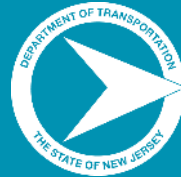


Complete Streets 101

Implementation & Design

Rutgers University, New Brunswick, NJ
September 24, 2019



Today's Presenters

- Michael Dannemiller, NV5
- Peter Kremer, WSP USA
- Anne Heasly, Sustainable Jersey
- Jennifer Duckworth, Tetra Tech,
Millburn Pedestrian Safety
Advisory Board



Today's Schedule

Activity		Time
Welcome & Introduction		1:45 – 1:50
What are Complete Streets?	Mike D	1:50 – 2:00
CS New Jersey & US Resources	Pete K	2:00 – 2:10
Organizing CS Groups	Anne Heasley	2:10 – 2:20
Getting a Municipal Group Started		Jen D 2:20 – 2:30
<i>Wrap Up & Questions</i>		<i>2:30 – 2:45</i>


Please Introduce Yourself

- Name and affiliation
- Your involvement with Complete Streets to date (if any)
- What one thing would you like to get from this training?





What are Complete Streets?



Complete Streets are designed for safe access by all users, all travel modes, and all abilities.

They balance the needs of drivers, pedestrians, bicyclists, transit, emergency responders, and goods movement based on local context.

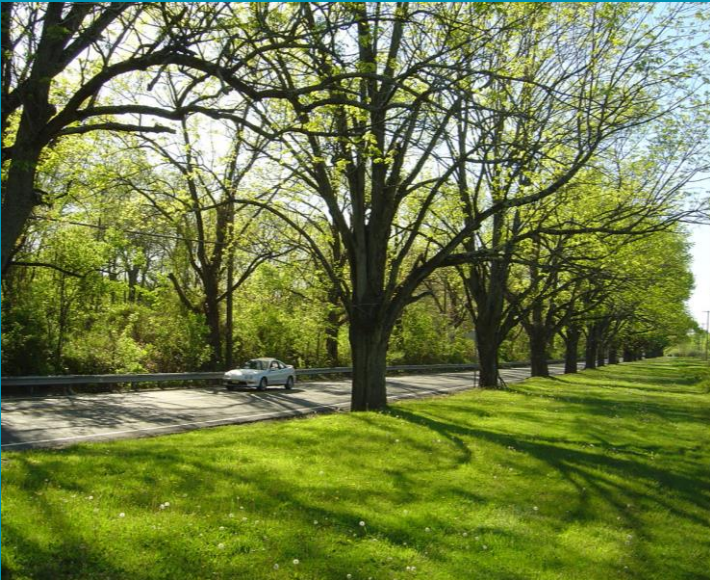


Complete Streets are designed for safe access by all **users**, all **travel modes**, and all **abilities**.

They balance the needs of drivers, pedestrians, bicyclists, transit, emergency responders, and goods movement **based on local context**.

It's all about Local Context

- Who uses the street?
- How is it used?
- Local development, land use, and density
- Natural environment
- Support local economy and activities
- Each community, street, and design is unique



Group Discussion:

Is this Street Complete or Incomplete?



Bridge Avenue (CR 632)

