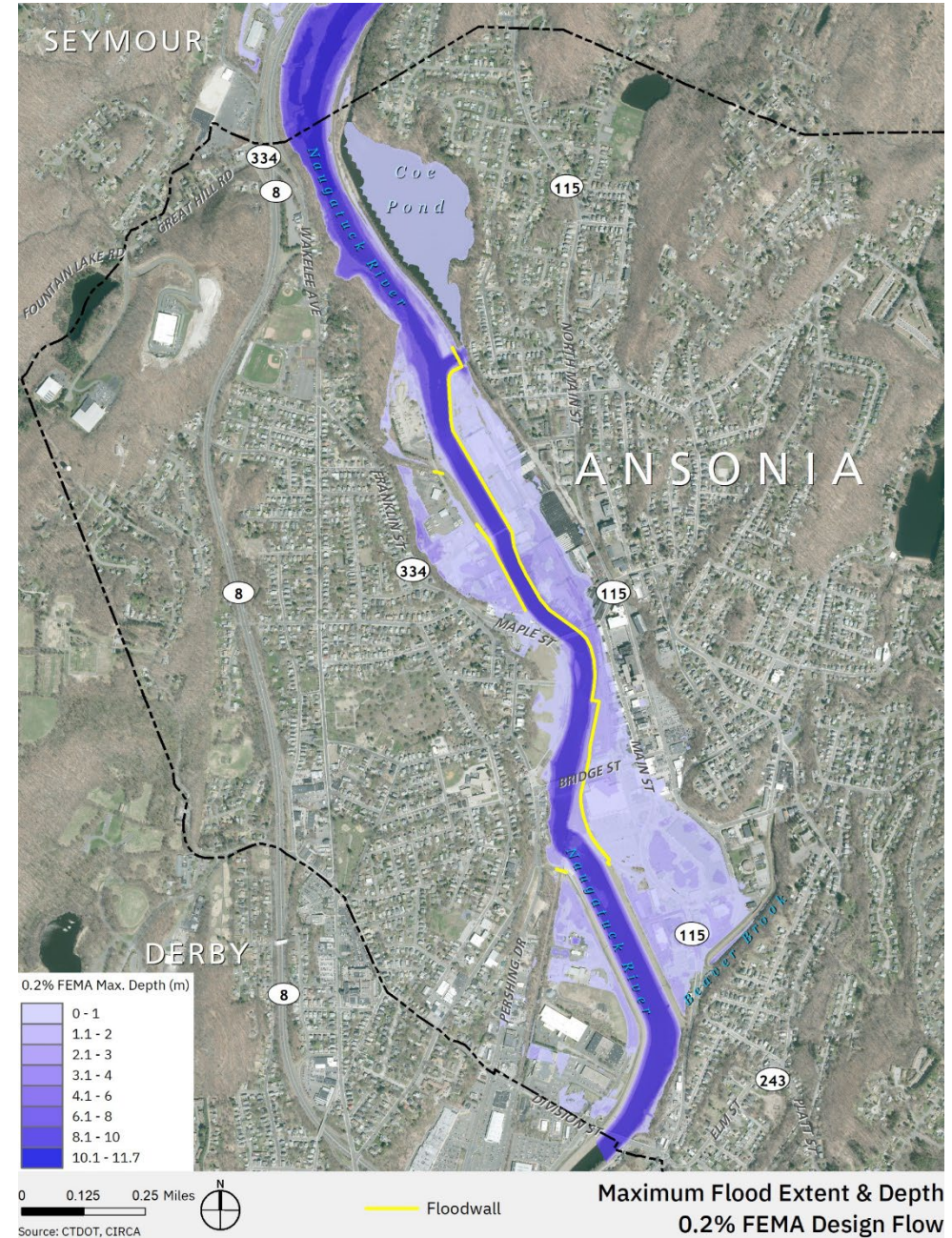
