



SOMERSET+HEALTH

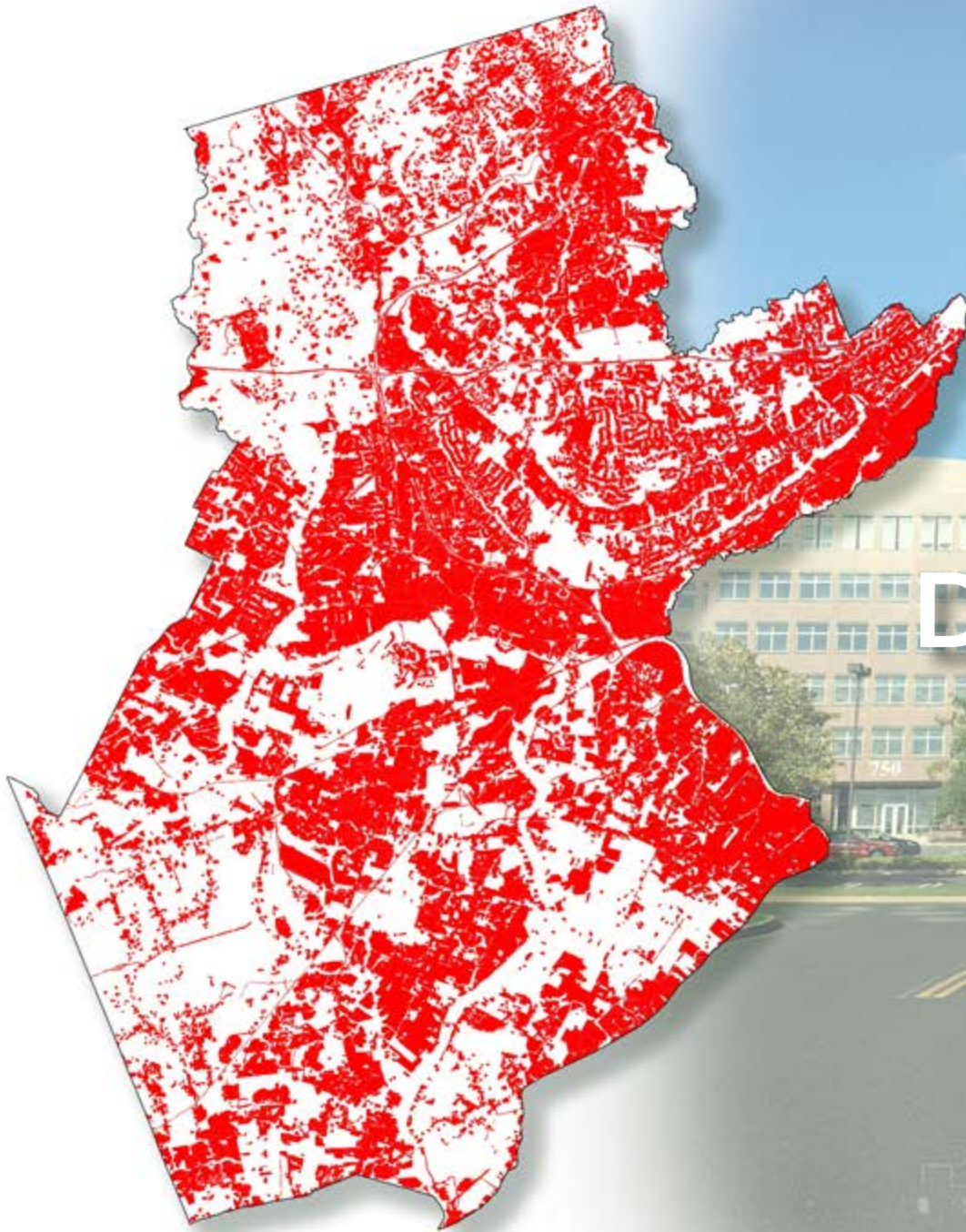
GeoDesign Studio
Landscape Architecture Department
Rutgers University
Fall 2016

*Radhika Bhagwat, Meghan Collins, Donna Dahringer, Tian Hao, Chris Hewitt,
Dean Janulis, Sanja Martic, Katja Patchowsky, Jennifer Ryan, Kimberly Tryba, and
Thomas Young*





SOMERSET COUNTY



DEVELOPED





FOREST AND WETLANDS





FARMLAND





PARKS AND OPEN SPACE



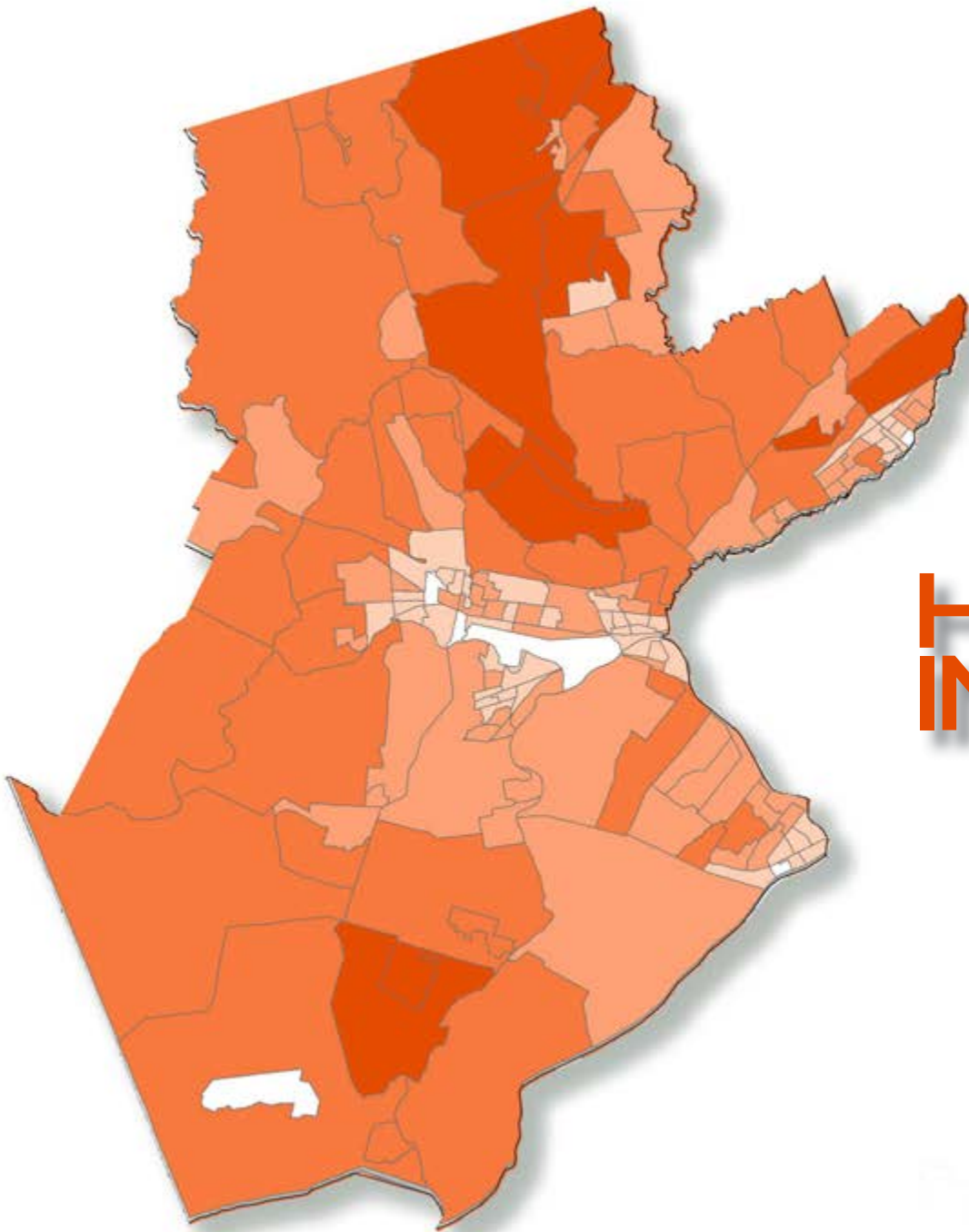


MAJOR ROADS

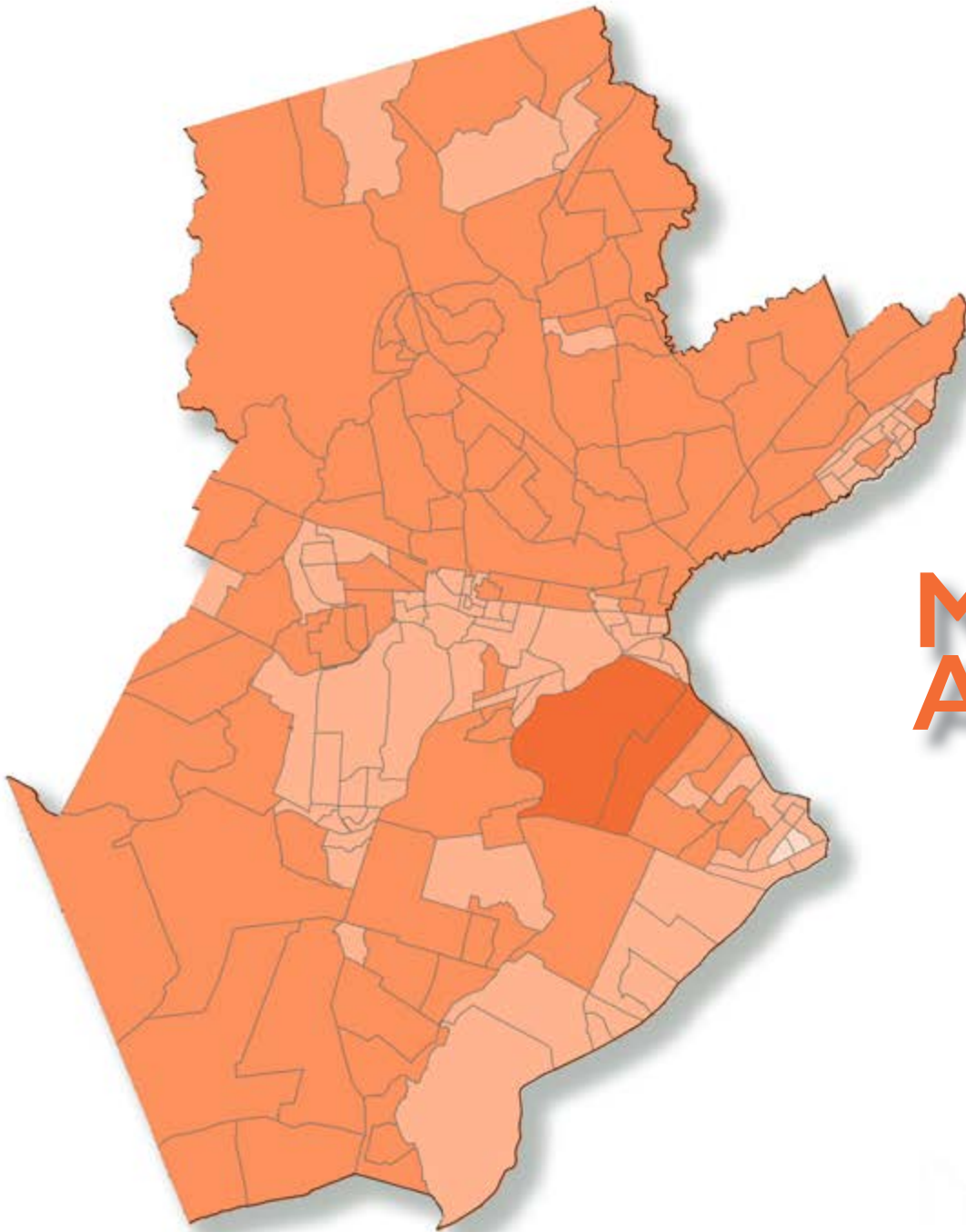


7.5

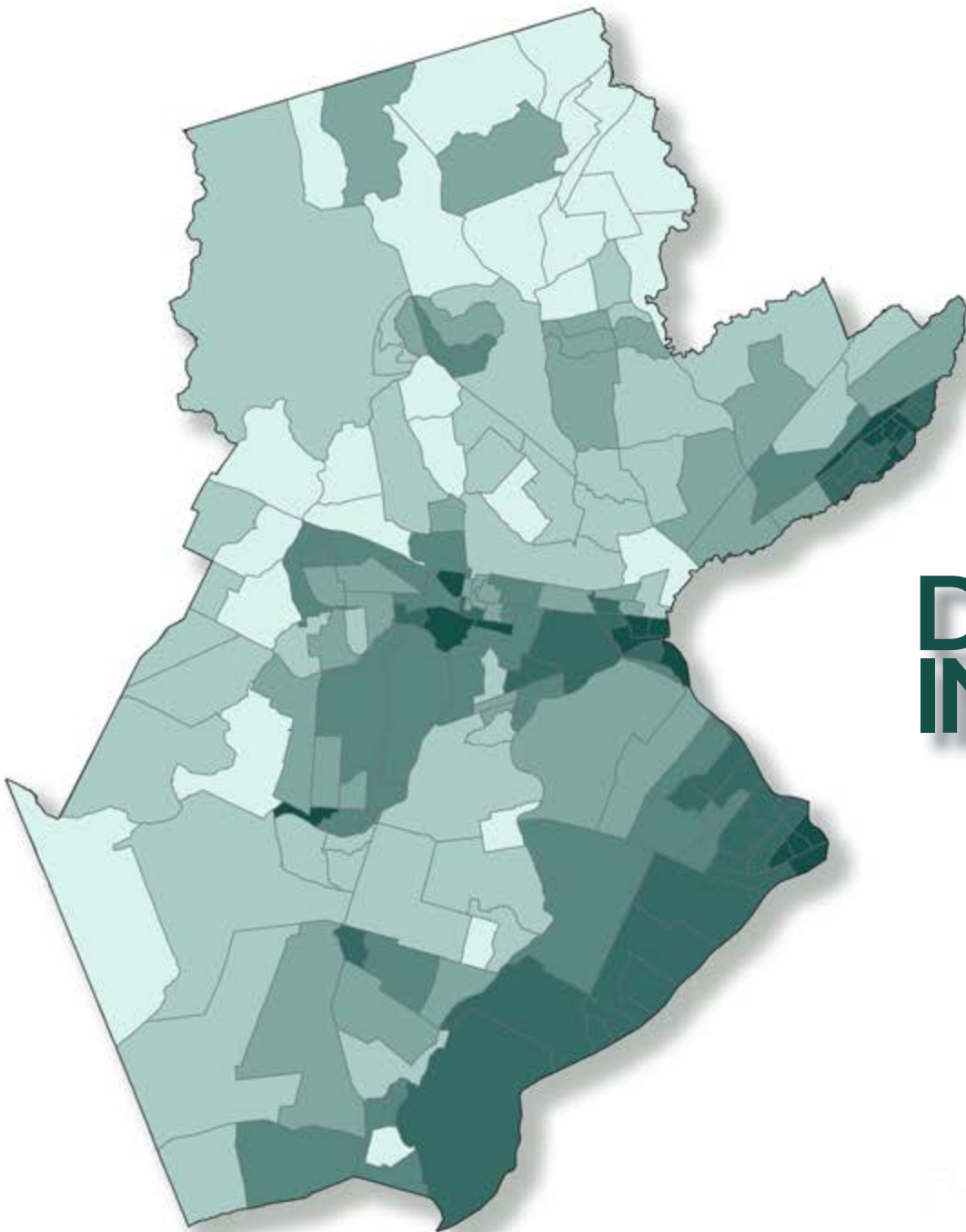
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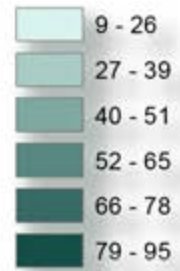
HOUSEHOLD INCOME



**MEDIAN
AGE**



DIVERSITY INDEX





HEALTHCARE FACILITIES

SOMERSET COUNTY HEALTH PRIORITIES

- Mental health and substance abuse
- Healthy eating and overweight/obesity
- Chronic disease (management and treatment)
- Health care access
- Seniors identified as a priority population for services and support