Location: Point Pleasant, NJ

County: Ocean

Context: Strip Commercial

Lane Width: 12 ft

Shoulder Width: 7 ft

Parking: No

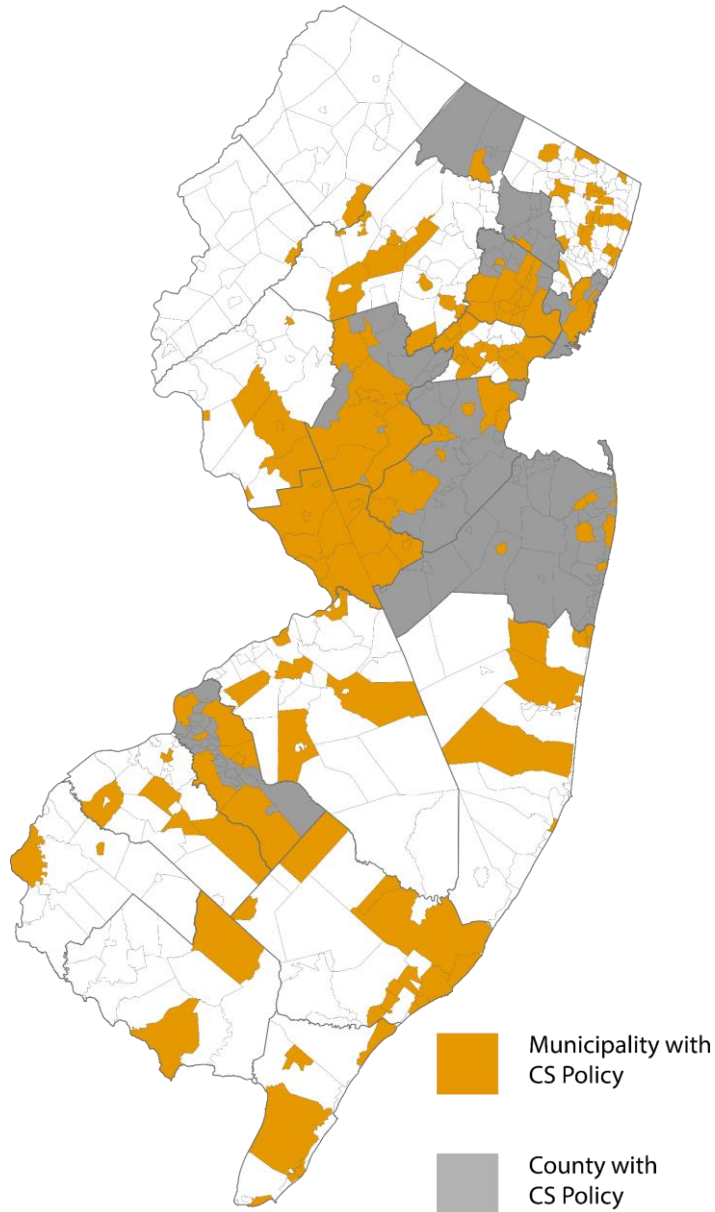
Posted Speed: 35 MPH

Volume: 11,000 AADT

Complete or Incomplete?



Status of Policy Adoption in New Jersey



As of August, 2019 – 159 New Jersey municipalities and eight counties have adopted Complete Street policies.

Communities of every type have made designing streets for all users, modes and ability levels their official policy.

The guide provides an overview of why Complete Streets are gaining traction in New Jersey.

Today's Presenters

- Michael Dannemiller, NV5
- **Peter Kremer, WSP USA**
- Anne Heasley, Sustainable Jersey
- Jennifer Duckworth, Tetra Tech,
Millburn Pedestrian Safety
Advisory Board



Why Complete Streets?



Health & Wellness

Economic Vitality

Livability

Equity

Personal Mobility

Safety

Travel Mode Choice

Environment





Safety Benefits

Complete Streets improvements can provide safety benefits in all contexts



Better facilities on high speed arterials provide better separation and safer routes



