



RUTGERS-NEW BRUNSWICK

**Edward J. Bloustein School
of Planning and Public Policy**

Alan M. Voorhees Transportation Center

15-Minute Neighborhoods

A Pathway to creating healthier, more just, resilient and sustainable communities in New Jersey

Presented by: Jon Carnegie

Date: April 19, 2024

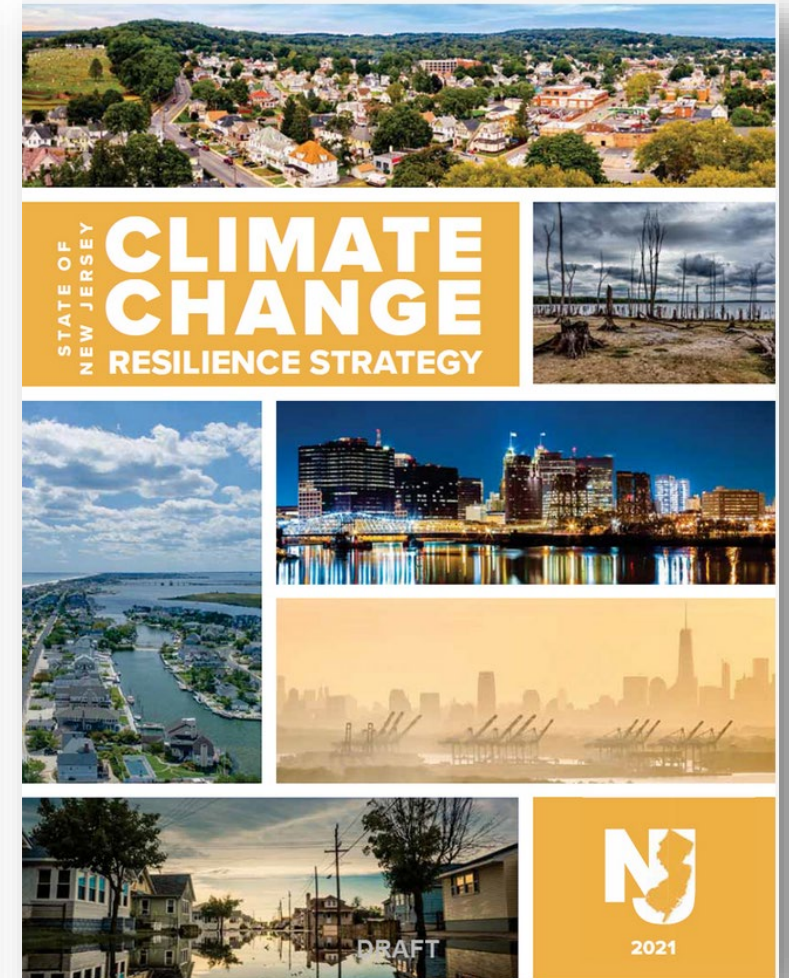
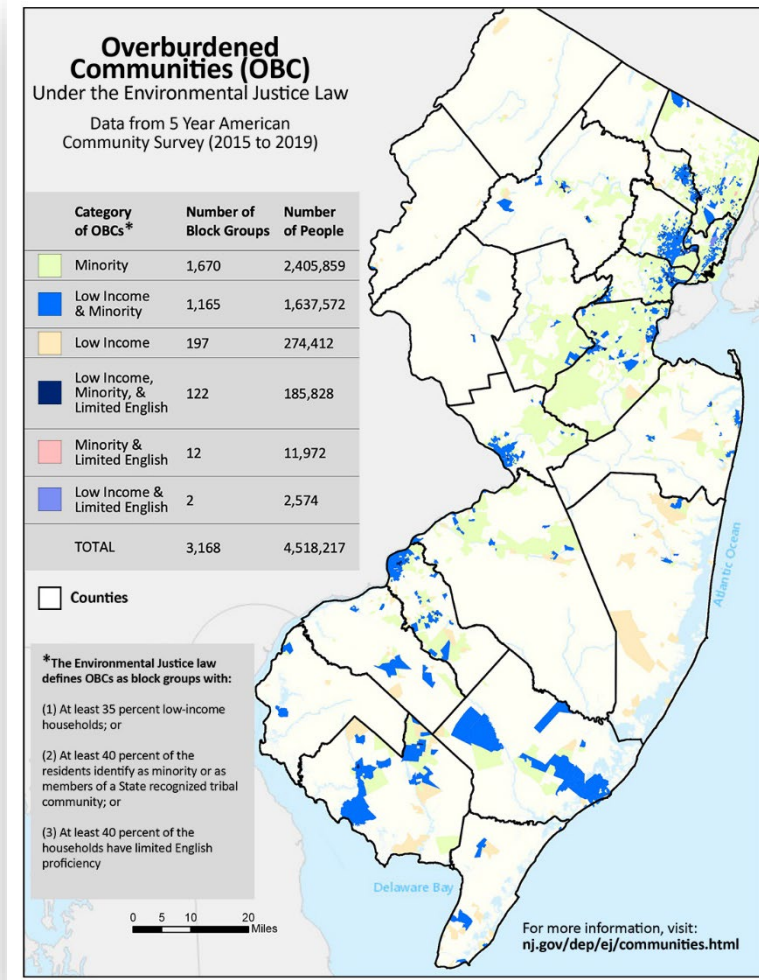
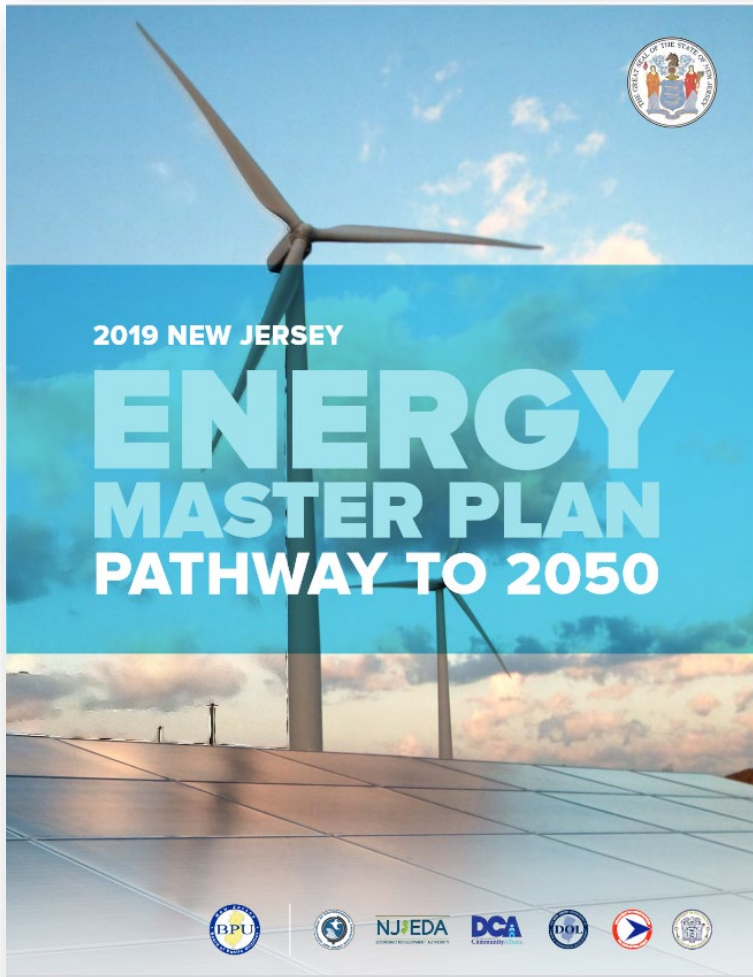
1