**SOMERSET
+HEALTH**

**MOBILE
HEALTH
HUBS**



**SOMERSET
+HEALTH**

**MOBILE
HEALTH
HUBS**



GREEN FOOD SYSTEM



**SOMERSET
+HEALTH**

**MOBILE
HEALTH
HUBS**



GREEN FOOD SYSTEM

FITransit



SOMERSET +HEALTH

**MOBILE
HEALTH
HUBS**



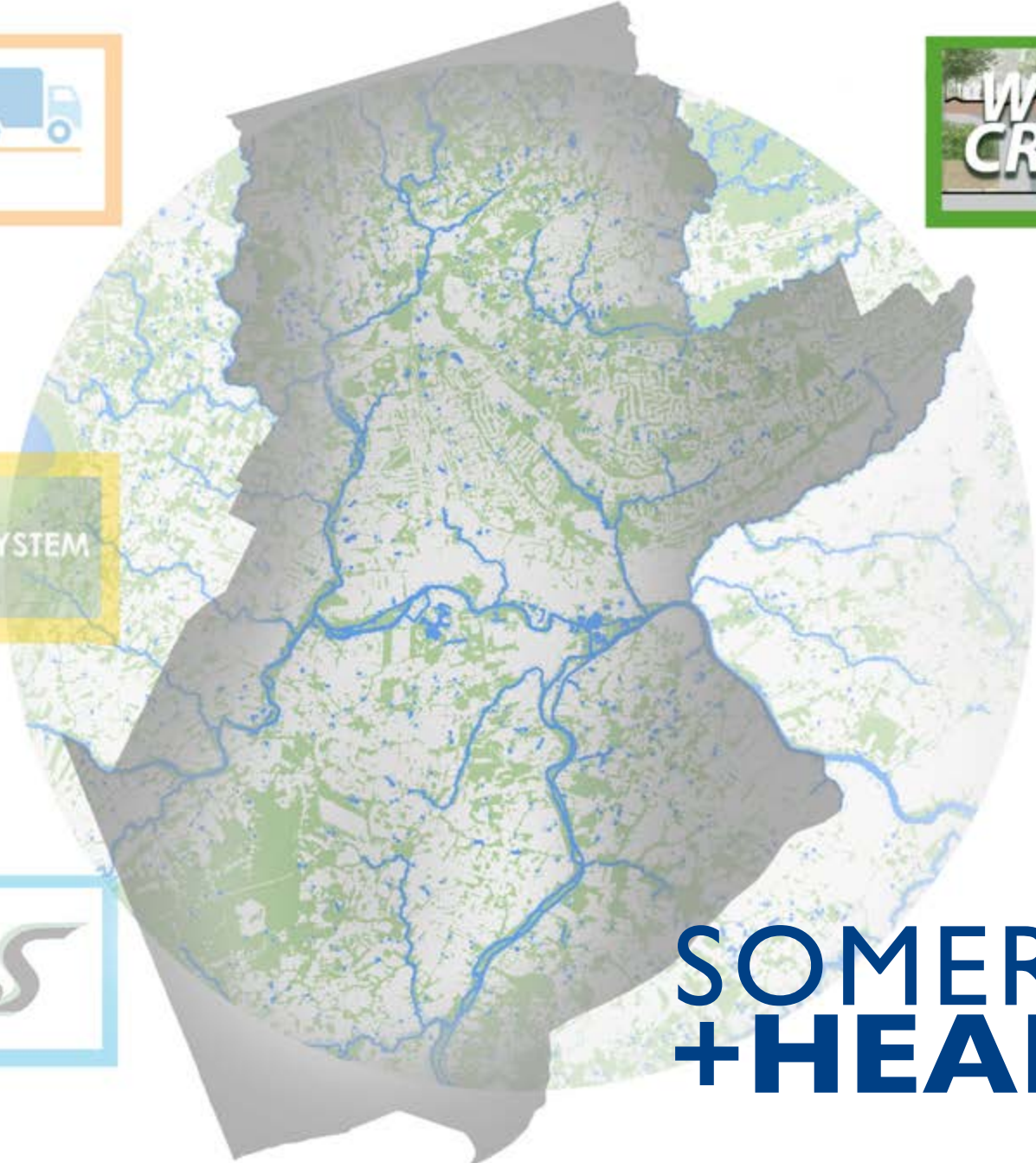
**WILDLIFE
CROSSING**



GREEN FOOD SYSTEM



FITransit



SOMERSET +HEALTH

**MOBILE
HEALTH
HUBS**



**WILDLIFE
CROSSING**



GREEN FOOD SYSTEM



play



FITransit






SOMERSET +HEALTH

**MOBILE
HEALTH
HUBS**



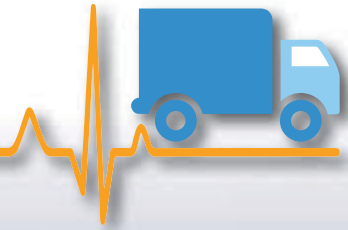
**MOBILE
HEALTH HUBS**



SOMERSET
COUNTY
Mobile Health Hubs



Mobile Health Units



Saint Peter's Healthcare System



<http://www.saintpetershcs.com/Services/Mobile-Health-Services-in-the-Community>

Children's Health Project of D.C.



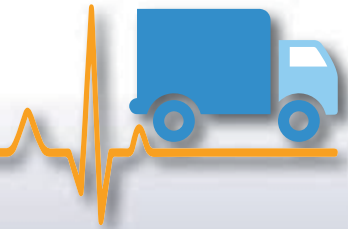
<http://childrensnational.org/advocacy-and-outreach/in-the-community>

The Rutgers University "S.A.V.E. Women and Men" Program



<http://web.njms.rutgers.edu/epwc/save.shtml>

Parklets and Popup Parks



<http://www.seriousseats.com/2012/06/06/food-trucks-on-austin-south-congress-texas-street-food.html>



<https://timmyvolume.wordpress.com/category/all/>



<http://deposisantamariah.blogspot.com/2014/03/negocio-proprio-idelas.html>



<https://urbannews.com/2015/07/new-portland-parklet-hard-lessons-tactical-urbanism/?more=186855>



http://www.hypespot.com.br/2014/09/como-ao-parklets-ao-otimismo-temperado-que-promove-uma-renovacao-dos-espacos-publicos/Pain_source=feedburner.stm_medium=small&utm