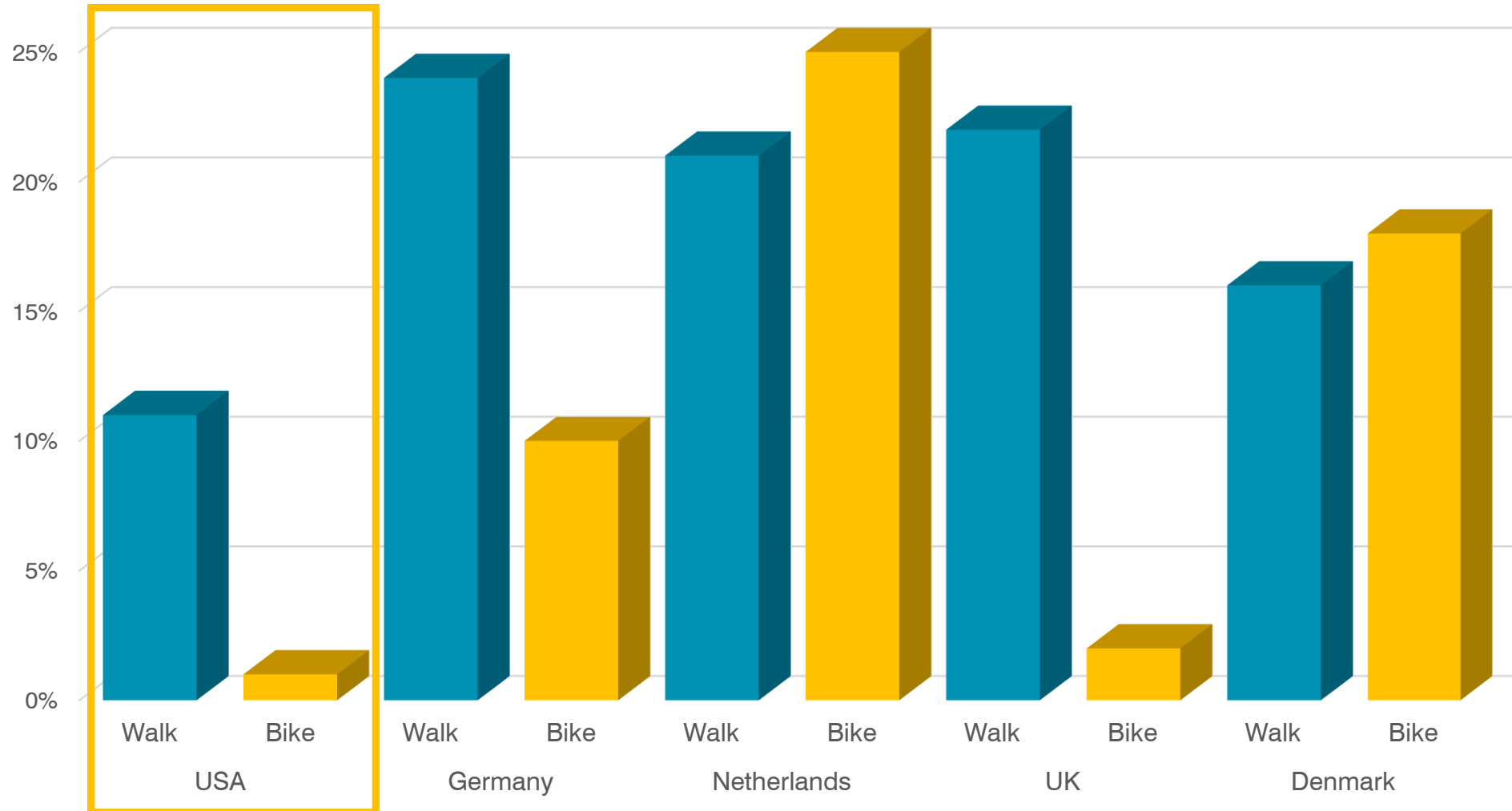
Lower speeds reduces fatalities

HIT BY A VEHICLE
TRAVELING AT...