Background



RUTGERS-NEW BRUNSWICK
Edward J. Bloustein School
of Planning and Public Policy
Alan M. Voorhees Transportation Center

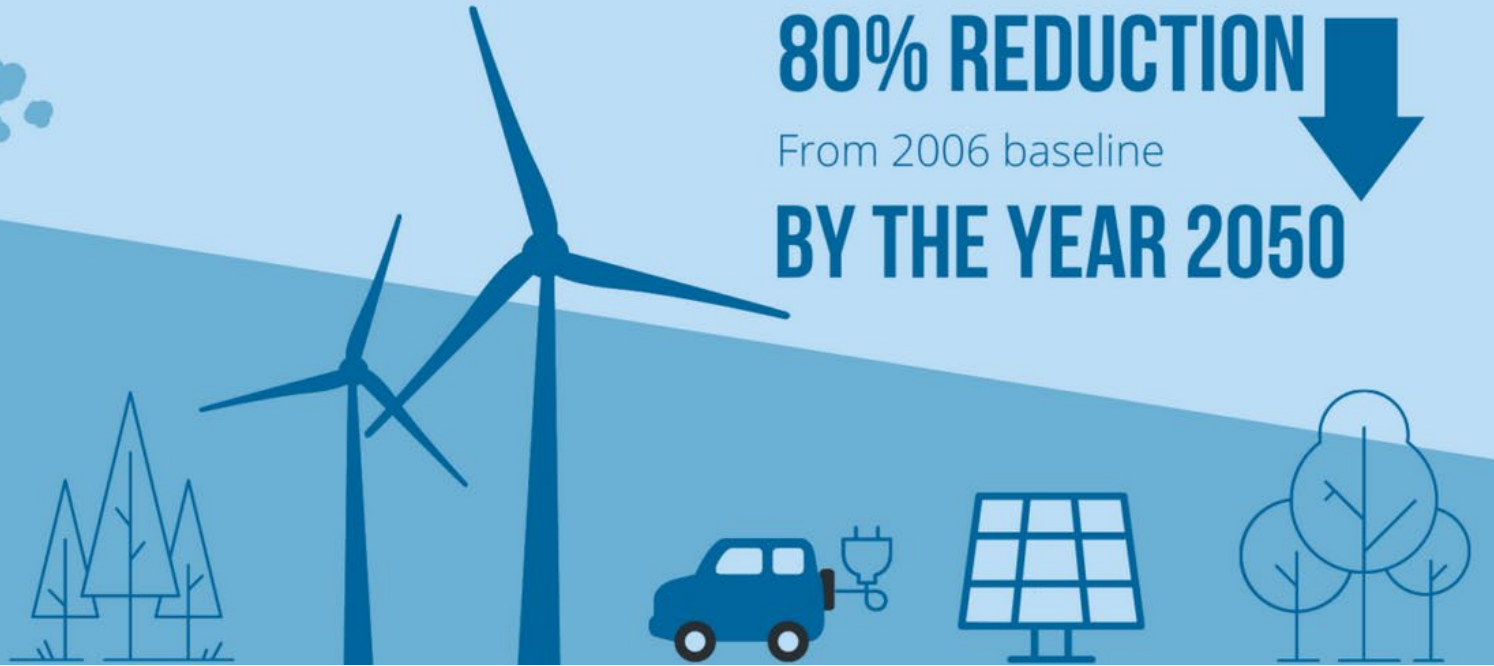
Changing policy dynamics at the State and national levels