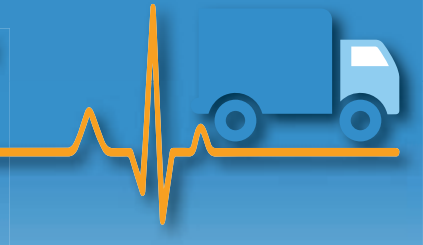


<http://ohio.com/2014/08/24/ohio-san-francisco-10-parklets-parklet.php>



**RWJ HOSPITAL
SOMERSET**

RWJ HOSPITAL - SOMERSET



Mobile Health Hub



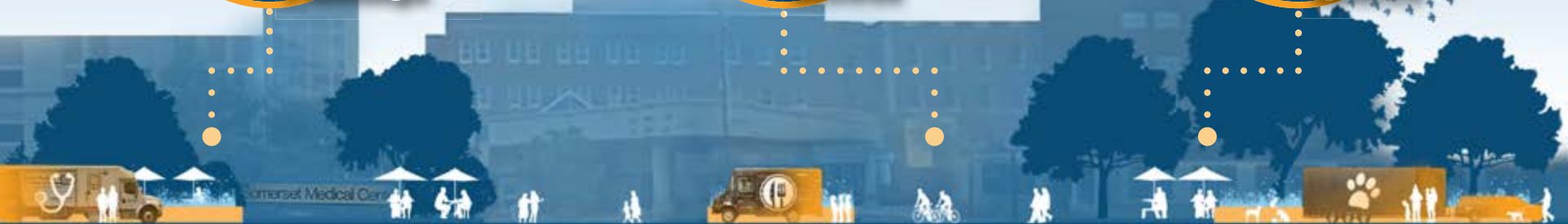
Therapeutic Plantings



Bicycle Access



Gathering Spaces



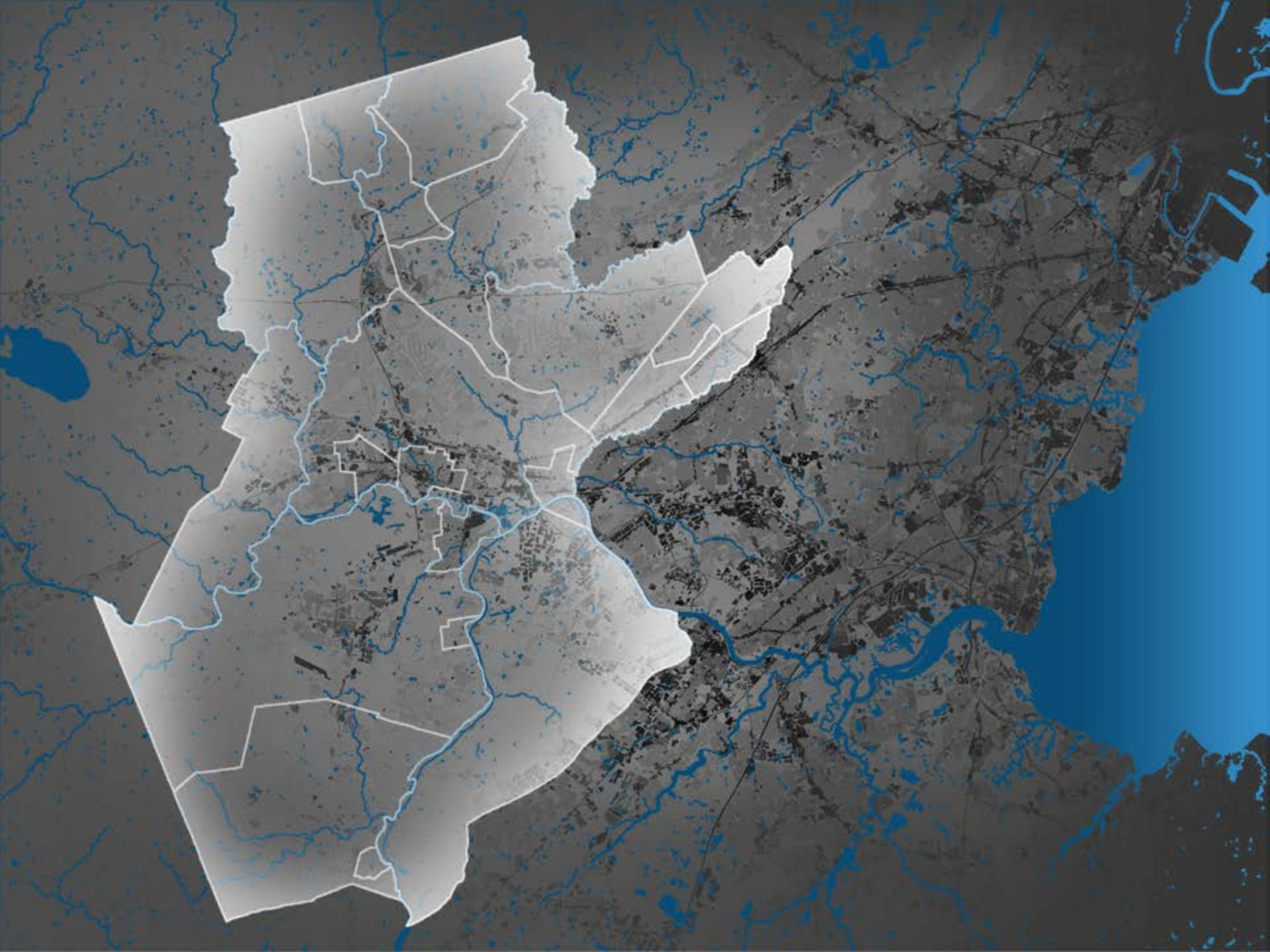
Preventative Health

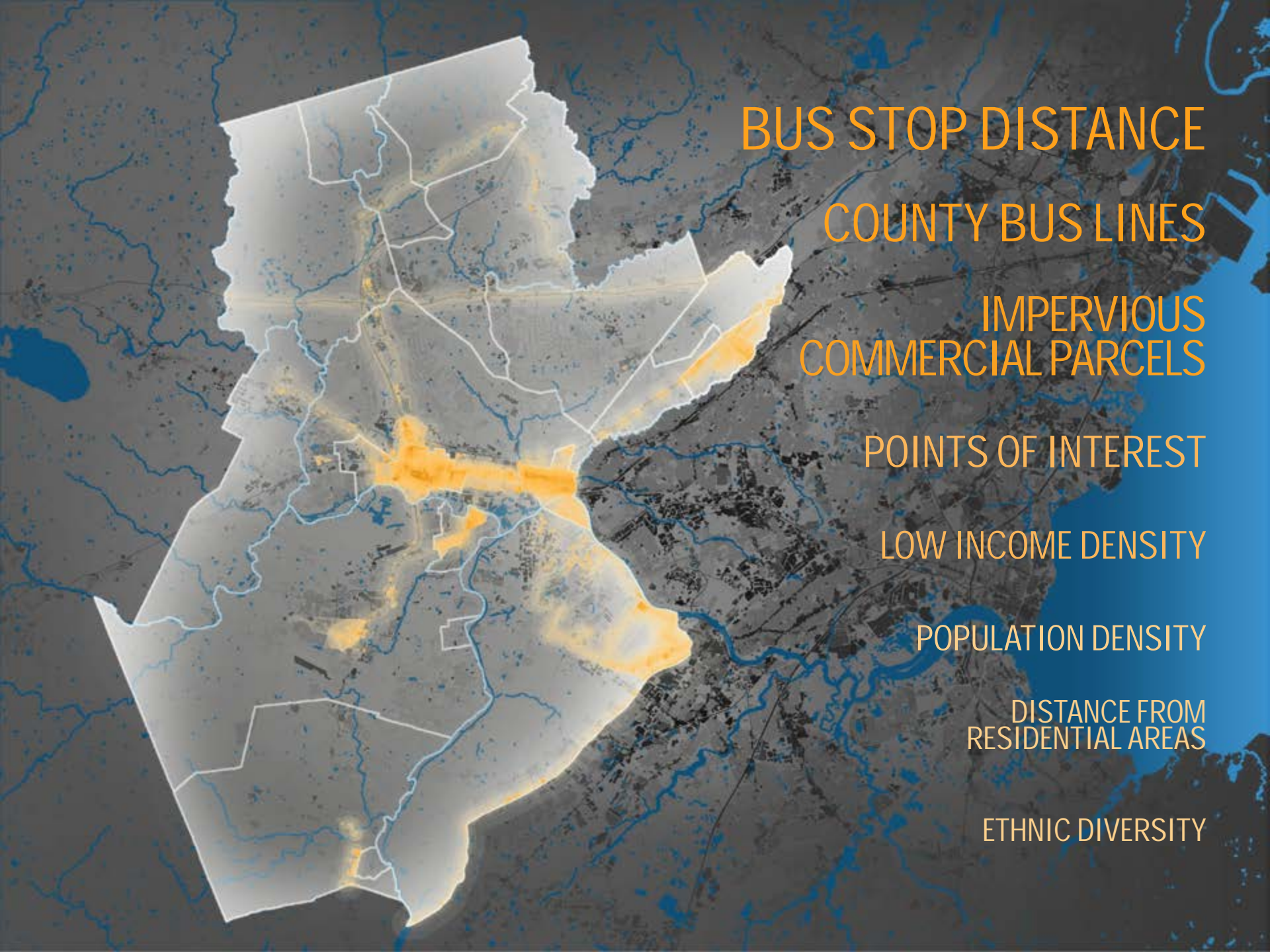


Healthy Food



Alternate Programming





BUS STOP DISTANCE

COUNTY BUS LINES

IMPERVIOUS
COMMERCIAL PARCELS

POINTS OF INTEREST

LOW INCOME DENSITY

POPULATION DENSITY

DISTANCE FROM
RESIDENTIAL AREAS

ETHNIC DIVERSITY





MIDDLEBROOK CENTER
Bound Brook

MONTGOMERY SHOPPING CENTER
Montgomery

SOMERSET SCHOOL
North Plainfield

FAMILY DOLLAR
North Plainfield

RARITAN SHOPPING CENTER
Raritan

IMMACULATA HIGH SCHOOL
Somerville

BRIDGEWATER COMMONS
Bridgewater

NORA SHOPPING CENTER
Somerset

HAMILTON STREET CENTER
Somerset

BUFFALO WILD WINGS / UNIQUE
Watchung



**CURB
SIDE**



**SUPER
SIZED**



**SHOPPING
CENTER**

COMMITMENT
VARIABILITY

POP UP

SEASONAL

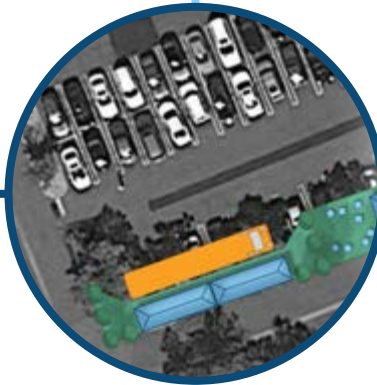
YEAR ROUND



POP UP

SEASONAL

YEAR ROUND



POP UP CURB SIDE

Somerset Street

Moveable
Seating

Potted
Plants

Parklet
Seating

5 *Parking
Spaces*

SEASONAL SHOPPING CENTER

Montgomery Mall



Eating Area

Seating Structure

Artificial Turf

Two Trucks

20 *Parking Spaces*

YEAR ROUND SUPER SIZED *Bridgewater Commons*



Concrete
Risers

Formal
Planting

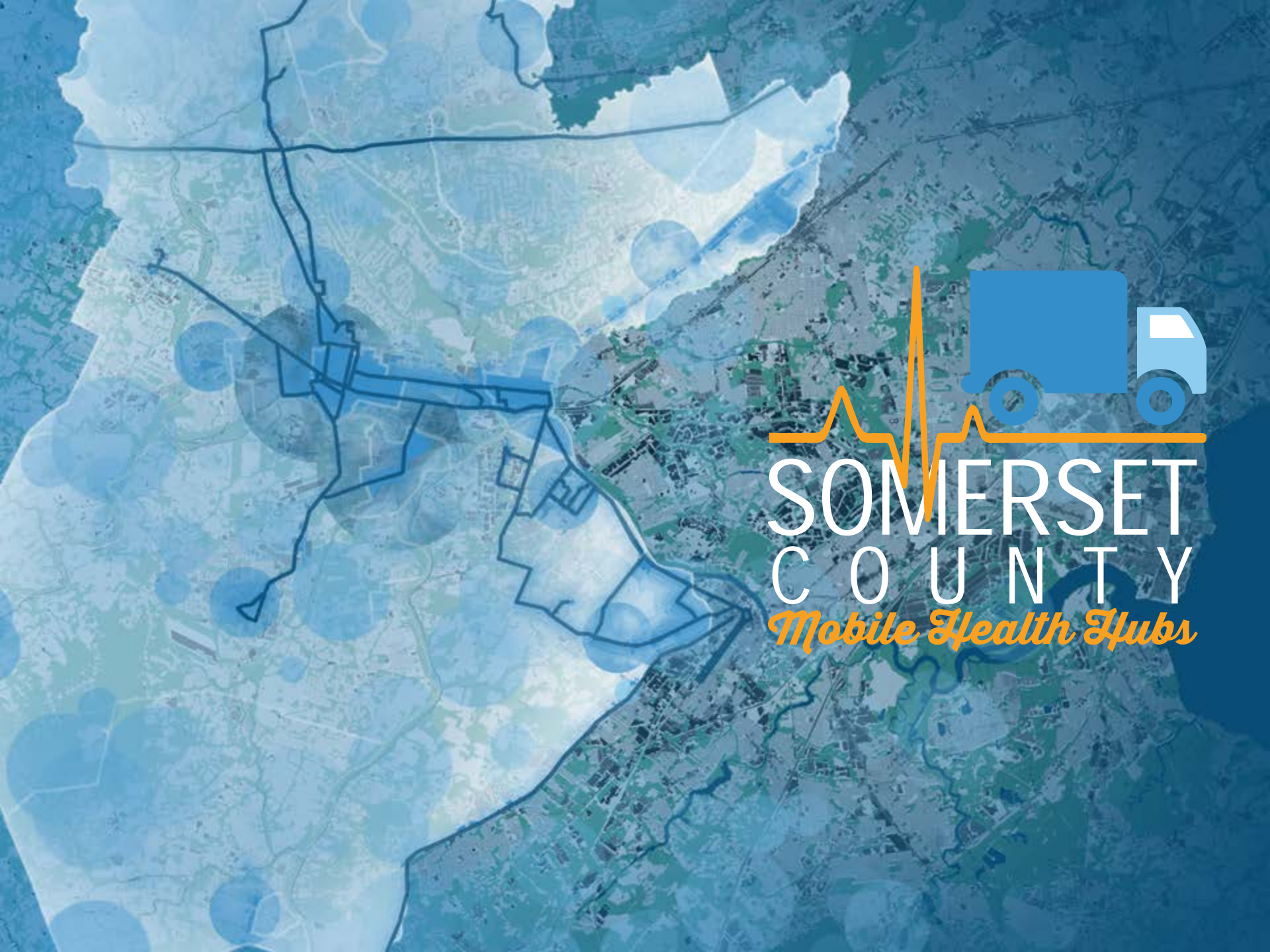
Stormwater
Mitigation

Play
Space

Three
Trucks

30 *Parking
Spaces*





SOMERSET
C O U N T Y
Mobile Health Hubs

**MOBILE
HEALTH
HUBS**



GREEN FOOD SYSTEM



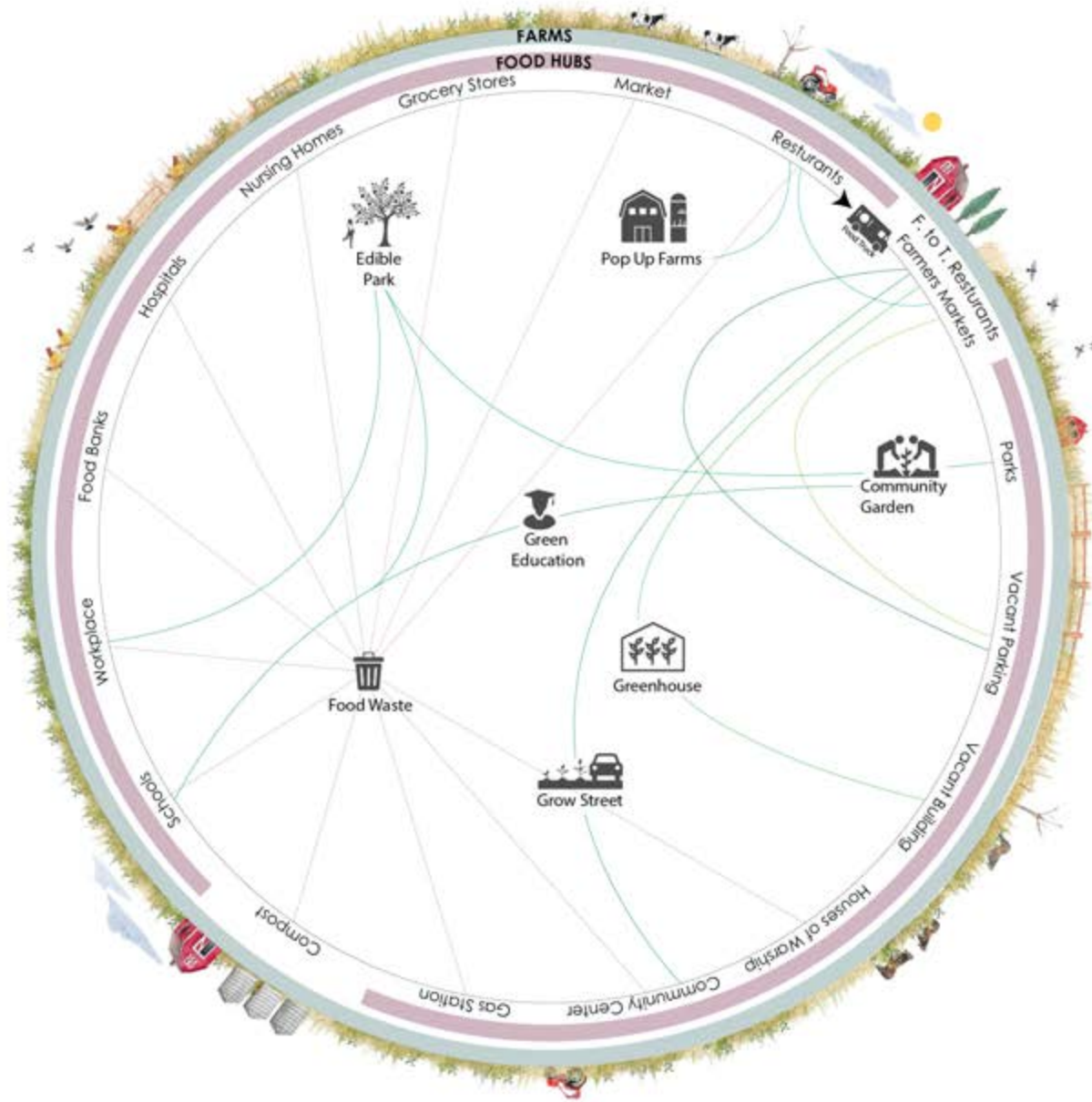
**GREEN
FOOD SYSTEM**



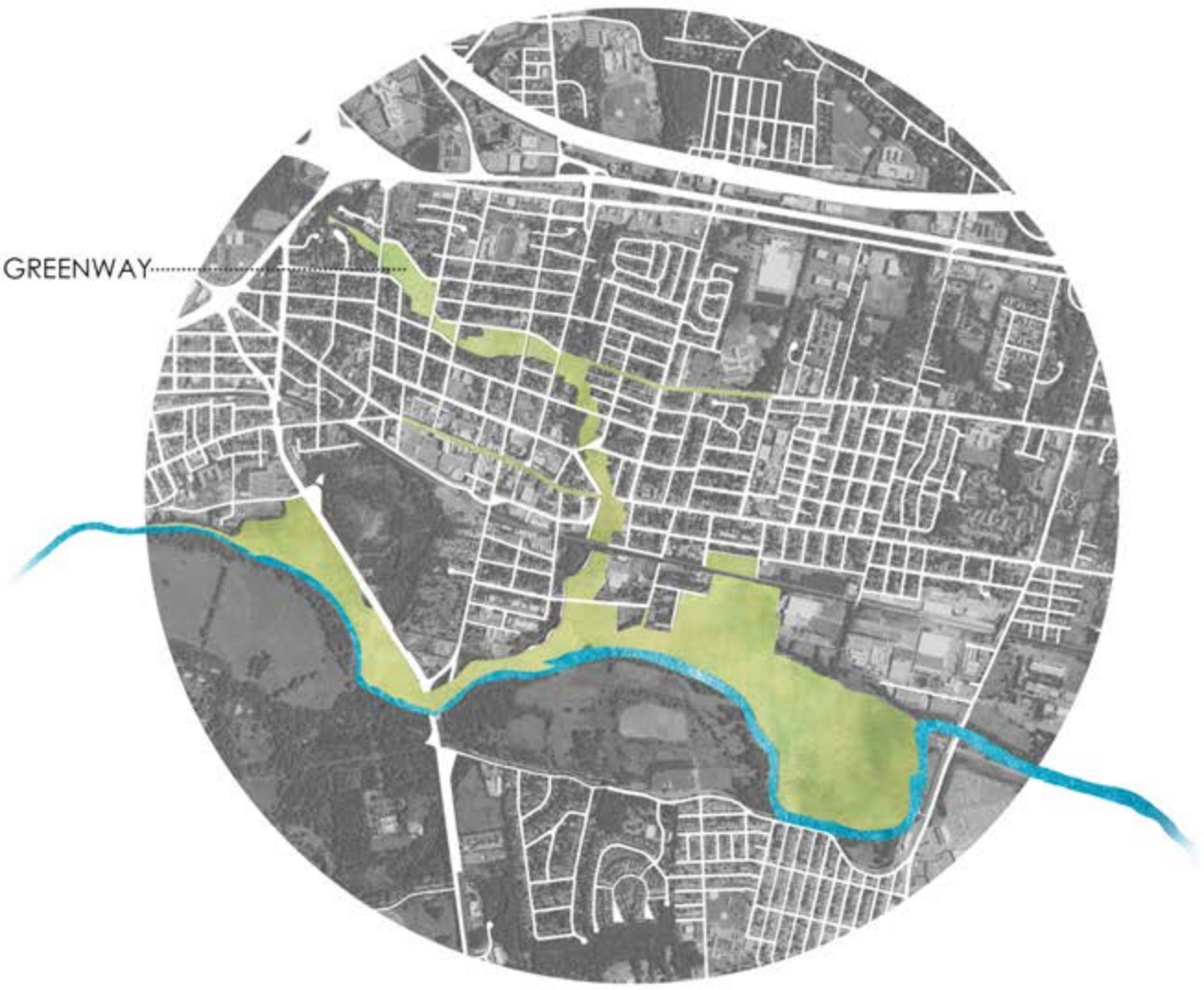
GREEN FOOD SYSTEM

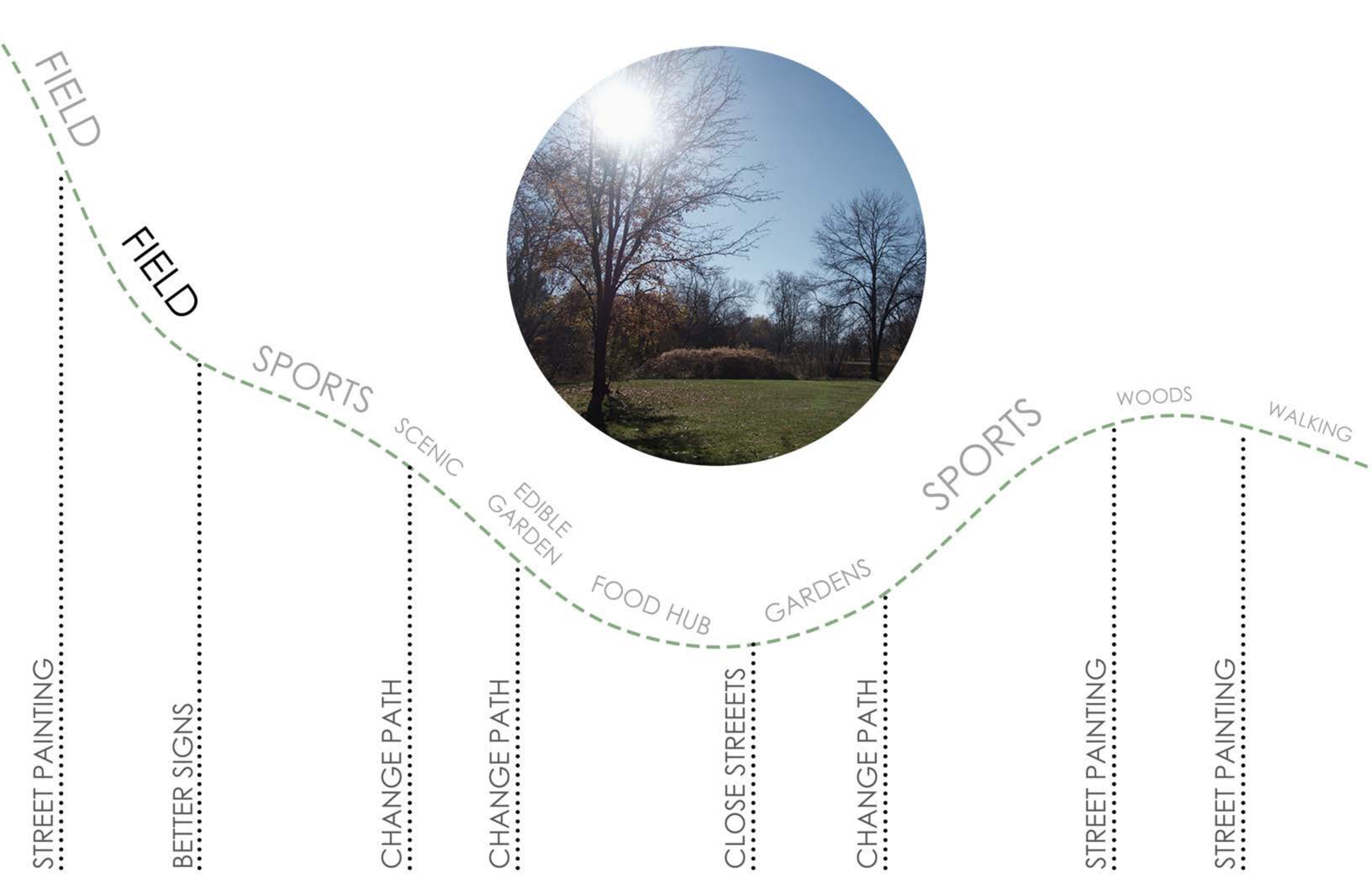
TIAN JANULIS
DEAN HAO





PETER'S BROOK GREENWAY.....