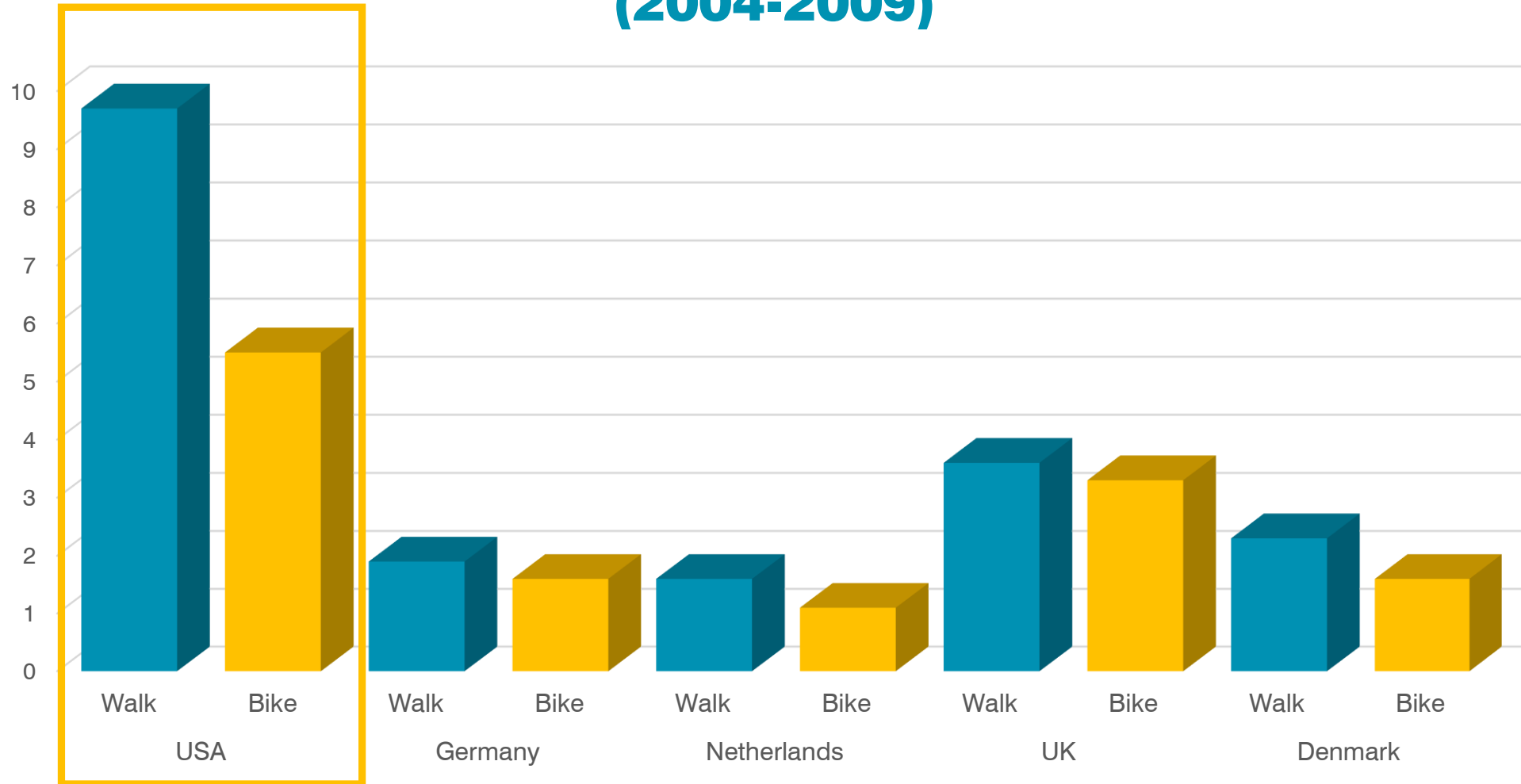
Travel Mode: U.S. Compared to Europe

Mode Share of All Trips (2009)



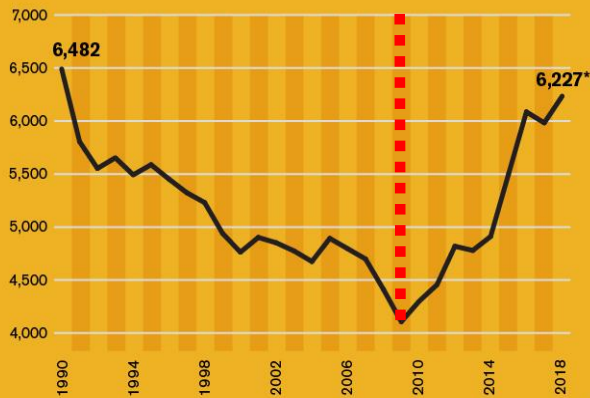
Exposure and Risk: U.S. Compared to Europe

**Fatality Rates per 100,000 Km Traveled
(2004-2009)**



What Do The Numbers Tell Us About Safety?