New Jersey Emissions Targets

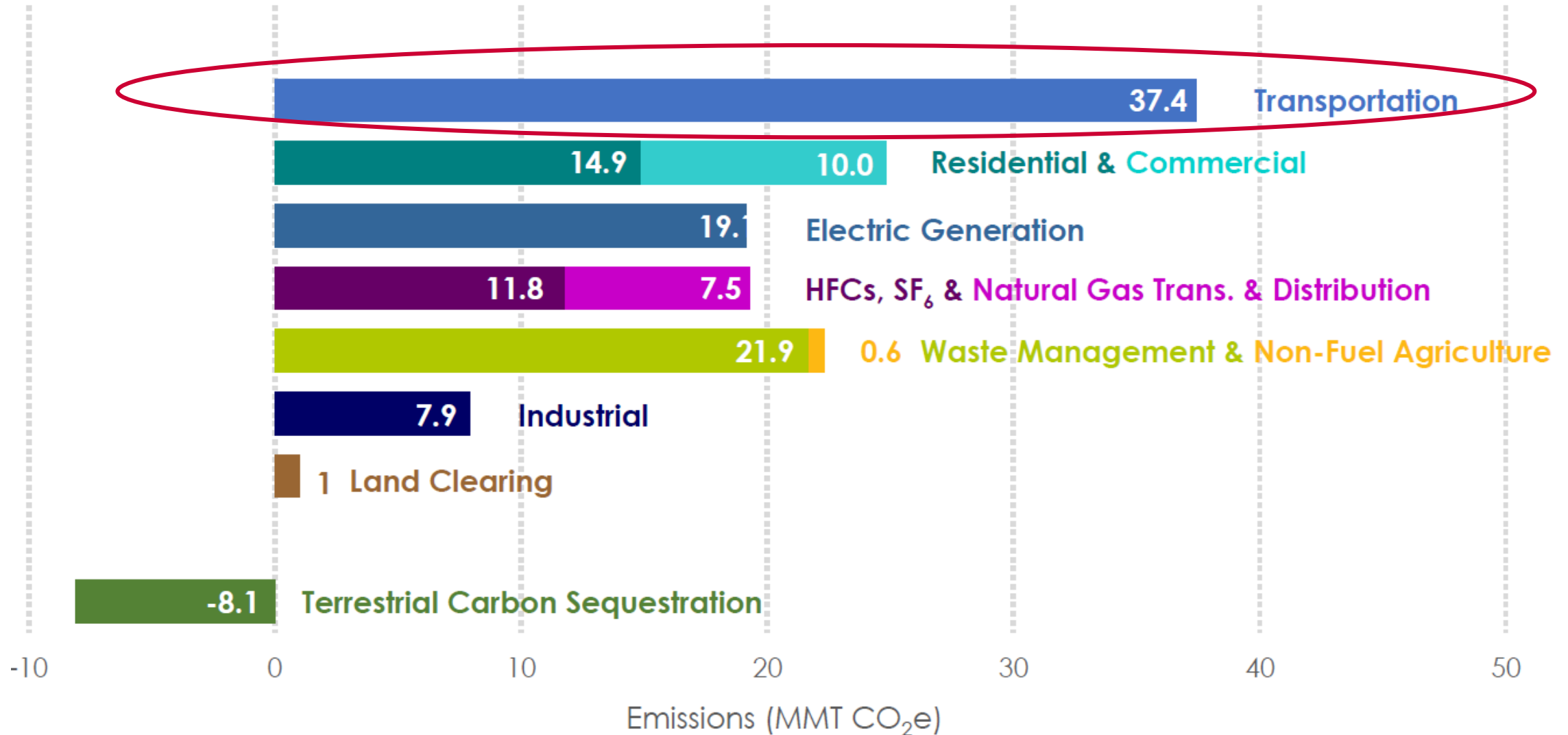
50% REDUCTION ↓
From 2006 baseline
BY THE YEAR 2030