STREET PAINTING

BETTER SIGNS

CHANGE PATH

CHANGE PATH

CLOSE STREETS

CHANGE PATH

STREET PAINTING

STREET PAINTING

FIELD

FIELD

SPORTS

SCENIC

EDIBLE GARDEN

FOOD HUB

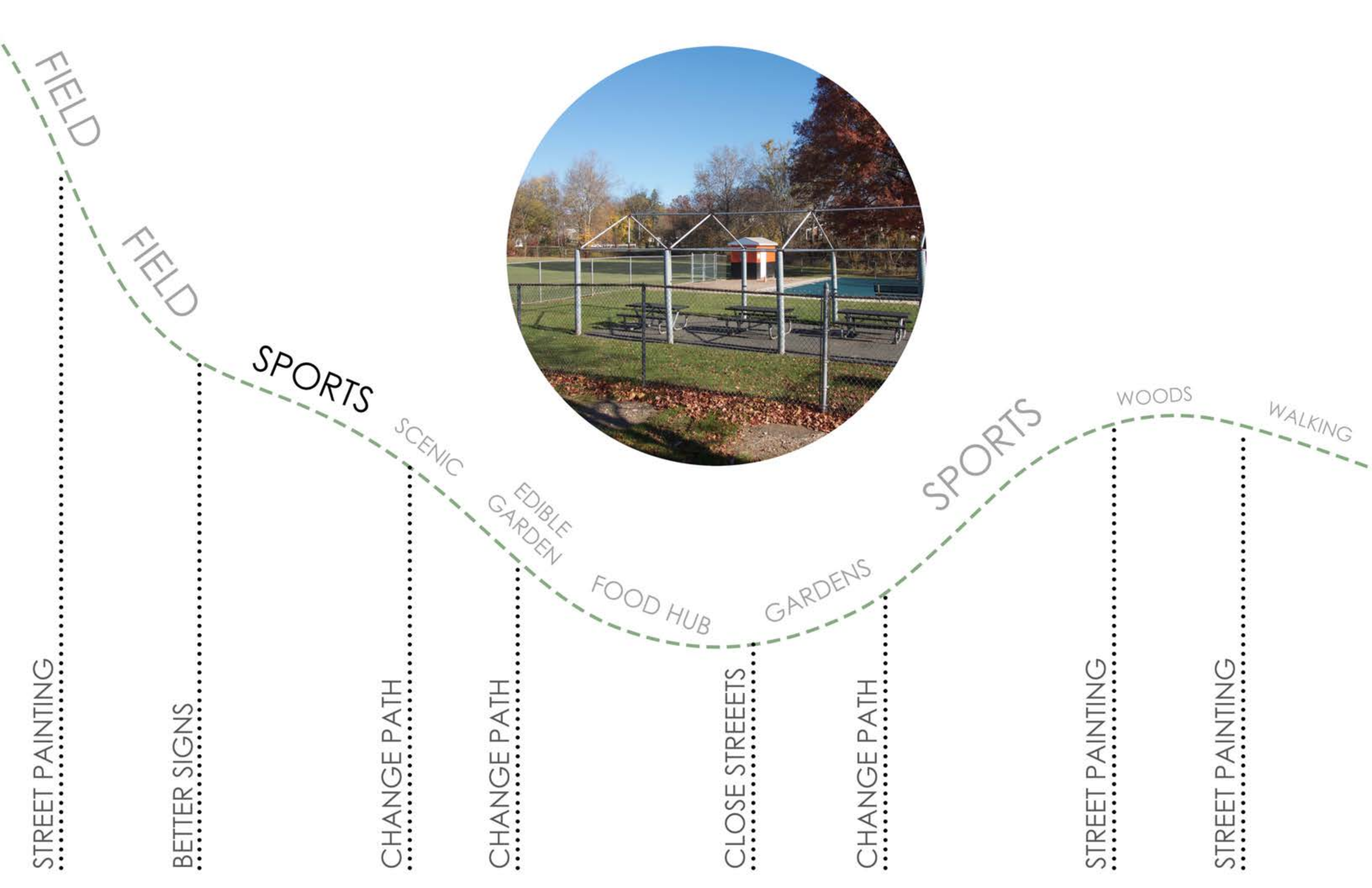
GARDENS

SPORTS

WOODS

WALKING







STREET PAINTING

BETTER SIGNS

CHANGE PATH

CHANGE PATH

CLOSE STREETS

CHANGE PATH

STREET PAINTING

STREET PAINTING

FIELD

FIELD

SPORTS

SCENIC

EDIBLE GARDEN

FOOD HUB

GARDENS

SPORTS

WOODS

WALKING





STREET PAINTING

BETTER SIGNS

CHANGE PATH

CHANGE PATH

CLOSE STREETS

CHANGE PATH

STREET PAINTING

STREET PAINTING

FIELD

FIELD

SPORTS

SCENIC

EDIBLE GARDEN

FOOD HUB

GARDENS

SPORTS

WOODS

WALKING





PETER'S BROOK GREENWAY

FOOD HUB

GROW STREET

COMMUNITY GARDEN

ROUTE 22

ROUTE 28

MAIN STREET

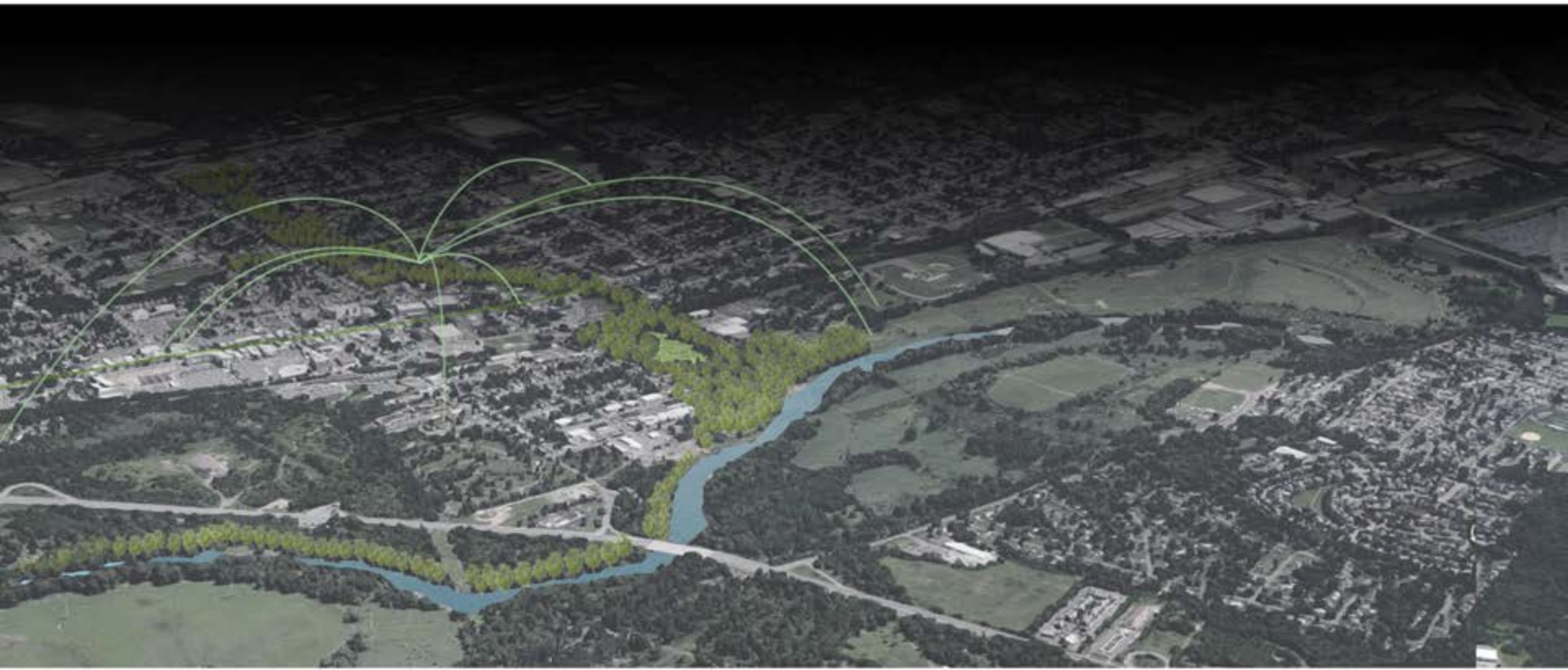
ROUTE 206

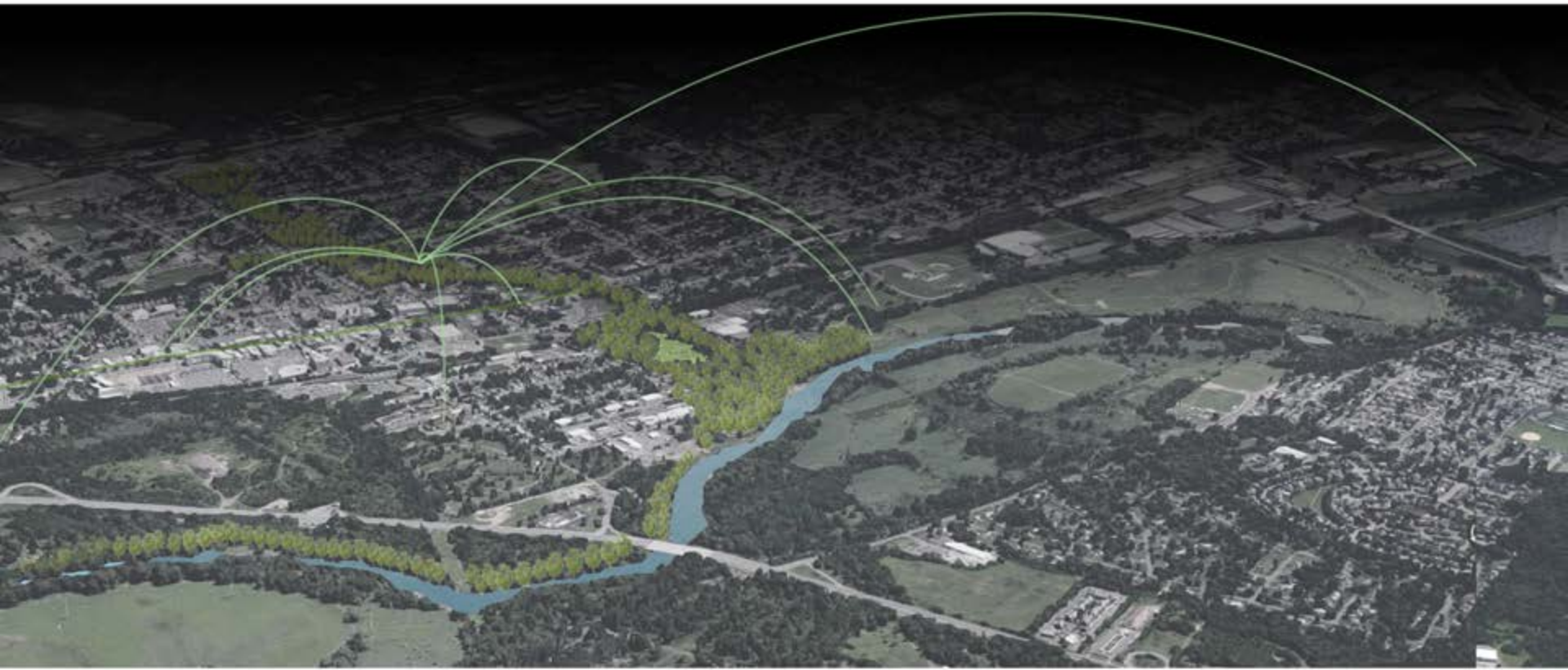


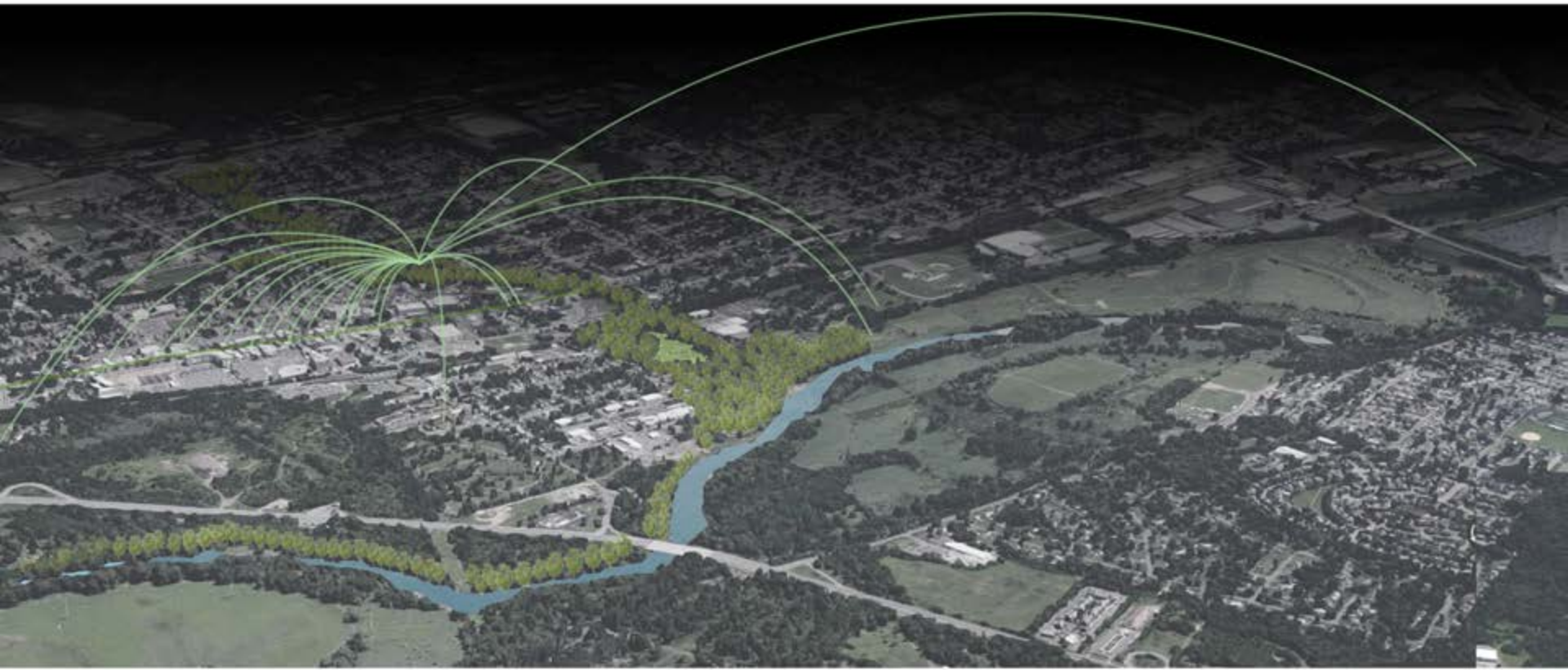












GROW STREET





SWEET POTATOES

RADISHES

CARROTS



Sweet potatoes grow well with compost added to the soil. Too much nitrogen in the soil stunts the growth of the root.



Carrots of the smaller varieties do very well in deep containers. Soil conditions must be wet.



Radishes need plenty of sun and enjoy soil that is free of rocks. Compost is required for quality growth.

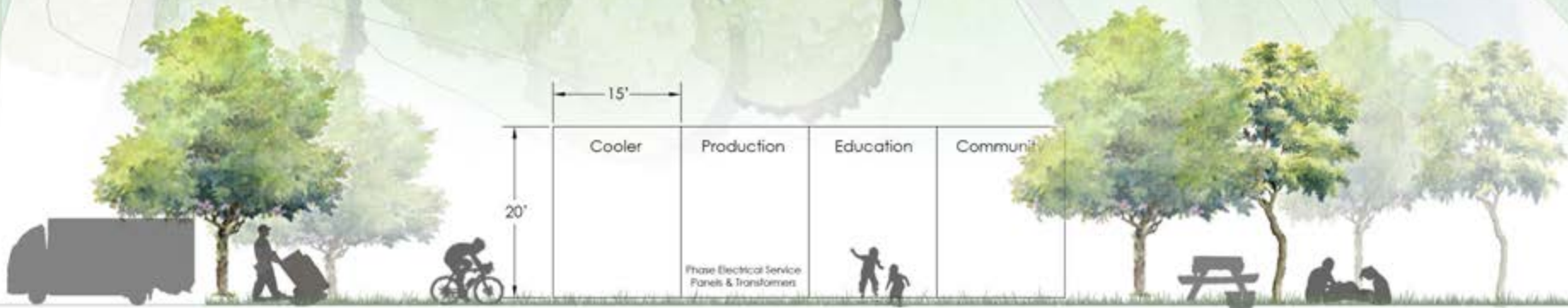


Large street planters provide the ability for urban areas to retrofit the streets for food production without any infrastructural change, and with a low price point.