*2018 is projected to have the **largest number of pedestrian fatalities** in the U.S. since 1990.



From 2008-2017, **pedestrian fatalities** increased by 35%. When combined, **all other traffic deaths** decreased 6% over the same period.



GHSA

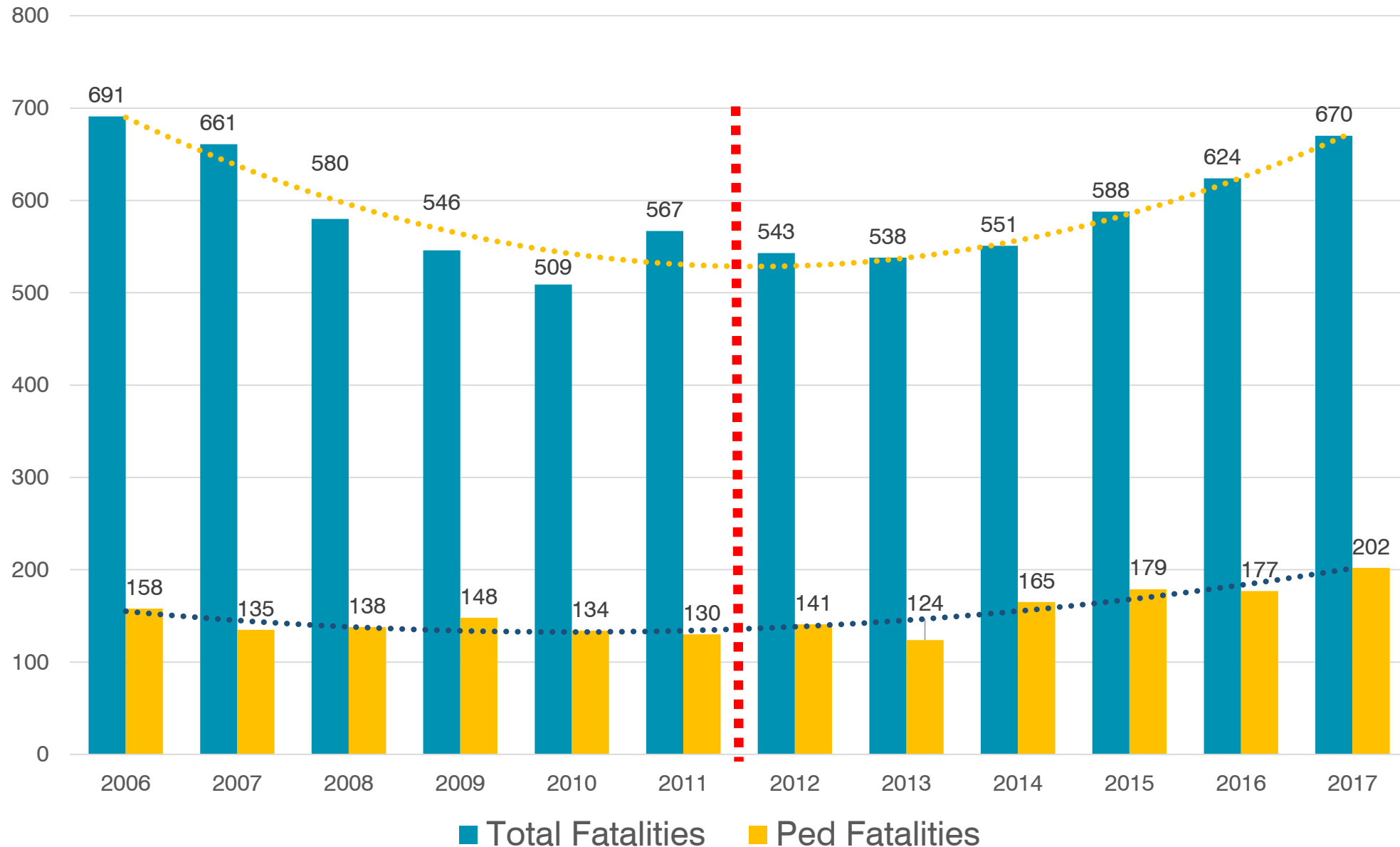
Source: GHSA

GHSA

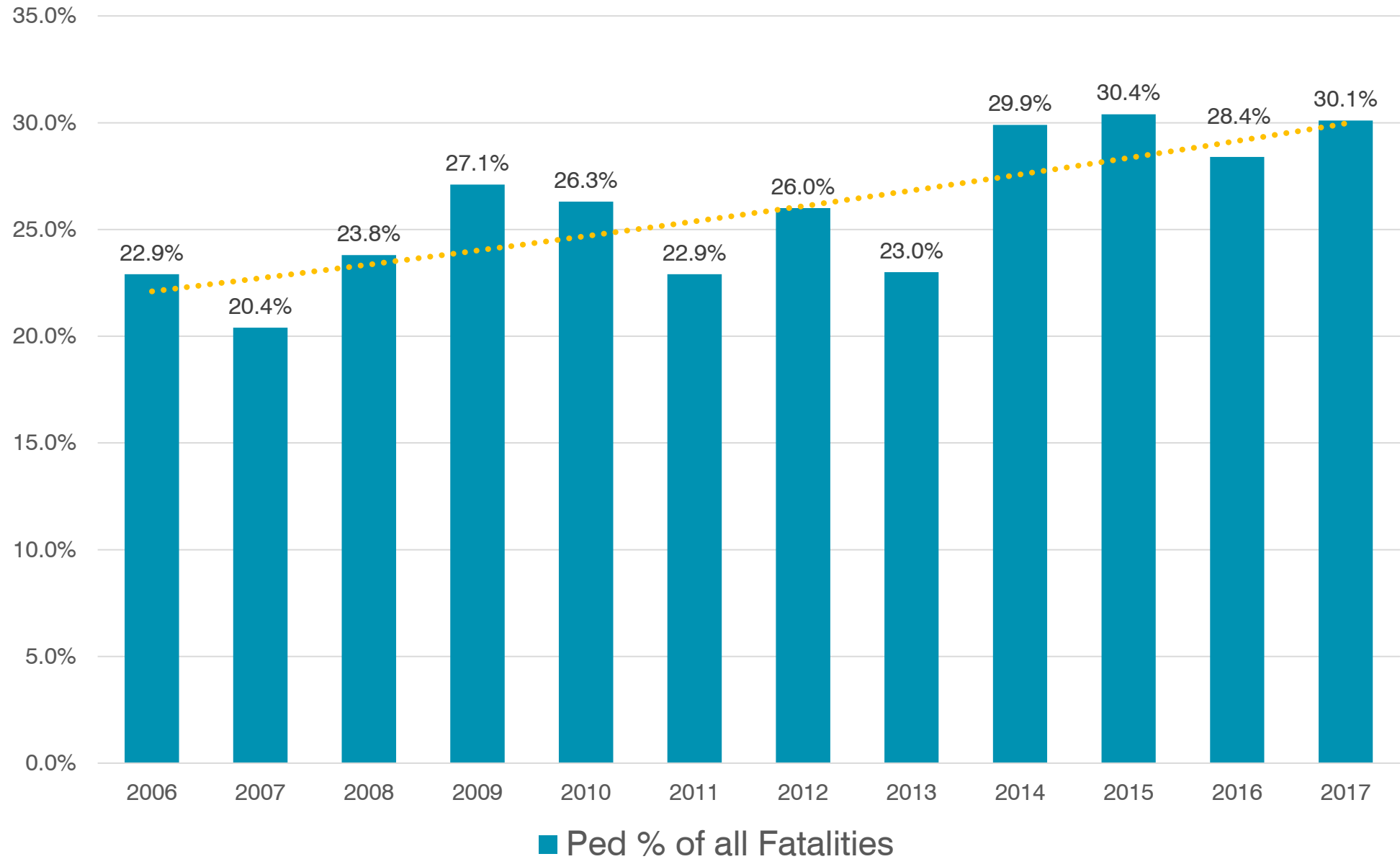
Fatal Crashes in New Jersey, 2006-2017

- **Total fatalities**
increased 21% since 2011/2012

- **Pedestrian fatalities**
increased 49% since 2011/2012



Pedestrian Share of Fatalities is Increasing



New Jersey Complete Streets Design Guide Training Workshops 2019



N|V|5 wsp



Recent Complete Streets Workshops

- **Mercer County - December 2018**
- **New Jersey DOT**
 - February 27, 2019
 - March 7, 2019
 - May 3, 2019
- **SJTPO/ Cumberland & Salem Counties - August 1, 2019**
- **Somerset County – August 13, 2019**
- **More than 250 attended**
- **SJTPO/ Atlantic & Cape May Counties**
 - October 2019 - tentative

Summary Steps – Implementation Methods

Review and Modify Plans & Procedures

- Master Plan, Circulation Element, Zoning and subdivision regulations
- Design guidance, maintenance procedures
- Capital programming and funding sources

Create Structure and Oversight

- Formal Complete Street Implementation Plan
- Interagency Task Force
- Citizen Advisory Committee
- Planning and Zoning Boards

Turn Policy into Action

- Problem Statements, street audits, checklists