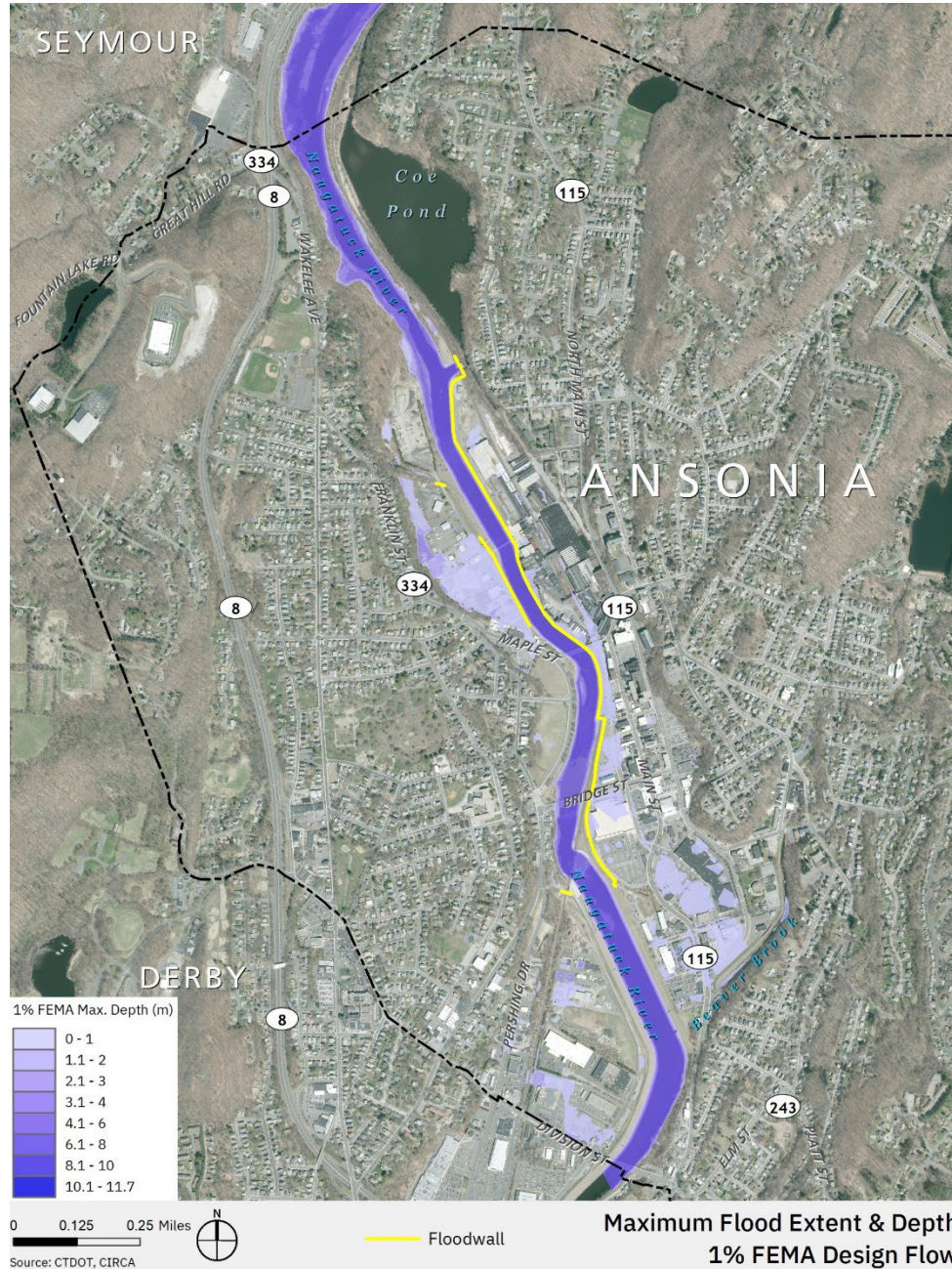
FLOOD