FOOD HUB





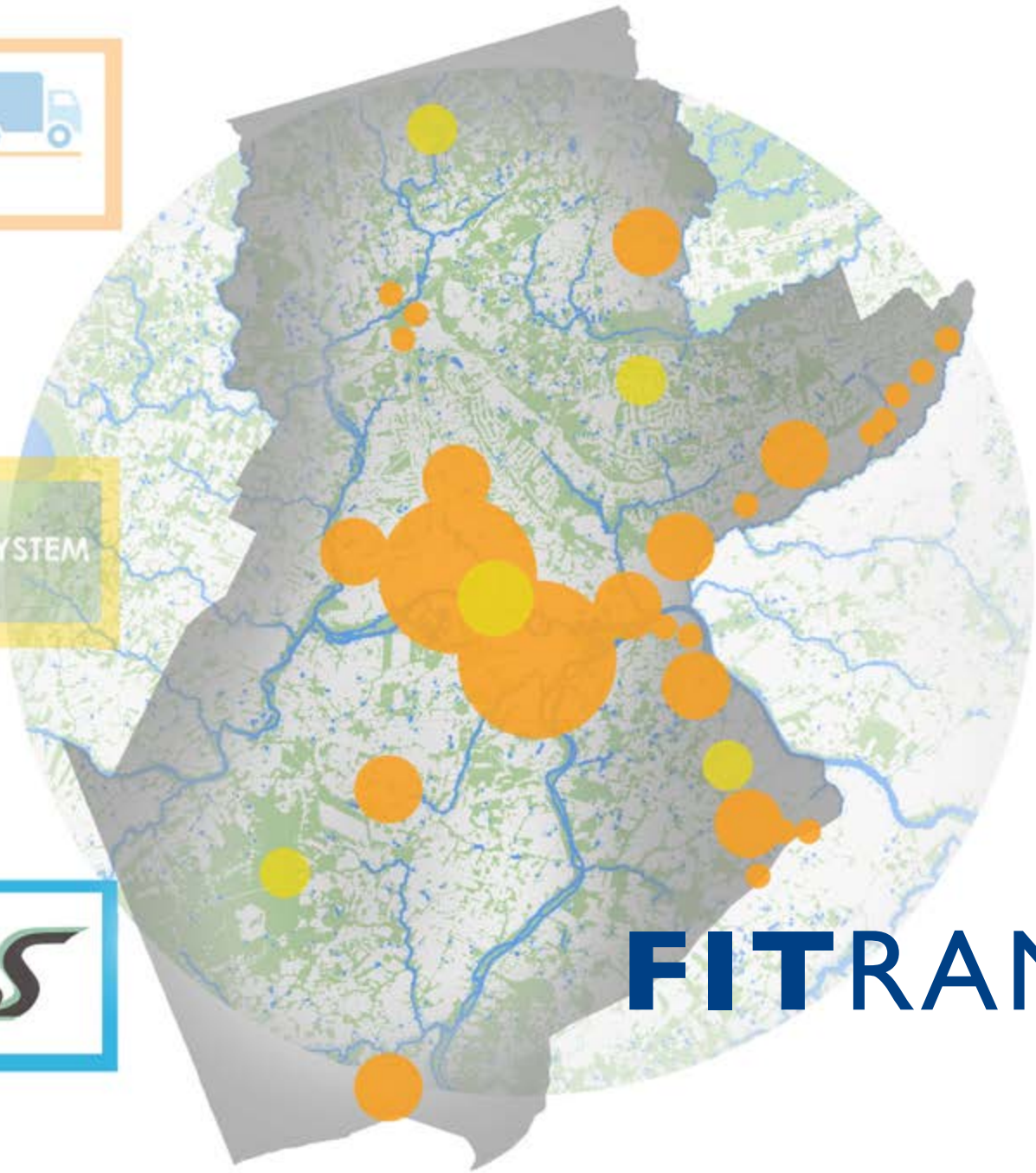


**MOBILE
HEALTH
HUBS**



GREEN FOOD SYSTEM

FItransit



FITRANSIT

FITransit

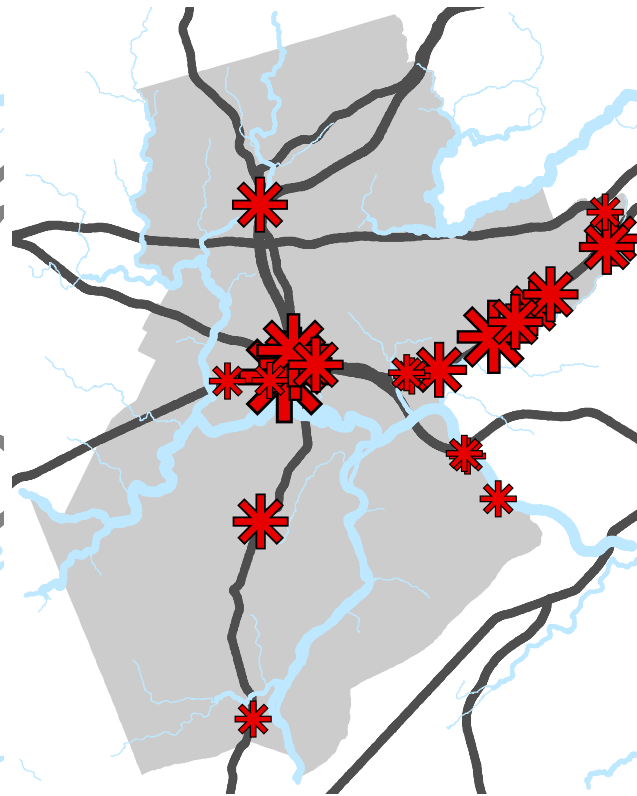
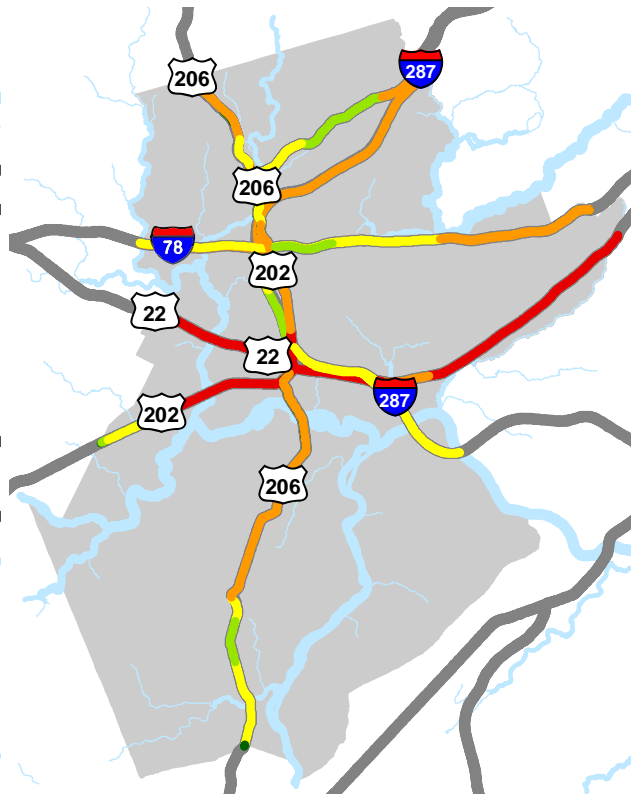
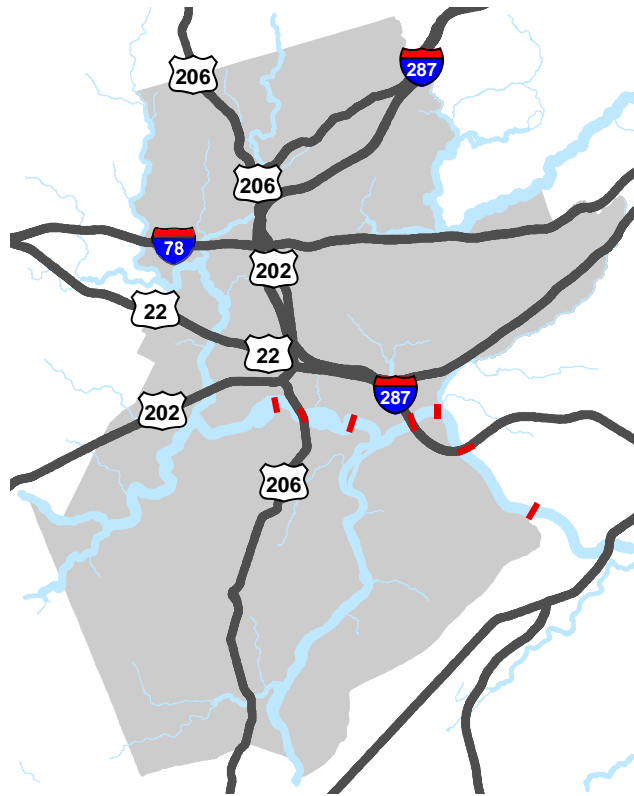


Somerset County Transportation Challenges

Limited North/South Access

Major Roads--Congestion

Car Accident Hotspots (Not Including Interstates)

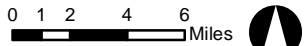


— Raritan Crossings

— Severely Congested
— Very Congested
— Some Congestion
— No Congestion
— No Data

* 30-40
 * 41-62
 * 63-99
 * 100-245

10701 Accidents
 1 in 8 are on Route 22
 Most Accidents at 1 Point:
 202/206/28 Junction



Map: Jennifer Ryan
 Projection: NAD 1983 State Plane New Jersey FIPS 2900 Feet
 Source: NJDOT, Making Connections, 2013



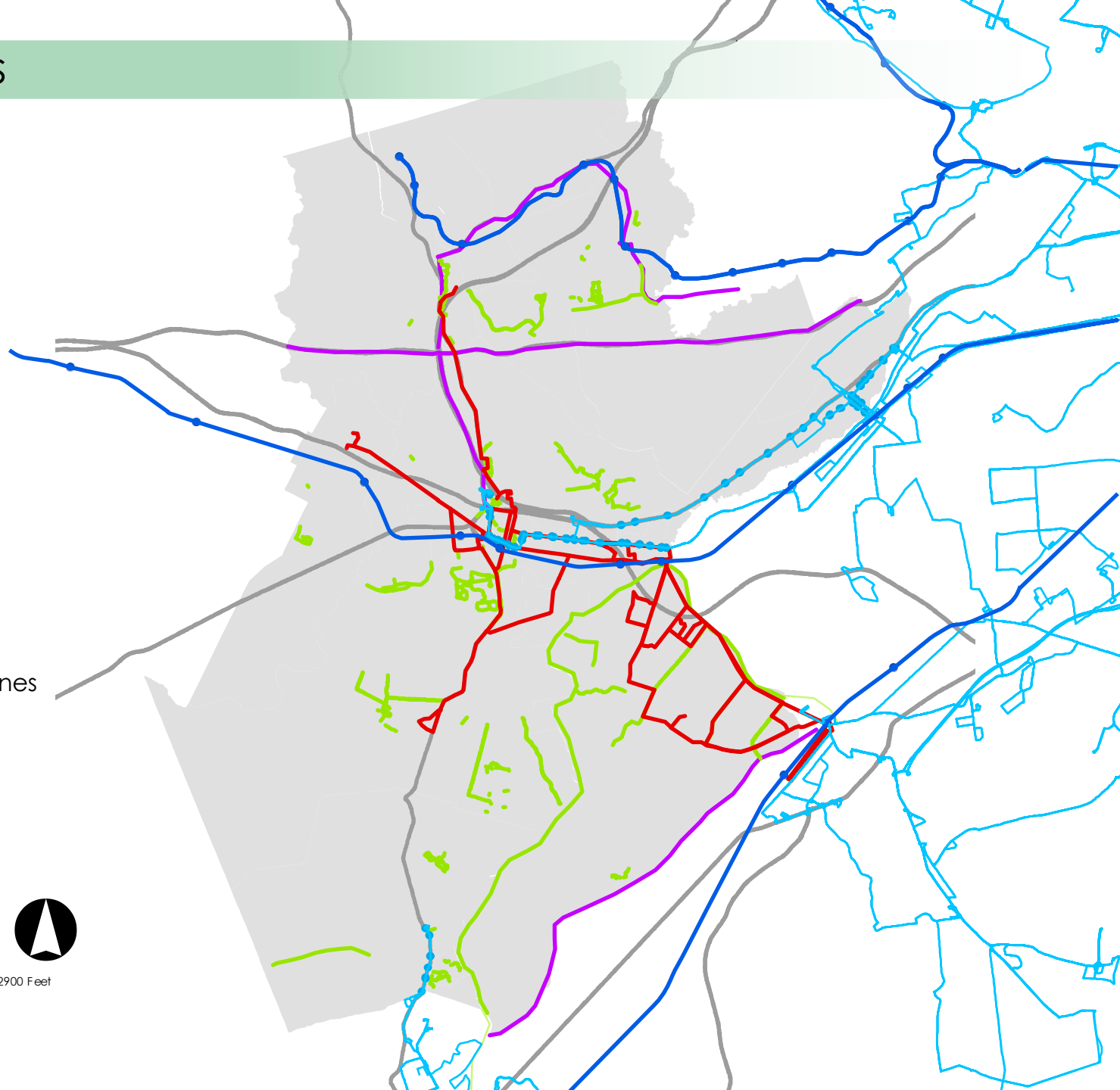
Transit Options

- County Bus
- Bike Trails and Lanes
- NYC Bus
- NJT Train Lines
- NJT Bus Routes
- Major Roads

0 3 6 Miles



Map: Jennifer Ryan
Projection: NAD 1983 State Plane New Jersey FIPS 2900 Feet
Source: NJDOT, Making Connections, 2013



FITransit



- Walking and Biking to Destinations
- Reduces Obesity, Stress, and Chronic Diseases
- Reduces CO₂ Emissions and Fuel Use