- Pilot projects to demonstrate innovative concepts
- Partnerships
- Training and outreach
- Performance monitoring

Summary Steps - Complete Streets Design

Goals for Design

- **Provide options - Accommodate all travelers not just cars and trucks**
- **Improve visibility, shorten crossings, reduce exposure to traffic, and slow traffic where appropriate**
- **Allocate roadway space to all users based on context**
- **Prioritize low cost, quick fix, flexible design**

Specific Design Details – Always Based on Context

- **Sidewalks and crosswalks**
- **Road design**
- **Intersections**

Today's Presenters

- Michael Dannemiller, NV5
- Peter Kremer, WSP USA
- **Anne Heasley, Sustainable Jersey**
- Jennifer Duckworth, Tetra Tech,
Millburn Pedestrian Safety
Advisory Board



Getting Started: Resources available for FREE

Anne Heasley, Sustainable Jersey, Program Manager for Policy and Planning
Complete Streets 101: September 24, 2019





Getting Started | Resources available for Free

Complete Streets 101

- +Sustainable Jersey Actions
- +Complete Streets Training
- +Complete Streets Technical Assistance
- +Case Studies

- Identifies actions municipalities take to meet the needs of the future without compromising the future
- Develops tools, resources, and programs to help municipalities achieve their goals
- Provides access to grants and technical assistance
- Recognizes accomplishments and achievements