80% REDUCTION ↓
From 2006 baseline
BY THE YEAR 2050

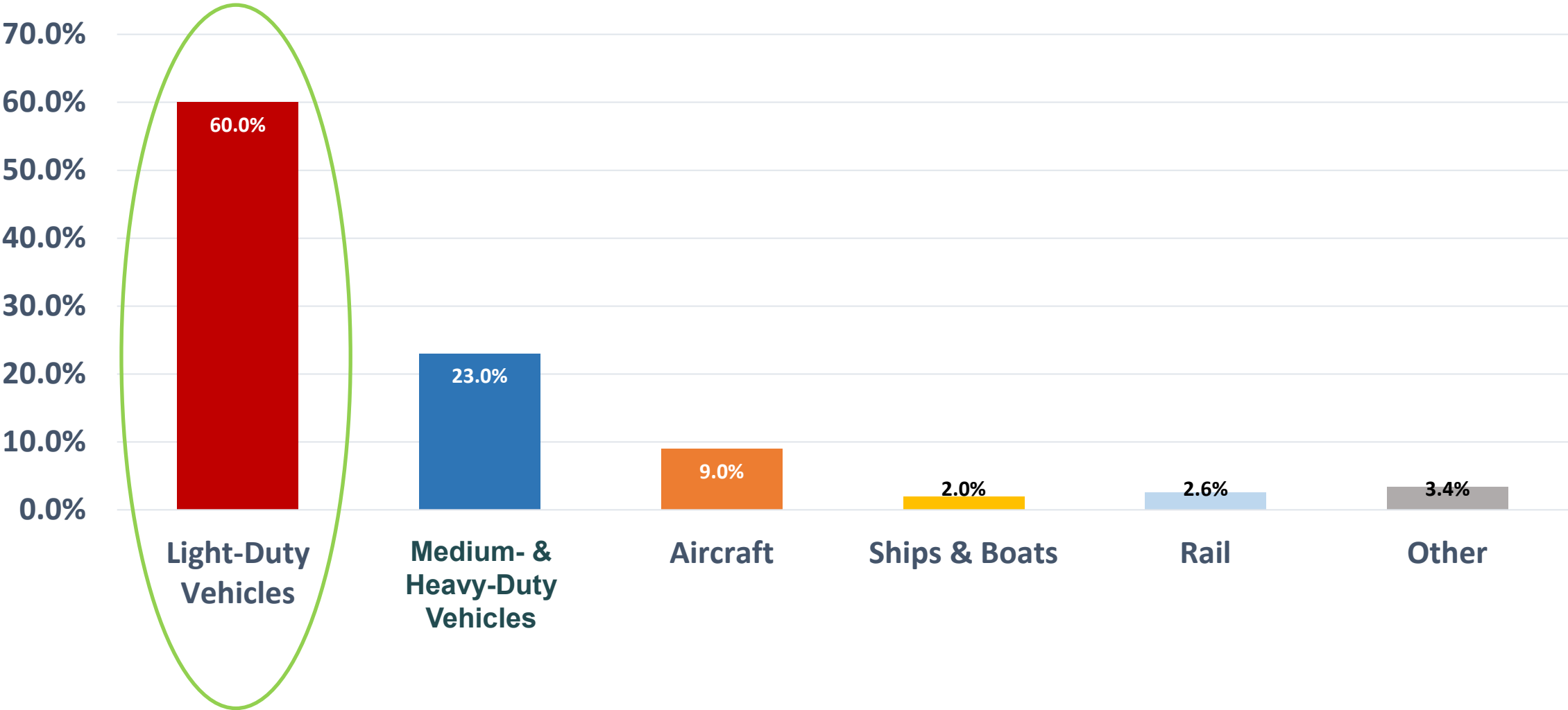


Source: NJ Department of Environmental Protection

2021 NJ Emissions by Sector (GWP₂₀)



Transportation Sector Emissions



Source: Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2015 (EPA, 2017)

2

Project overview



RUTGERS-NEW BRUNSWICK
Edward J. Bloustein School
of Planning and Public Policy
Alan M. Voorhees Transportation Center

Project overview



Phase 1

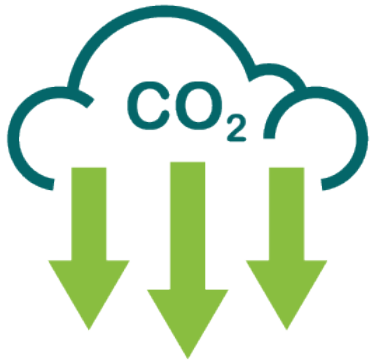
- Leading practice scan
- Data analysis
- Mapping existing conditions
- County visioning workshops

Phase 2

- Select three locations
- Create neighborhood-scale vision plans
- Develop statewide recommendations

Funding provided by:





MOBILITY



Healthy. Improve health outcomes for people and communities by improving air quality and making it easier and safer to walk and bike.



Just. Promote **equity** by making travel by transit more reliable and convenient and by enhancing access to opportunity for marginalized groups.



Efficient. Increase transportation system efficiency and effectiveness by integrating advanced and emerging transportation technologies and modes.



Resilient. Adapt infrastructure to climate hazards and ensure services are flexible and responsive to change and well coordinated.



Carbon Neutral. Reduce energy use and emissions of all kinds by facilitating a transition to CO2-neutral transportation.