2 Miles



15 Minutes



Analysis: Density of Healthy Destinations Near Grocery Stores

Schools



Dense Housing



2 Miles



Work



Other Healthy Destinations

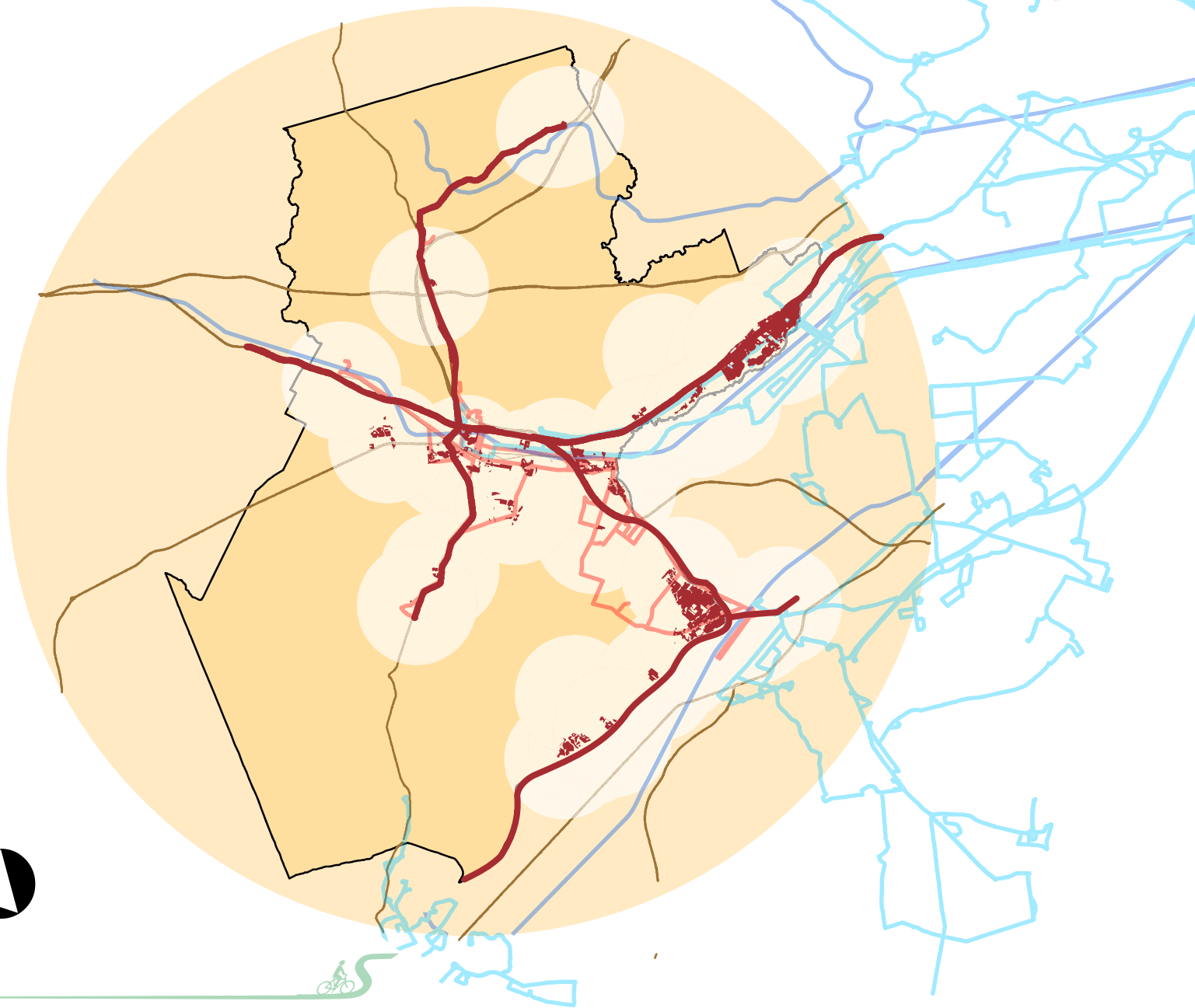


Design: Improve Transit Service

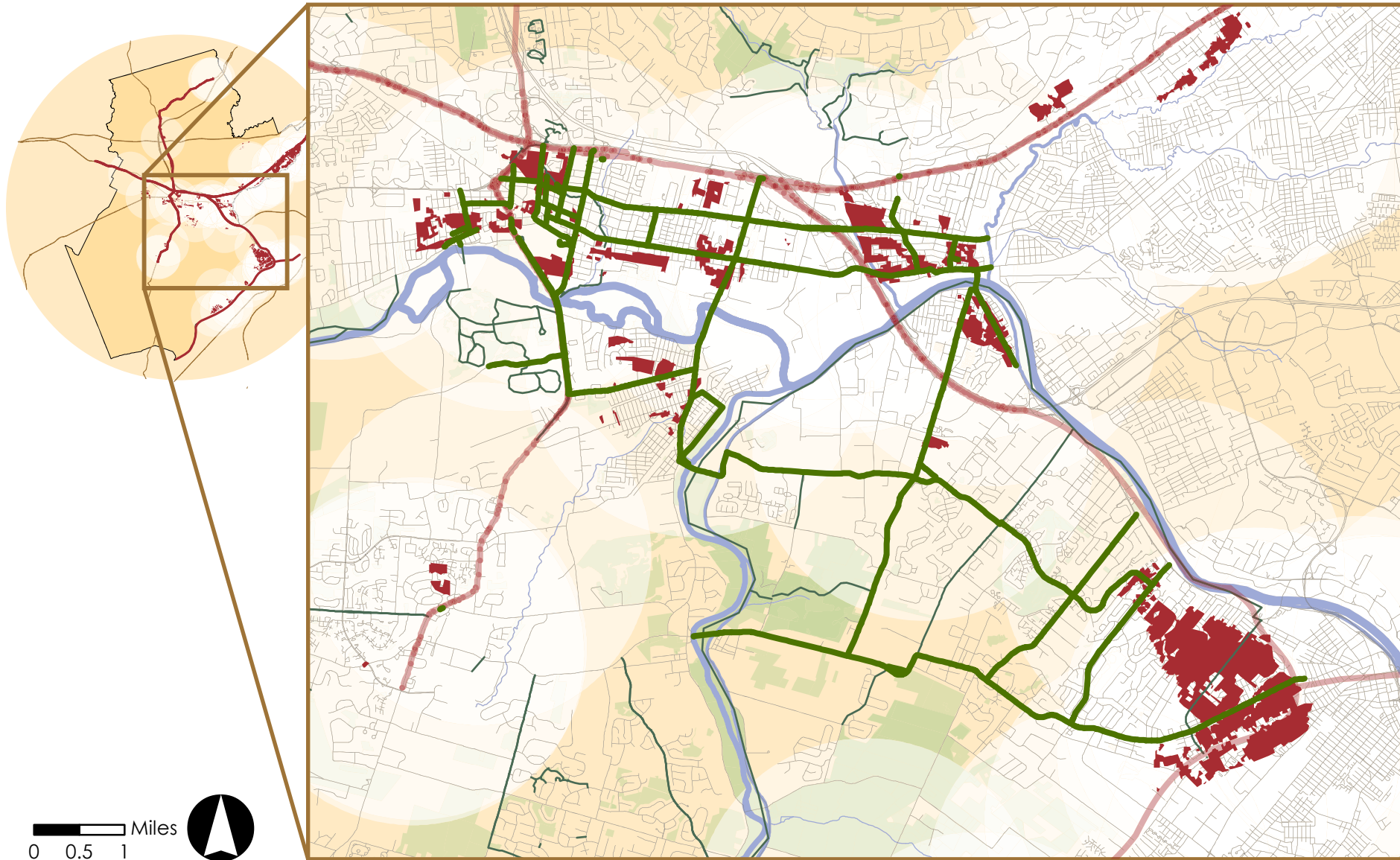


Bus
Rapid
Transit

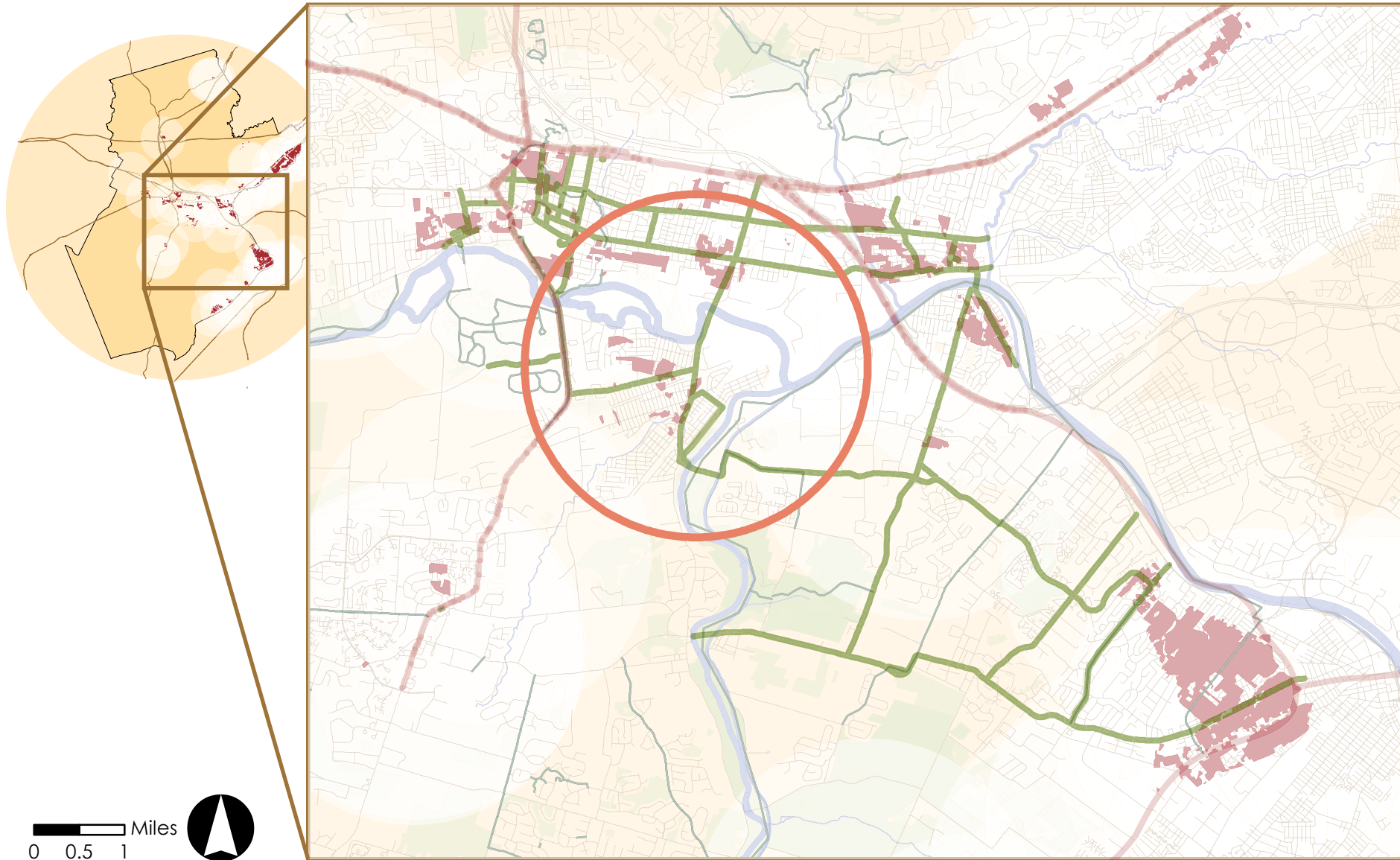
0 1 2 4 Miles



Design: Proposed Bike Lane Network



Design: Target for Bike Hub



MANVILLE

2-mile walking/biking radius:

0.5 miles
2 miles

Duke Farms

Traffic Constricts at Railroad Underpass

Main Street

One of 7 Raritan River Crossings in Somerset

Reading Cinemas Manville

Wal-Mart on Site of Johns-Manville Factory

D & R Canal



Design: Bike Hub in Manville



Design: Bike Hub in Manville



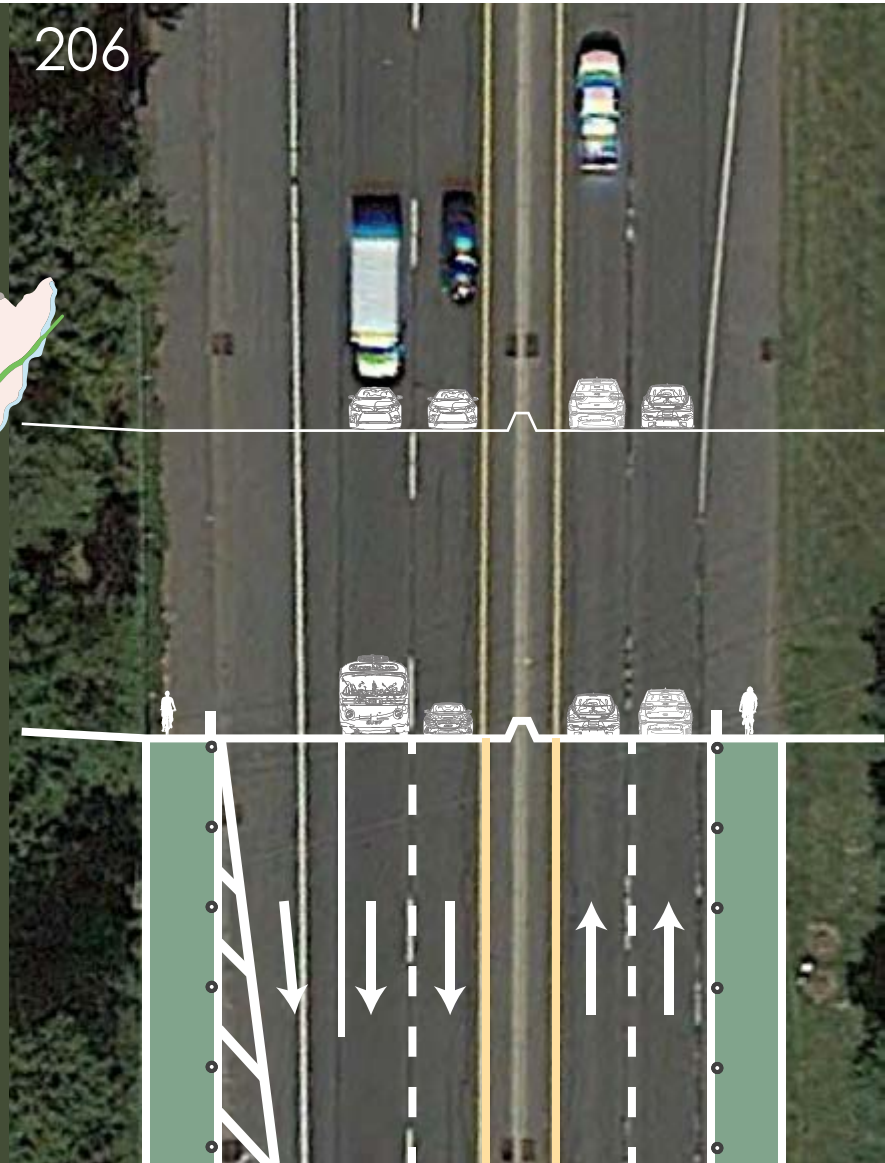
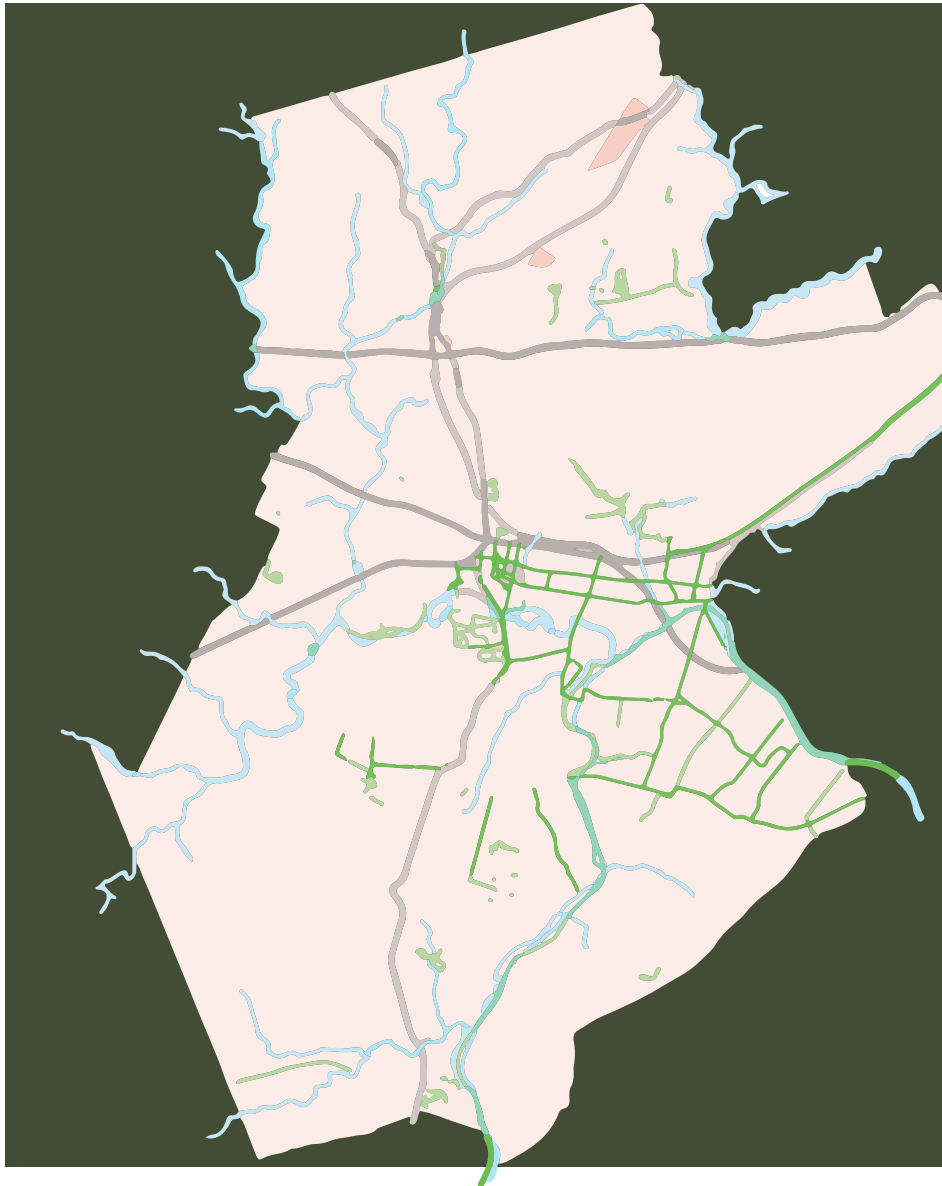
Design: Manville Shared Space



0 50 100 Feet



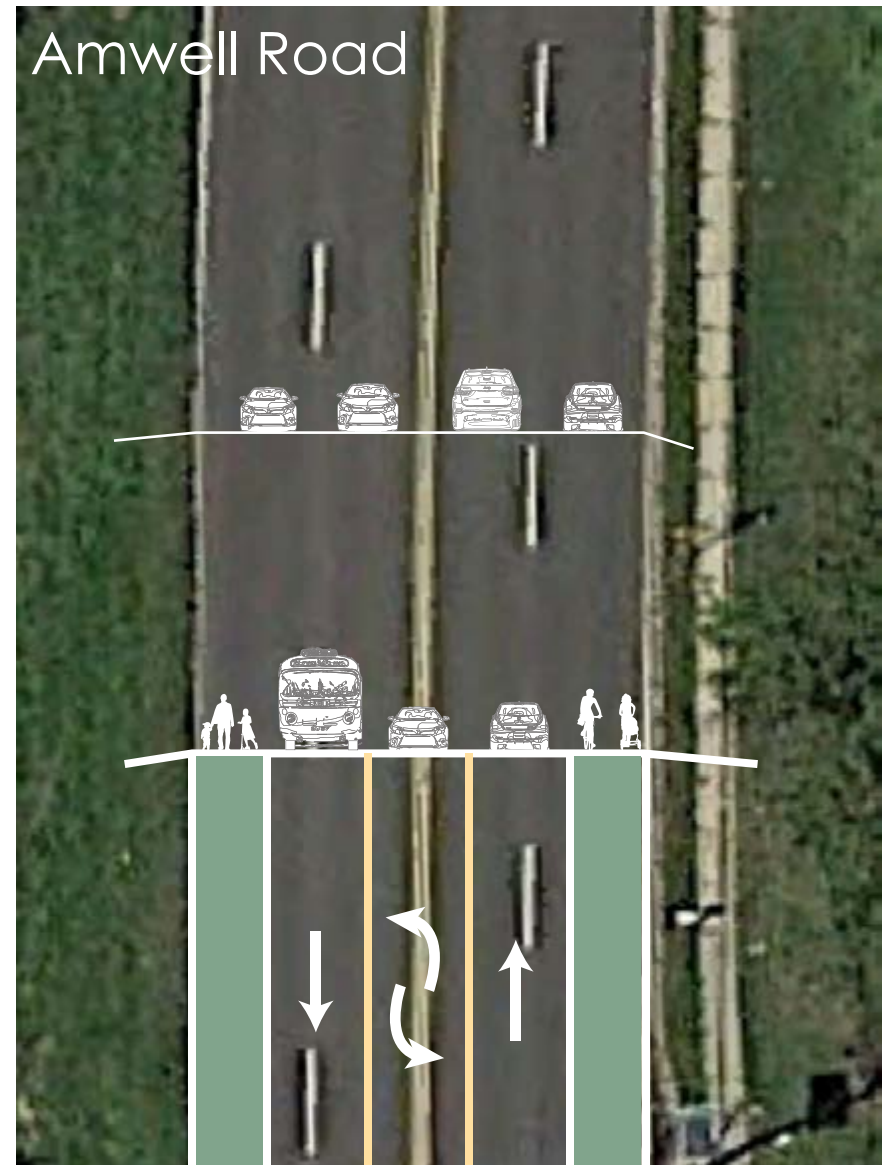
Design: Complete Streets



Complete Streets

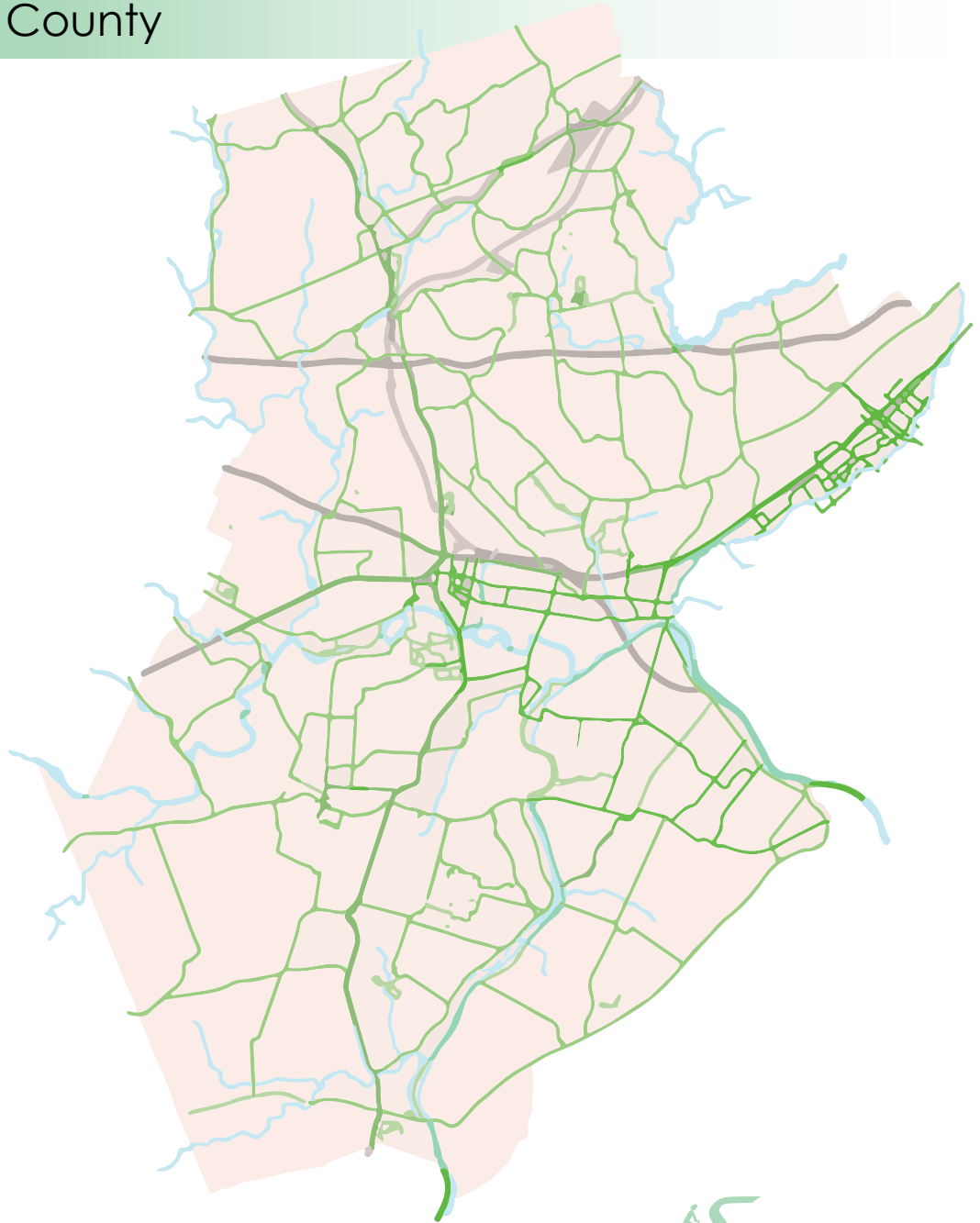
Road Diets:

- Shrinks roads by narrowing and reducing lanes
- Adds pedestrian and bike friendly access
- Makes FITransit easier and safer



0 10
Feet

Design: Connecting Somerset County



Try it Out:

Pop Up Hubs:

- Tent
- Tools
- Education
- Fun!