SUSTAINABLE JERSEY COLLECTIVE IMPACT

89%

OF NJ POPULATION LIVES IN A REGISTERED OR CERTIFIED COMMUNITY



80%

OF MUNICIPALITIES PARTICIPATING

55%

of NJ public school districts registered with Sustainable Jersey for Schools



204

MUNICIPALITIES CERTIFIED

55 SILVER CERTIFIED

149 BRONZE CERTIFIED



242

SCHOOLS CERTIFIED

15 SILVER CERTIFIED

227 BRONZE CERTIFIED

13,000



SUSTAINABILITY ACTIONS COMPLETED by both municipalities and schools

\$4.9 MILLION



IN GRANTS FOR MUNICIPALITIES, SCHOOLS & SCHOOL DISTRICTS





Sustainable Jersey Complete Streets Actions

www.sustainablejersey.com



Adopt a Complete Streets Policy

10 Points

Updated August 2018

Updates include a new checklist to assist in completing the action

Note: The Complete Streets Program action was retired at the end of 2016. Municipalities applying for certification in 2017 or after can apply for points related to Complete Streets under this action and the Adopt a Complete Streets action. The maximum number of points available for these two actions combined is 25 compared to 20 points for the retired Complete Streets Program action. Please note that this includes an updated standard for a complete streets policy. A policy previously approved for the retired Complete Streets Program action may need to be updated to be approved for this action regarding the complete streets actions can be directed to 609-771-2938 or by emailing info@sustainablejersey.com.