3

Phase 2 - Case studies

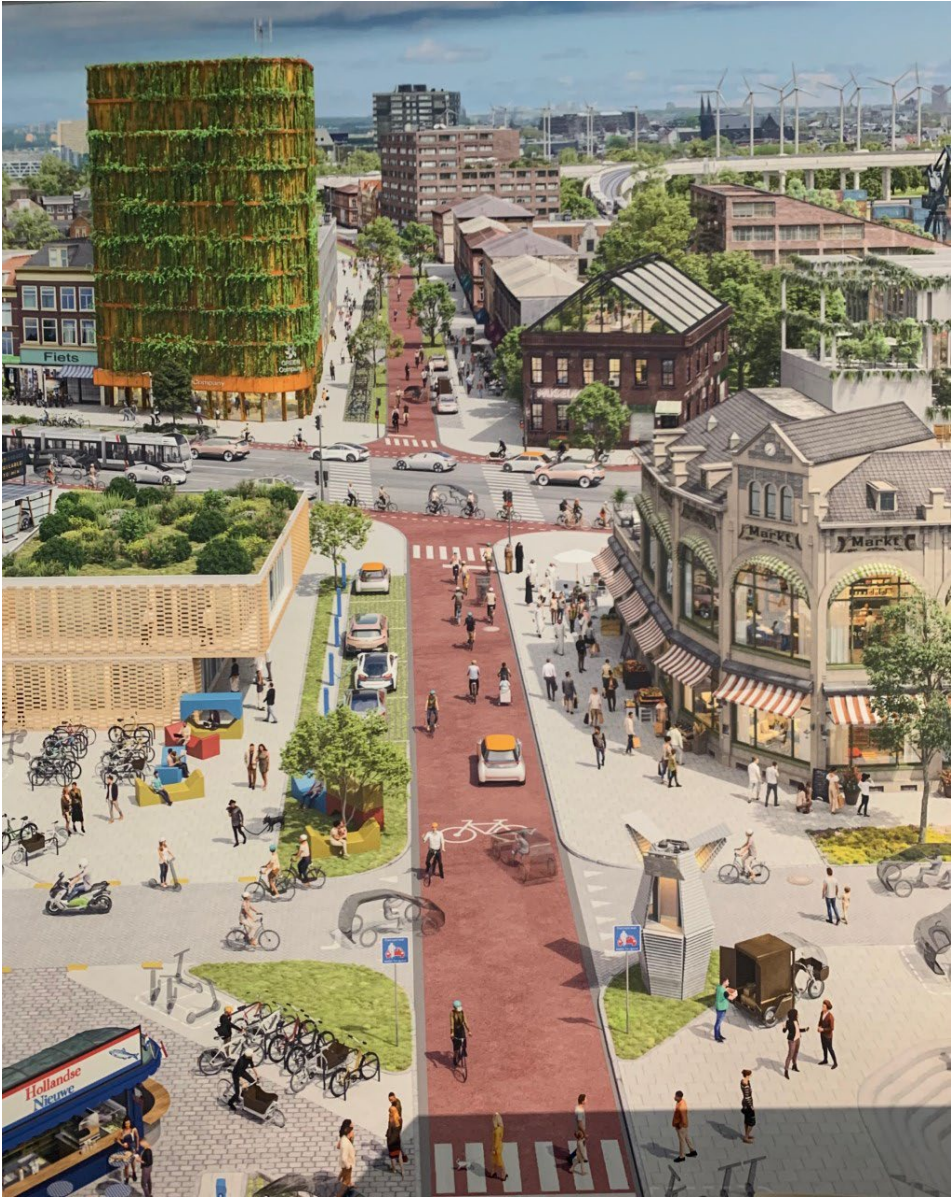
Bridgeton, Cherry Hill, Newark



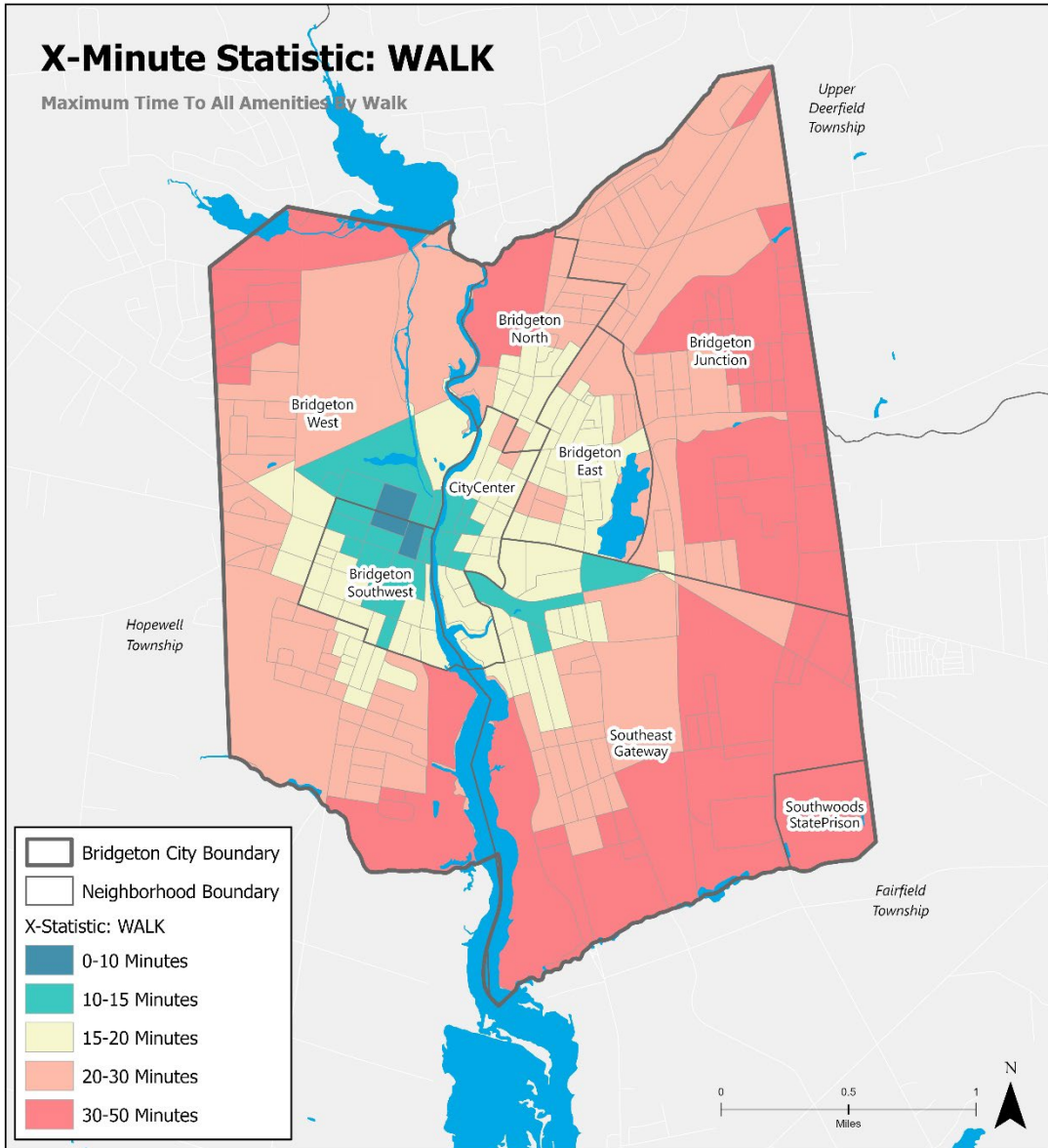
RUTGERS-NEW BRUNSWICK
Edward J. Bloustein School
of Planning and Public Policy
Alan M. Voorhees Transportation Center

15-minute Cities/Neighborhoods Planning Model

Proximity, Accessibility, & Complete Neighborhoods

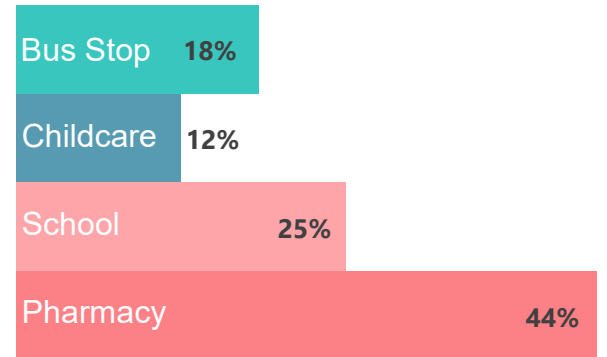
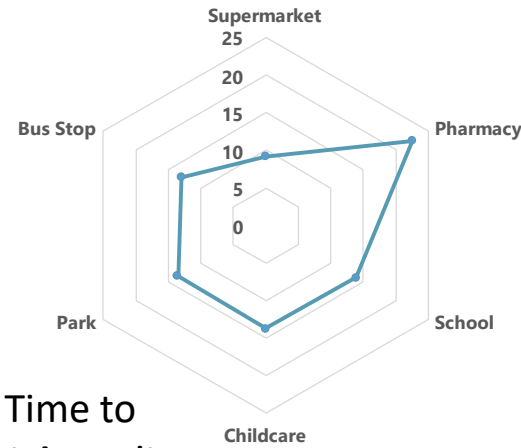