FLOOD RISK & ANALYSIS OF
HURRICANE IRENE

Flood Protection System Analysis

1% vs 0.2% STORM RISK

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

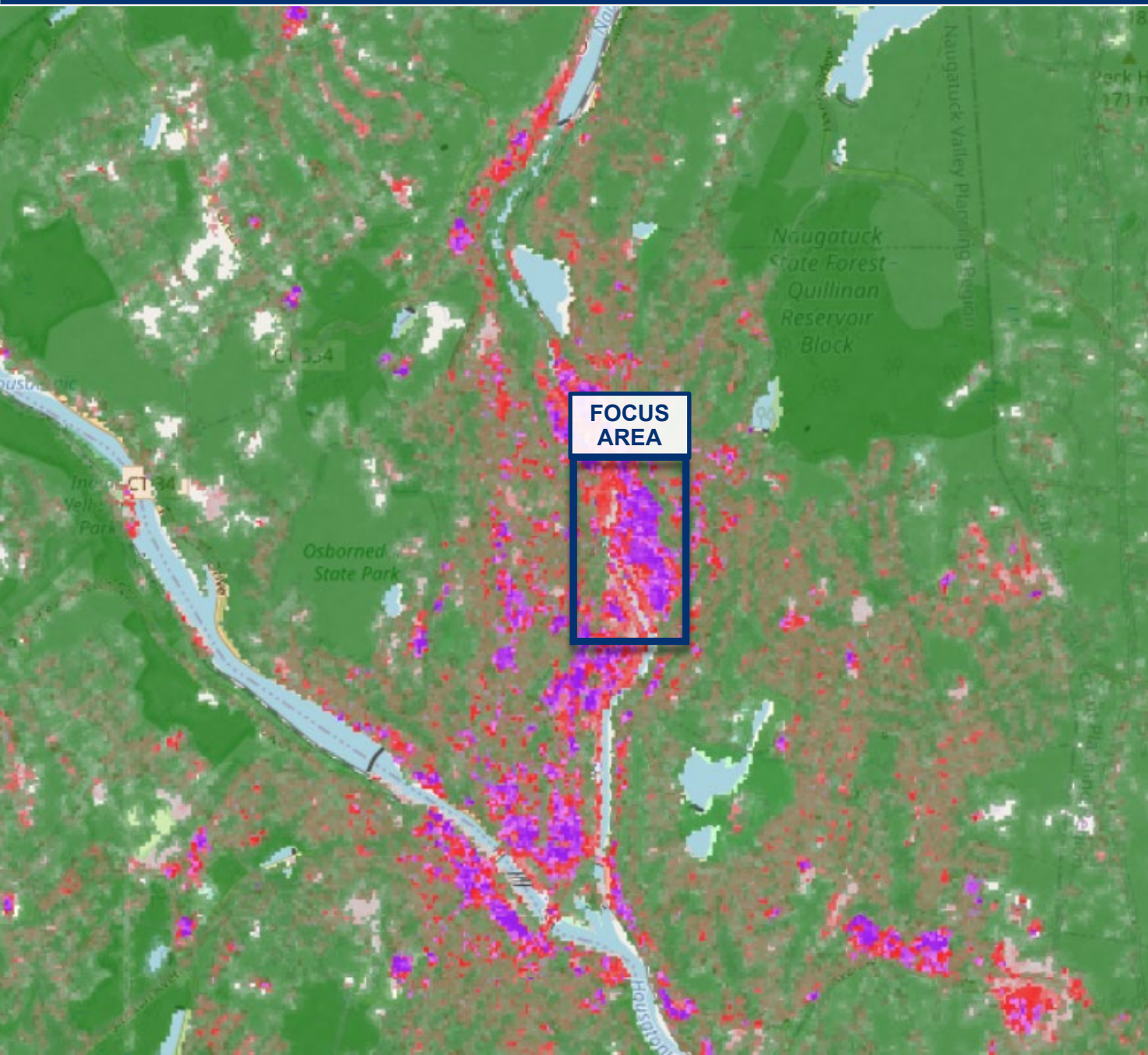




GREEN CORRIDORS

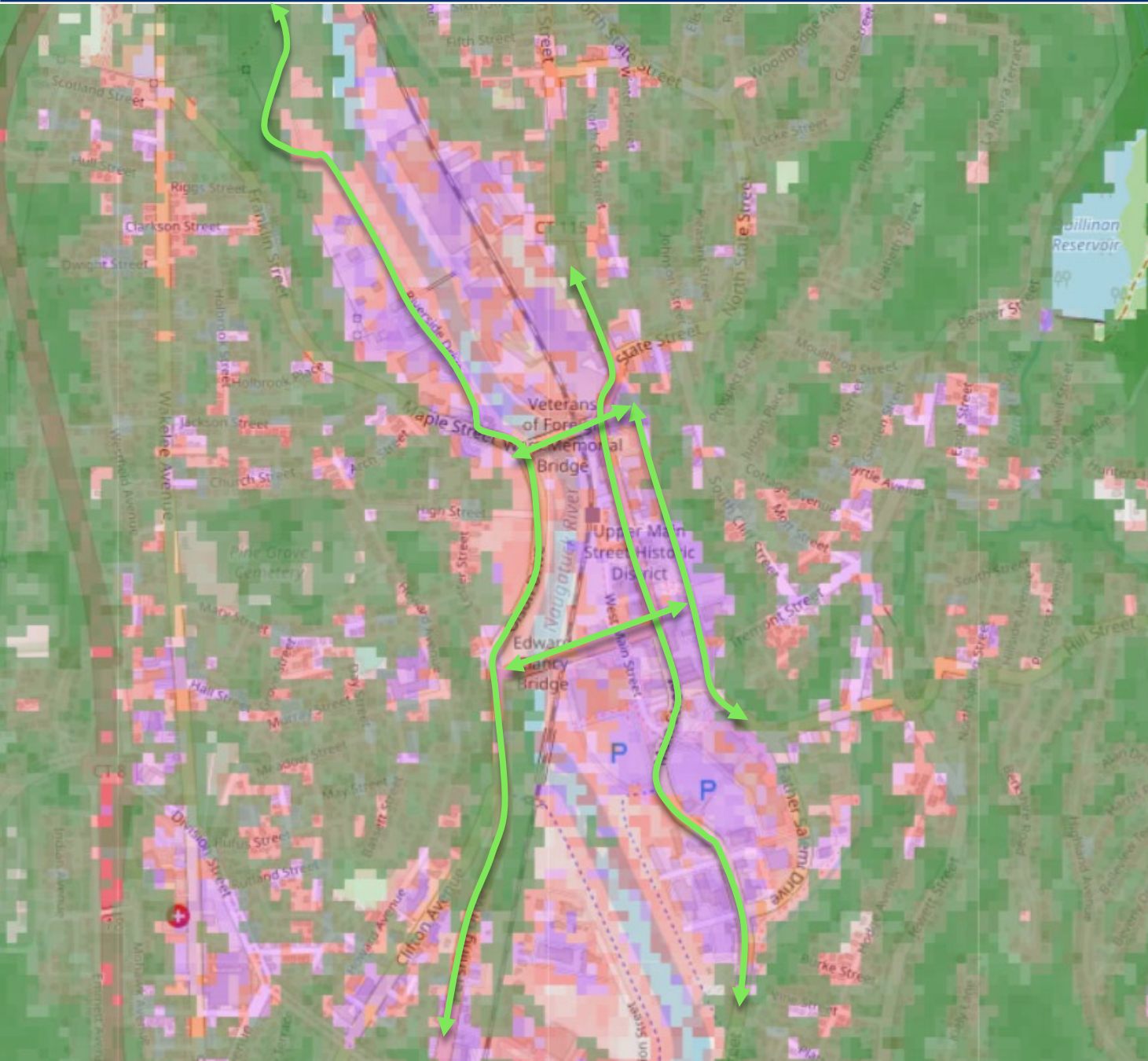
TREE CANOPY & IMPERVIOUS SURFACES

Tree Canopy & Impervious Surfaces



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

Tree Canopy & Impervious Surfaces



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*



GREEN CORRIDOR STUDY ZONES

MAIN ST @ ANSONIA
TRAIN STATION



Main Street | Resilient Corridor Placed within the Cultural Hub

Existing Conditions



Main Street | Resilient Corridor Placed within the Cultural Hub

Resilient Strategies



RESILIENT STRATEGIES:

- Green buffer allows for additional street trees, while still maintaining space for select on-street parking and bus drop-off zones
- Extension of Public Park with permeable paving
- Planted bump-out and crossing for improved visibility and accessibility
- Signage for Public Amenities
- Multi-purpose space with shade structures & permeable paving
Ex: Pop-up flexible space, outdoor dining





GREEN CORRIDOR STUDY ZONES

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



Existing Conditions



Resilient Strategies



RESILIENT STRATEGIES:

- Green buffer allows for additional street trees and shrubbery
- Veterans' Memorial Park, adjacent to City Hall, supports green corridor, connecting East Main Street to Main St
- Incorporate Green Infrastructure into Veterans' Memorial Park, such as bioretention swales & canopy structures
- Solar infrastructure and EV charging stations enhance parking lot productivity





GREEN CORRIDOR STUDY ZONES