Road Diets:

- Cones 
- Paint 
- County Lending Library 
- Community Involvement 
- Walk to School Day 



**MOBILE
HEALTH
HUBS**



**WILDLIFE
CROSSING**



GREEN FOOD SYSTEM



FITransit



WILDLIFE CROSSING

2015 VEHICLE-ANIMAL CRASHES, NJ

County	Total Crashes	Injuries
Monmouth	901	47
SOMERSET	694	35
Morris	627	26
Hunterdon	551	28
Middlesex	531	24
Sussex	430	17
Ocean	405	12
Bergen	380	24
Warren	335	20
Essex	177	10
Passaic	168	5
Union	118	4
Hudson	28	1
NJTPA Region	5,345	253
Statewide	7,599	371

The top 3 locations for car crashes caused by deer in Somerset County:

1. U.S. 202 in Branchburg **124** accidents
2. U.S. 22 in Bridgewater **111** accidents
3. U.S. 202 in Bridgewater **61** accidents

Source: <http://www.mycentraljersey.com/story/news/local/land-environment/nj-enviro-watchdog/2016/10/18/oh-deer-6-hotspots-deer-car-crashes-central-jersey/92354974/>



Image Source: Katja Patchowsky

WILDLIFE CROSSING



Image Source: Katja Patchowsky

WILDLIFE CROSSING ON RT 78, UNION COUNTY, NJ





Image Source: Katja Patchowsky

Sound wall & fencing along the road



Image Source: Katja Patchowsky

Wildlife Bridge: Line of Sight



Image Source: Katja Patchowsky

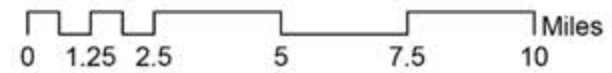
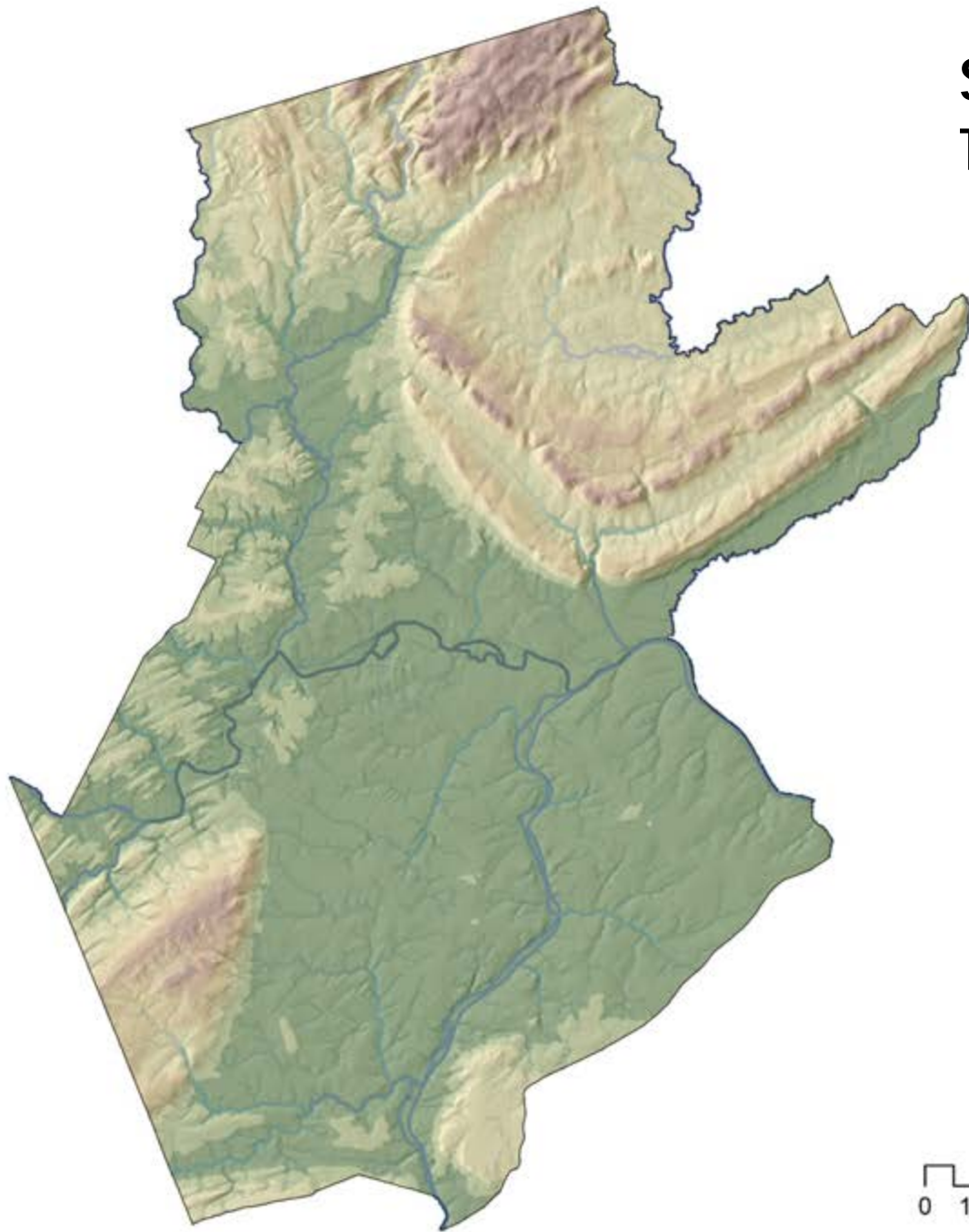
Thicket of vegetation along the fence