X-Minute Statistics - Bridgeton



Walk

- Only **13%** of the people in Bridgeton have all essential amenities located within 15-minutes by walk from their blocks
- People in Bridgeton must travel **25 minutes** by walk on average to reach all the amenities
- 50% of the people in Bridgeton must travel **21 minutes** by walk to reach the furthest amenity from their blocks
- The 90th percentile time that people in Bridgeton must travel to reach the furthest amenity by walk is **33 minutes**



Max Time to Furthest Amenity

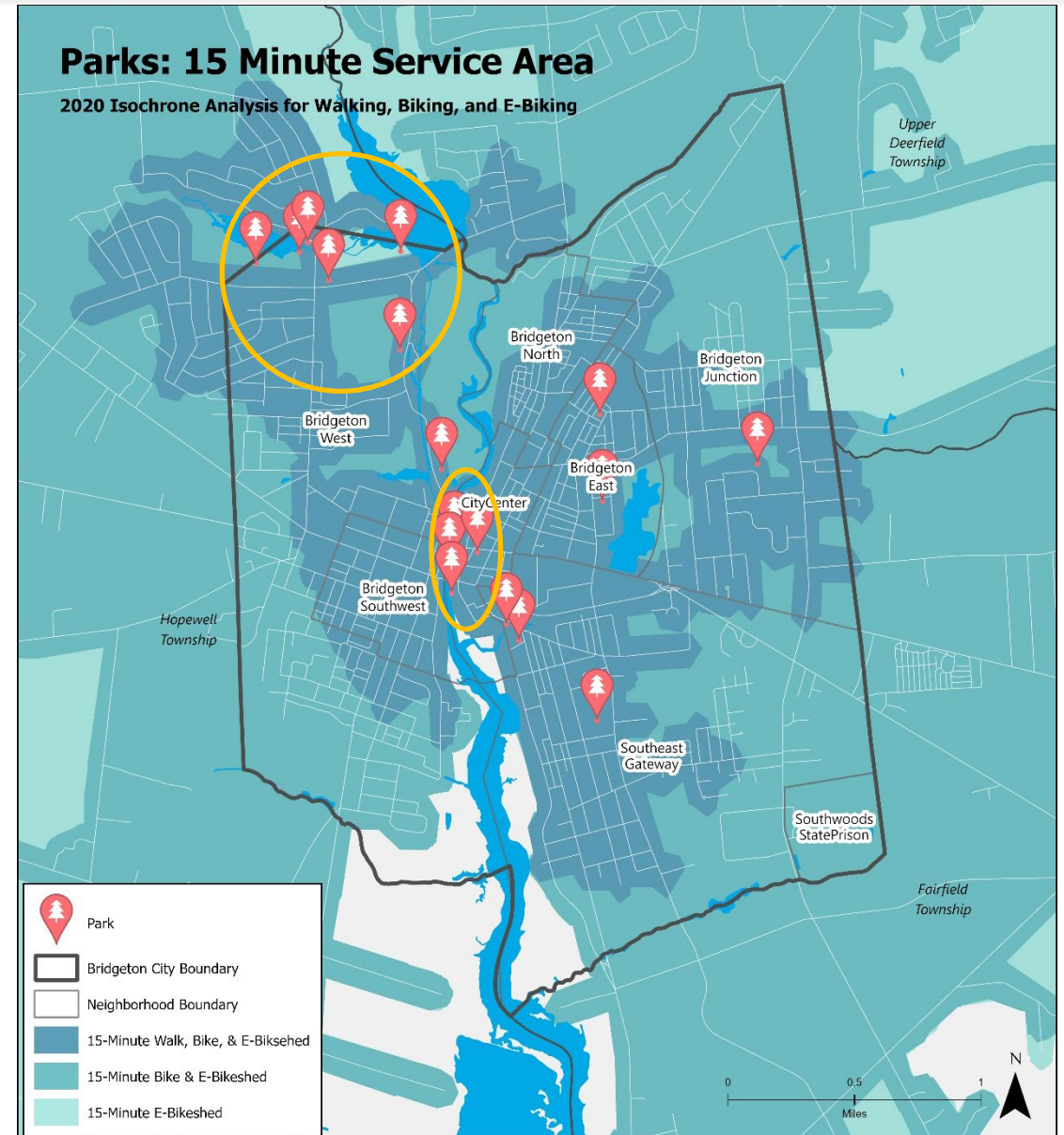
% of Blocks and Furthest Amenity

Isochrone Analysis - Bridgeton

Overview

- **17 Parks in Bridgeton**
 - 2 Large Parks
 - 15 Neighborhood Parks
 - Most concentrated in the City Center and Bridgeton West
- **Low Access Neighborhoods (Walk)**
 - Southeast Gateway
 - Most severe for % families below poverty level
 - Bridgeton West
 - Bridgeton North
 - Bridgeton Junction