OLSON DR @ NOLAN FIELD SPORTS
CENTER



Olsen Drive: Creating An Accessible & Resilient Waterfront Experience



Existing Conditions



Olsen Drive: *Creating An Accessible & Resilient Waterfront Experience*

Nolan Field with Greenway Connection



GREENWAY FEATURES

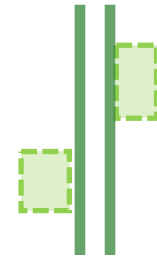
- Additional Parking for Nolan Field. Suitable for Angled or Parallel Parking with opportunity for permeable paving
- Preserve existing mature trees and create planted buffer with additional shade trees
- Bike path enhances accessibility and creates missing link in Naugatuck River Greenway path network
- Outlook embraces Ansonia's relationship to the Naugatuck River

Additionally, ramp to river's edge creates opportunity to engage with the riverfront i.e. water sports, educational programming, and events





"KIT OF PARTS" APPLIED RESILIENCY STRATEGY



LINK

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



SOLAR

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

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



Planted bump-out and crossings for improved visibility and accessibility



Outlooks embrace Ansonia's relationship to the Naugatuck River



MULTI-USE

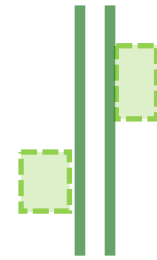
Multi-use spaces in ROW & public parks encourage vibrant downtown
Ex: Pop-up flexible event space or outdoor dining



Signage for public amenities & education



"KIT OF PARTS" APPLIED RESILIENCY STRATEGY



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 & public parks encourage vibrant downtown
Ex: Pop-up flexible event space or outdoor dining



INFRASTRUCTURE

Maintain existing flood protection system



SOLAR

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