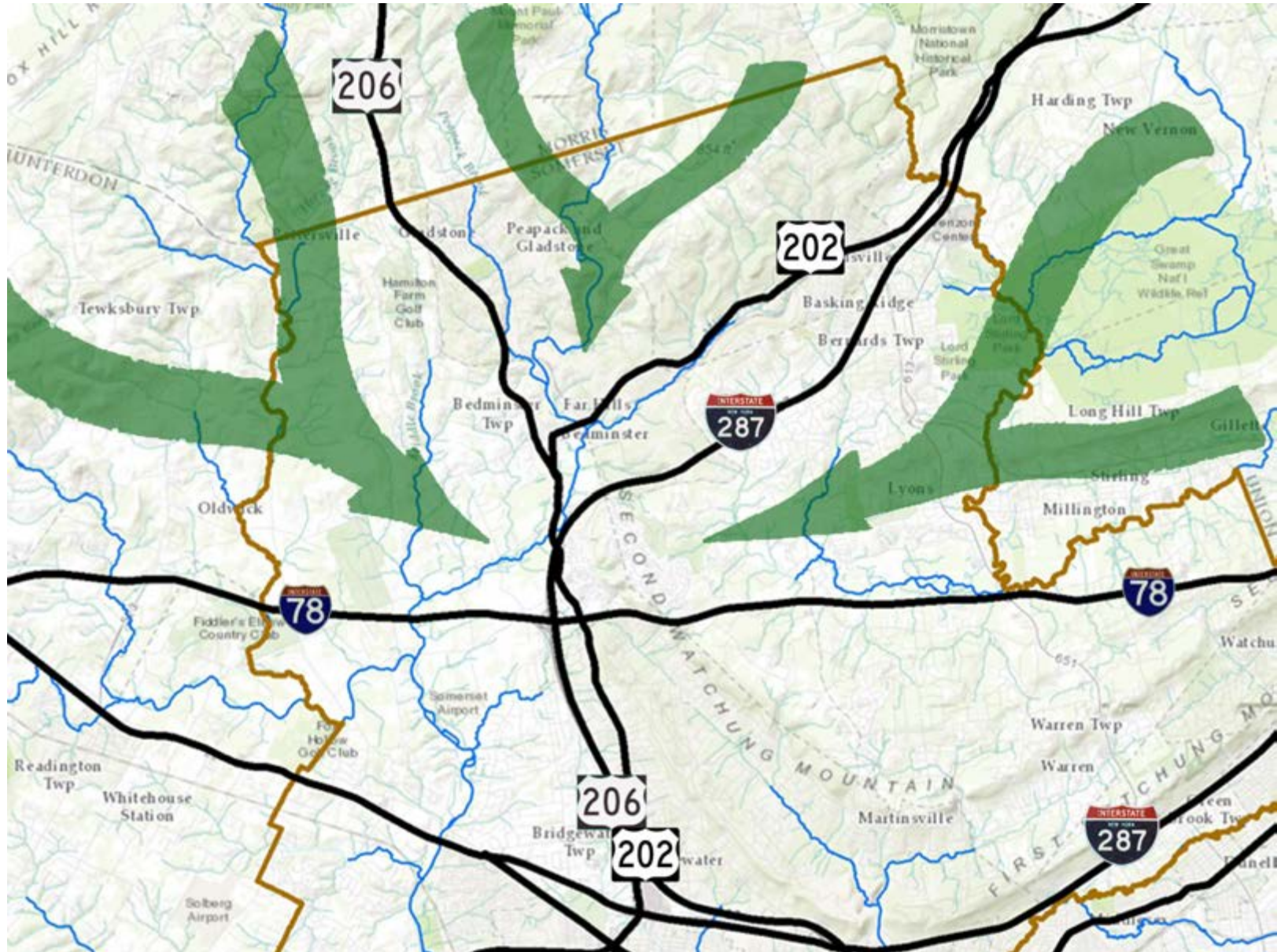
Image Source: Katja Patchowsky

View of Route 78 from the bridge

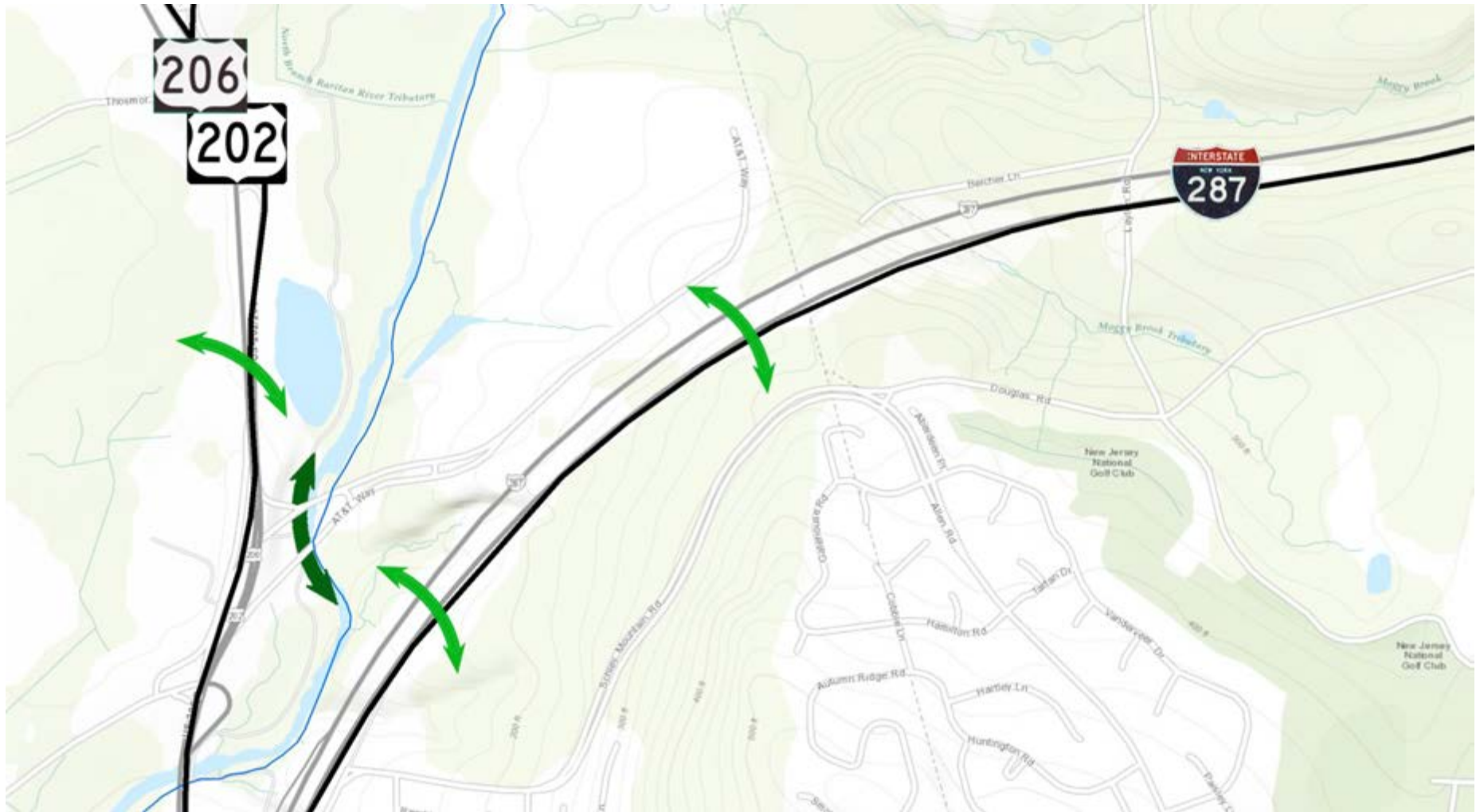
SOMERSET COUNTY TERRAIN MAP



DEER MOVEMENT WITH ROADS



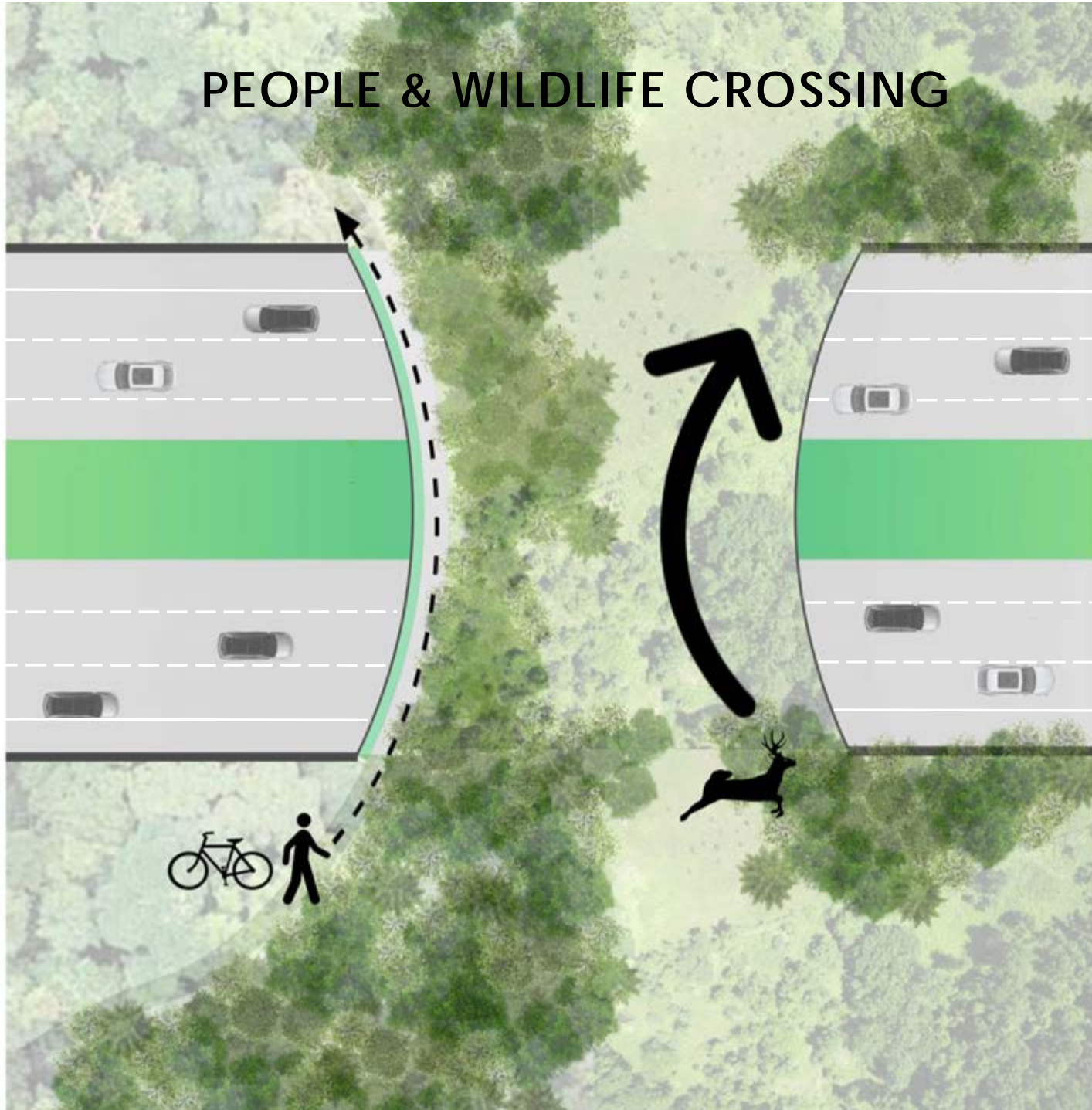
PEOPLE & DEER CROSSING SITES



PEOPLE & DEER CROSSING SITES



PEOPLE & WILDLIFE CROSSING



ROAD SECTIONS



Wildlife Crossing: Highway underneath



Wildlife Crossing: Highway above

ROAD SECTIONS: CROSSING ABOVE HIGHWAY

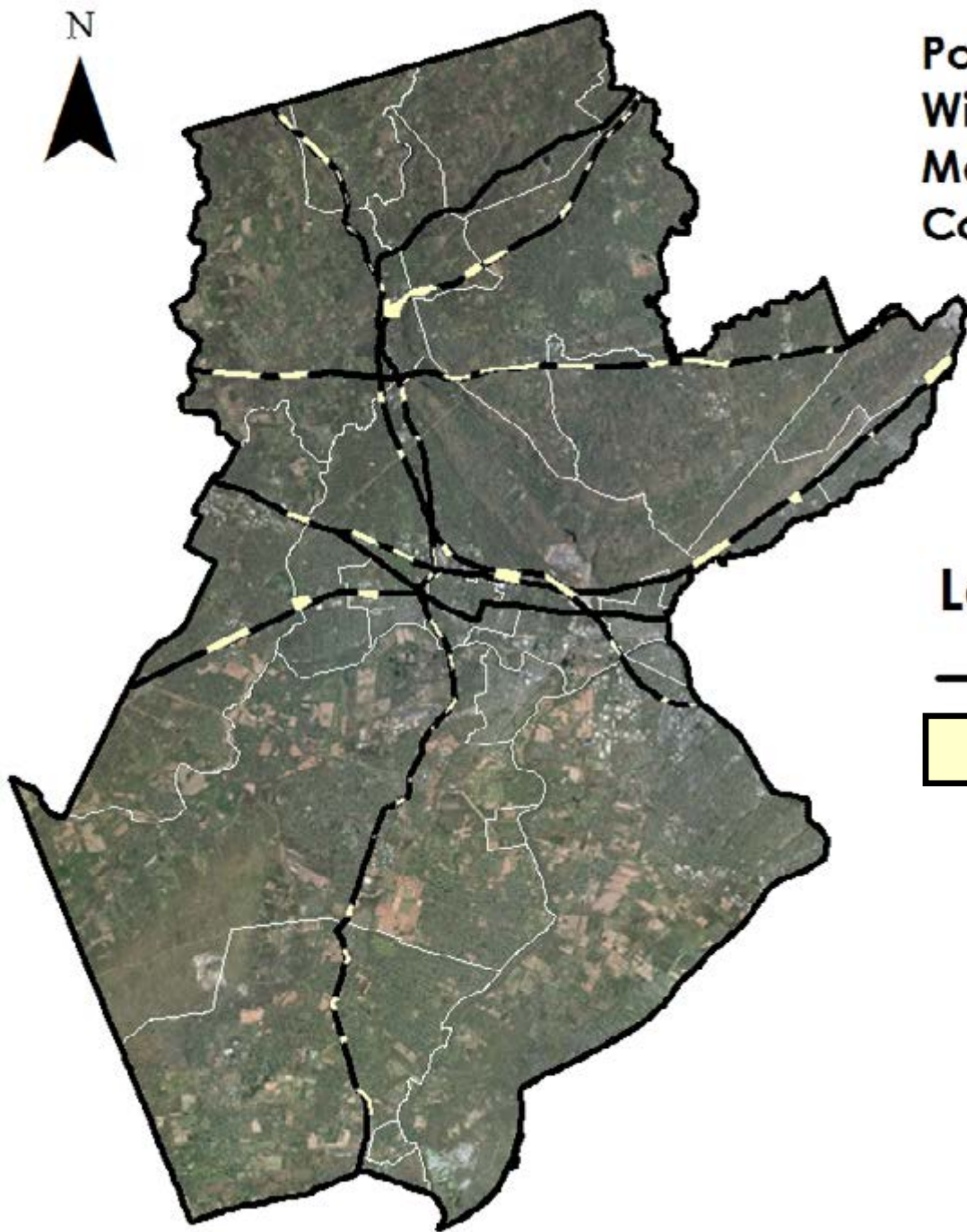


Wildlife Crossing: Highway underneath

ROAD SECTIONS: CROSSING BELOW HIGHWAY



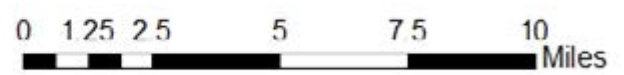
Wildlife Crossing: Highway above



Potential Areas for a Wildlife Crossing Corridor Major Routes of Somerset County Considered

Legend

- Major Routes Somerset
- ▭ Potential Wildlife Crossings



Projection: NAD NJ 1983
Map Composition: Radhika Bhagwat, Katja Patchowsky

**MOBILE
HEALTH
HUBS**



**WILDLIFE
CROSSING**

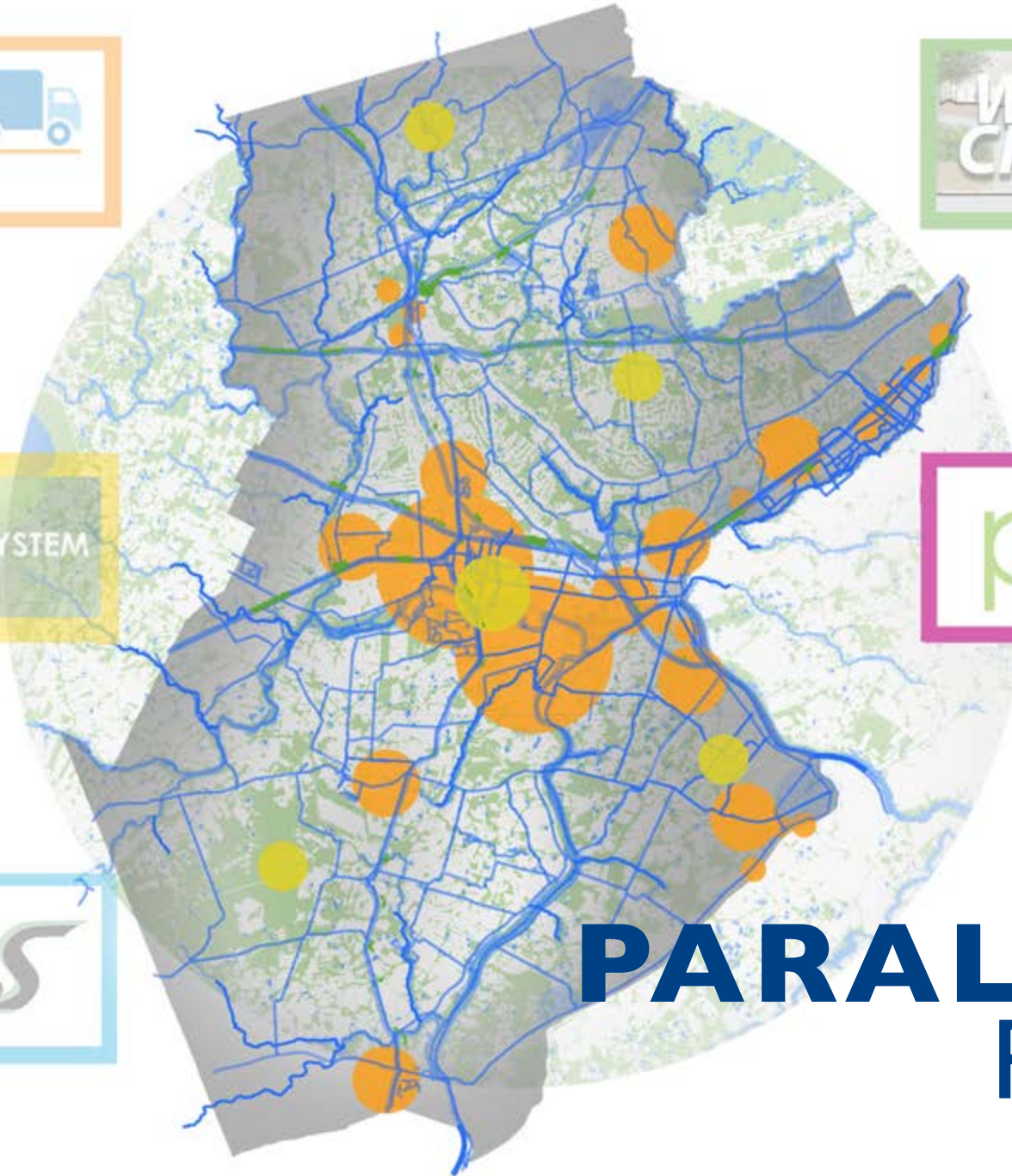
GREEN FOOD SYSTEM

play

FITransit



**PARALLEL
PLAY**



**FROM PAVEMENT TO PLAYSPACE:
A PROPOSAL FOR PARALLEL-PLAY PARKS**

play

IMPORTANCE OF PLAY



play

Photos: Somerset County, Asbury Park Press, Lake County Parks, Matheny Medical and Educational Center

branchburg bound brook
somerse edminster
millstone bridgewater
watchung franklin
montgom north plainfi
bernard green brook
far hills somerville
raritan mlsborough
manville bernardsville
peapack glastone warren
rocky hill south bound brook



CHILDREN

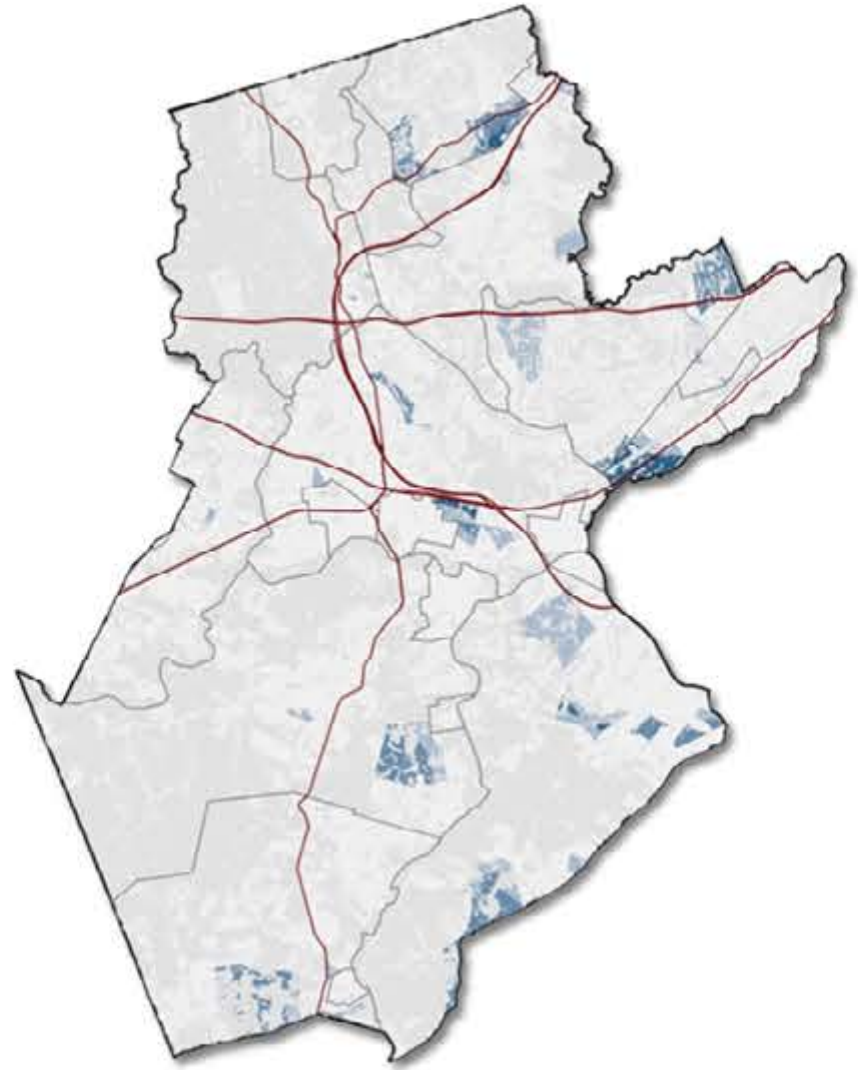


ADULTS 65+



ADULTS 65+ AND CHILDREN COMBINED

- Site analysis led to site selection
- Process of elimination
 - Visual inspection
 - Existing assets
 - Potential opportunities



TIME



Blessed are the sleek
*Warren has lost 55lb,
so far, with 35 to go.*

Time Magazine – May 2012 (Photo: Fresh Air Fitness)



Macombs Dam Park – Bronx, NY (Photo: Marilyn K. Yee/The New York Times)



Lawn on D – Boston, MA (Photo: Sasaki Associates)



RUTGERS

Franklin Township



MIDDLESEX COUNTY

SOMERSET COUNTY



N.T.S.

play

SITE SELECTION: ONE MILE CREEK



N.T.S.





Pine Grove Manor
Elementary School

Classroom
Building

School
Parking

Tabletop
Crossing

Bridge Crossing

Woodland Greenway

One Mile Creek

Community Garden

Extended
Treeline

Adult Play Areas



N.T.S.

play

COMMUNITY PLAN: PARALLEL PLAY



Pine Grove Manor
Elementary School

Classroom
Building

School
Parking

Tabletop
Crossing

Bridge Crossing

Woodland Greenway

One Mile Creek

Community Garden

Extended
Treeline

Children's Play Area

Adult Play Areas



N.T.S.

play

COMMUNITY PLAN: PARALLEL PLAY



Pine Grove Manor
Elementary School

Classroom
Building

School
Parking

Bridge Crossing

Woodland Greenway

One Mile Creek

Community Garden

Tabletop
Crossing

Phillips Rd

Extended
Treeline

Privacy Plantings

Children's Play Area

Adult Play Areas



N.T.S.

play

COMMUNITY PLAN: PARALLEL PLAY



Pine Grove Manor
Elementary School

Classroom
Building

School
Parking

Tabletop
Crossing

Bridge Crossing

Woodland Greenway
One Mile Creek

Community Garden

Extended
Treeline

Walking Loops (ADA-compliant)

Privacy Plantings

Children's Play Area

Adult Play Areas



N.T.S.

play

COMMUNITY PLAN: PARALLEL PLAY



Pine Grove Manor
Elementary School

Classroom
Building

School
Parking

Bridge Crossing
Woodland Greenway
One Mile Creek

Tabletop
Crossing

Community Garden

Extended
Treeline

- Edible Ornaments
- Walking Loops (ADA-compliant)
- Privacy Plantings
- Children's Play Area
- Adult Play Areas



N.T.S.

play

COMMUNITY PLAN: PARALLEL PLAY



Pine Grove Manor
Elementary School

Classroom
Building

School
Parking

Bridge Crossing
Woodland Greenway
One Mile Creek

Tabletop
Crossing

Community Garden

Environmental
Lab Area

Extended
Treeline

- Edible Ornamentals
- Walking Loops (ADA-compliant)
- Privacy Plantings
- Children's Play Area
- Adult Play Areas



N.T.S.

play

COMMUNITY PLAN: PARALLEL PLAY



play

PROPOSED: WOODLAND GREENWAY



play

PROPOSED: ENVIRONMENTAL LAB PROGRAM



play

PROPOSED: BRIDGING THE DIVIDE/NEW CROSSINGS



play

PROPOSED: PARALLEL PLAY PARK

BRANCHING OUT

1. MIDDLESEX COUNTY PARTNERSHIP OPPORTUNITY
2. LOWER RARITAN WATERSHED PARTNERSHIP
 1. CLEAN UP AND OTHER INITIATIVES
 2. ARTS PARTNERSHIP
3. ADDRESSING OTHER HEALTH CONCERNS
 1. DUMPING AREA
 2. HOMELESSNESS
 3. CRIME
 4. LYME DISEASE AND ZIKA
4. ADAPTABLE TO MANY OTHER AREAS AROUND THE COUNTY

**FROM PAVEMENT TO PLAYSPACE:
A PROPOSAL FOR PARALLEL-PLAY PARKS**

play

**MOBILE
HEALTH
HUBS**



**WILDLIFE
CROSSING**



GREEN FOOD SYSTEM



play



FITransit



SOMERSET +HEALTH



DESIGN OPPORTUNITIES

MENTAL HEALTH

SUBSTANCE ABUSE

SITE HISTORY

FARMLAND PRESERVATION

DISEASE CLUSTERS

FLOODING

POLLUTION

**MOBILE
HEALTH
HUBS**



**WILDLIFE
CROSSING**



GREEN FOOD SYSTEM



play



FITransit



SOMERSET +HEALTH