Proportion of people within 15-min of the amenity

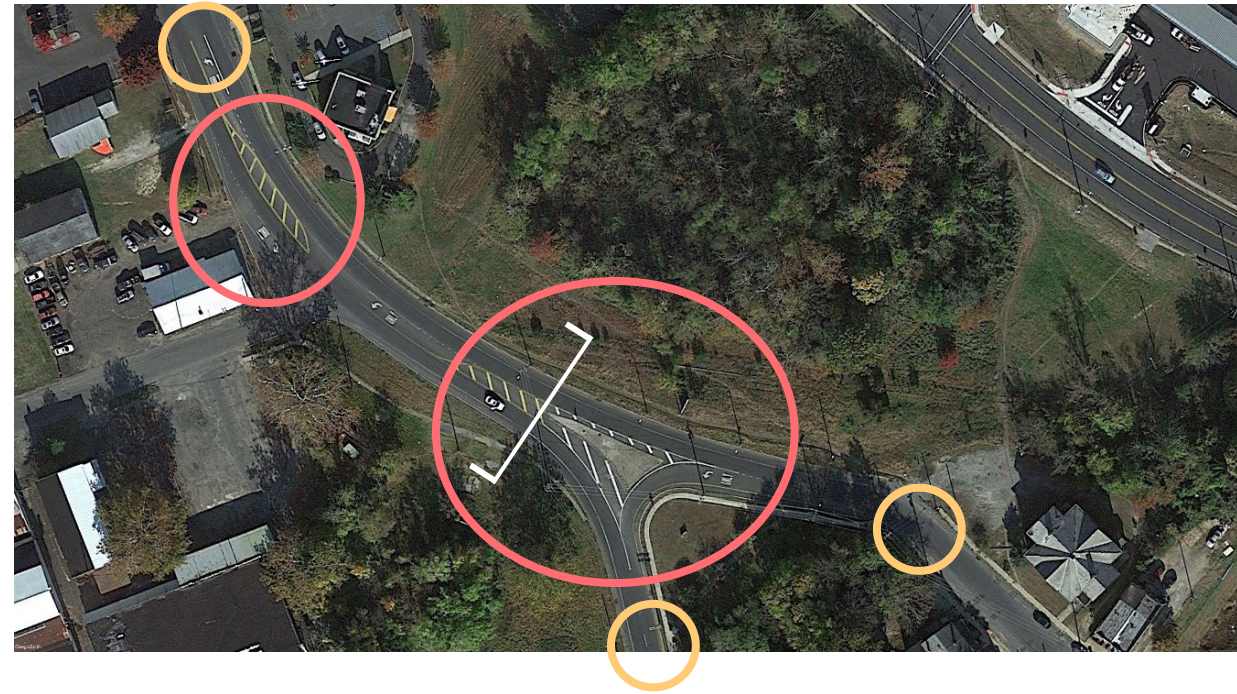


Source: Team Bridgeton Analysis

Recommendation Example – Bridgeton

Improve pedestrian infrastructure, enhance public safety, and promote sustainable best practices.

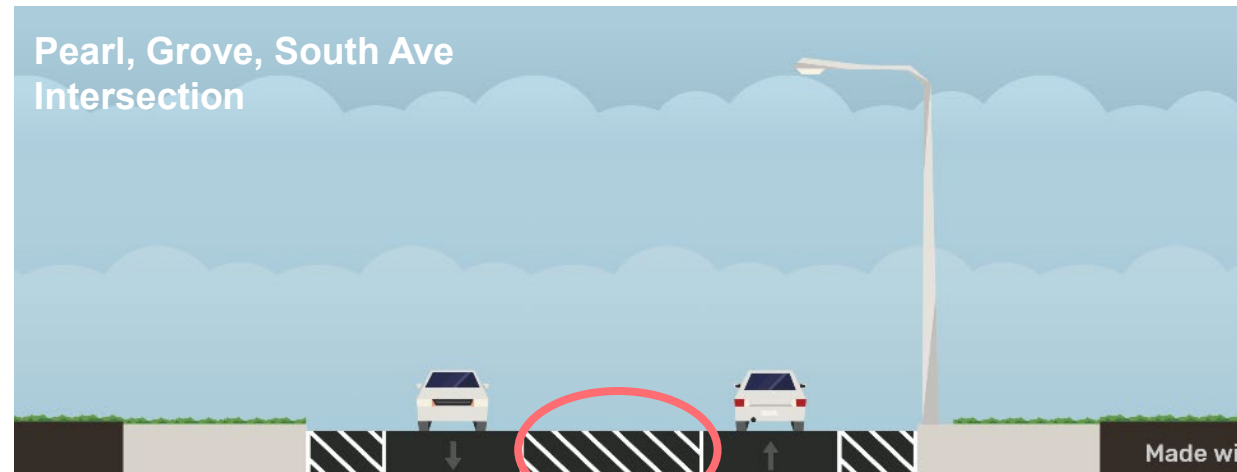
- Extend, widen, and repair sidewalks
- Create safe and frequent crosswalks
- Expand street lighting coverage
- Add dedicated bike lanes where feasible
- Introduce green infrastructure along streets



Source: City of Arlington, VA



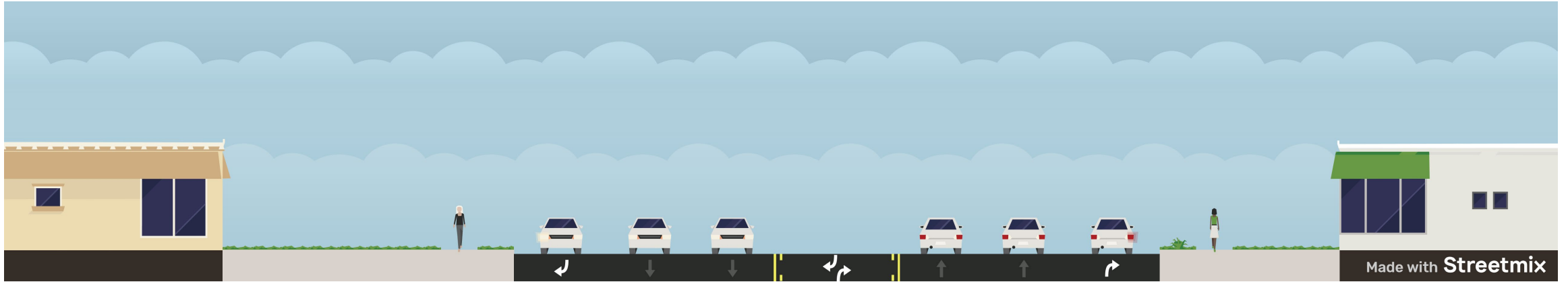
Source: street-plans.com



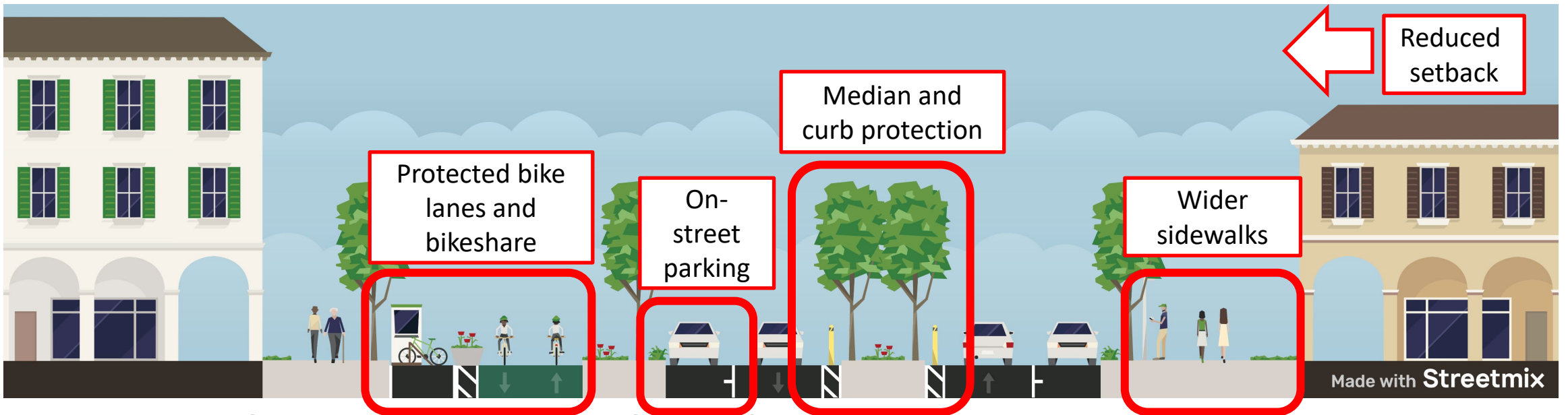
Source: Street Mix

Recommendation Example – Cherry Hill

Present



Future Vision



Recommendation Example- Newark



Nature based solutions - stormwater management

- Address runoff
- Encourage green buildings
- Reduce impervious surfaces
- Manage stormwater from streets
 - Bioswales
 - Planters
 - Rain Gardens



4

Results

Literature, leading practices, stakeholder outreach, case studies



RUTGERS-NEW BRUNSWICK
Edward J. Bloustein School
of Planning and Public Policy
Alan M. Voorhees Transportation Center

Findings



Complete streets and active transportation ...

provide a path to improved safety, health, and connectivity, and lower greenhouse gas emissions.



New transportation technologies ...

such as e-bikes and e-scooters have the potential to bring about transformative change.



Green infrastructure ...

and nature-based solutions will be key to addressing climate impacts.



Planning and zoning reforms ...

are needed to facilitate the creation of “complete” 15-minute neighborhoods.



Placemaking and activity programming ...

can increase economic activity, recreation, and entertainment opportunities, promote a sense of community, and foster active mobility and living



Better coordination and creative partnerships ...

between jurisdictions, levels of government, and the private sector are essential to creating a healthier, more just, resilient, and sustainable New Jersey.



Details matter.

Well-designed and maintained streets and sidewalks are essential for people to feel safe and empowered to drive less and walk, bike, and take transit more.

Healthier

People are walking and biking more and driving less. Physical activity is increased, and air quality is improved, leading to reductions in obesity and chronic conditions such as diabetes, heart disease, and asthma. Expanding the tree canopy cools the air, especially in urban areas, reducing the risk of extreme heat.

More Just

All age and income groups can access affordable, convenient, and safe transportation, including extensive and well-maintained sidewalks, bicycle lanes and paths, and improved public transit. Incentives dramatically expanded the number of e-bikes, which are the mode of choice for local trips.

Resilient

Communities are better prepared for extreme weather. Investments in green infrastructure such as tree canopy, rain gardens, and wetlands restoration have resulted in less impervious surface, improved stormwater management, and cooler air temperature.

Sustainable

Emissions in New Jersey are reduced 80%. EVs are nearly 100% of the vehicle fleet. Vehicle Miles Traveled (VMT) are down more than 50%. Expanded tree canopy and green streets reduce air pollution, stormwater runoff, and flooding, improve water quality, and sequester carbon.

Effective Governance

These accomplishments would not have been possible without extensive public engagement; cooperation among jurisdictions, levels of government, and private and nonprofit sectors; and State and Federal funding, especially from the 2021 Bipartisan Infrastructure Law.

VISION

80% of NJ residents in complete, 15-minute neighborhoods



+10,000
miles of protected
bicycle lanes

50,000

low-income residents
receive incentives worth
50% of e-bike purchase



+1.5
million NJ house-
holds with e-bikes

TARGETS

	2035	2050
Increase in transit ridership	15%	50%
Residents with access to high-frequency transit	40%	60%
Reduction in per driver VMT	30%	50%

10% reduction in
impervious cover

Tree cover in every municipality:

40%



5

Planning and policy opportunities

Local, regional, and state-level actions



RUTGERS-NEW BRUNSWICK
Edward J. Bloustein School
of Planning and Public Policy
Alan M. Voorhees Transportation Center

1

Embrace the 15-minute neighborhood planning model.

2

Develop and implement a statewide VMT reduction strategy.

3

Encourage active transportation and expand the availability of micromobility options.



5

Create a statewide e-bike incentive program.



4

Create the first-in-the-nation, statewide network of protected bicycle lanes designed to improve safety, increase access to local destinations, and facilitate longer trips that connect to regional destinations.



6 Make it more convenient and attractive to use public transit and expand transit service where feasible.



7 Integrate nature and green infrastructure in community design.



8 Adapt communities and infrastructure for climate change.



9 Plan and zone for people and places.

10 Advance effective government decision-making.





THANK YOU!

You can find me at:

- ◆ carnegie@rutgers.edu
- ◆ 848-932-2840



RUTGERS-NEW BRUNSWICK
Edward J. Bloustein School
of Planning and Public Policy
Alan M. Voorhees Transportation Center