NEW: Before adopting or updating your Complete Streets policy, download both the **Adopt a Complete Streets Policy** and **Institute Complete Streets** action checklists to ensure all requirements are met.

"Complete Streets" is the concept that all roadways should be designed, built, and maintained for all users, not exist only for single-family motor vehicles. Other roadway users – pedestrians, bicyclists, and transit



Institute Complete Streets

10 Points 15 Points

Updated August 2018

Updates include a new checklist to assist in completing the action

Note: The Complete Streets Program action was retired at the end of 2016. Municipalities applying for certification in 2017 or after can apply for points related to complete streets under this action and the Adopt a Complete Streets Policy action. The maximum number of points available for these two actions combined is 25 compared to 20 points for the retired Complete Streets Program action. Questions regarding the Complete Streets actions can be directed to 609-771-2938 or by emailing info@sustainablejersey.com.

Prerequisite: **Adopt Complete Streets Policy**

NEW: While working on the Institute Complete Streets action, download the **Institute Complete Streets action checklist** to ensure all requirements are met.

While a Complete Streets Policy is a commitment that all future transportation projects will take into account the needs of everyone using the road, institutionalizing the policy is where the work truly begins. The day-to-day actions a community

Adopt a Complete Streets Policy

Municipality	County	Certification
Asbury Park City	Monmouth	Silver
Cape May City	Cape May	Silver
Chatham Boro	Morris	Silver
Gibbsboro Boro	Camden	Bronze
Glassboro Boro	Gloucester	Bronze
Mount Holly Township	Burlington	Silver
Red Bank Boro	Monmouth	Silver
Roselle Park Boro	Union	Bronze
Vineland City	Cumberland	Bronze
Voorhees Township	Camden	Silver
Winslow Township	Camden	Silver
Woodbine Boro	Cape May	Bronze
Woolwich Township	Gloucester	Bronze

Institute Complete Streets (Policy)

Municipality	County	Certification
Cape May City	Cape May	Silver
Voorhees Township	Camden	Silver

Sustainable Jersey Action Update – New Best Practice



Adopt a Complete Streets Policy
+
Institute Complete Streets (Policy)
=

New Action

- *Tiers – measure progress*
- *Look for advancement*
- *Guidance from the new policy*
- *Green Streets*



www.sustainablejersey.com



Green Infrastructure Planning *NEW*

5 Points 10 Points 20 Points

New Action February 2018

Green infrastructure is part of the solution to several water resource issues, including: runoff from impervious surfaces; methods of stormwater management that reduce wet weather flows; infiltration of the flow into combined or separate sanitary or storm sewers, which can cause overflows; or to be treated by vegetation or by soils; or to be stored for reuse. Green infrastructure practices that address stormwater runoff through soils or reuse.

Green Infrastructure practices include, but are not limited to: bioretention (rain gardens, downspout planter boxes, stormwater pits); pervious paving systems (permeable asphalt, pervious concrete); green roofs, cisterns, tree plantings, grass swales, infiltration basins, and rainwater harvesting systems (See Attachment 1 for some examples).

Attachment 1: Green Infrastructure Practices

The use of green infrastructure encourages the idea that stormwater is not treated as a nuisance that needs to be removed as quickly as possible.



Green Infrastructure Implementation *NEW*

10 Points 15 Points 20 Points

New Action February 2018

Green infrastructure is a cost-effective and sustainable approach to stormwater management that can reduce nuisance flooding and offer other important environmental, social, and economic benefits. Green infrastructure techniques capture, filter, absorb, and reuse stormwater to maintain or mimic natural hydrologic systems and to treat runoff as a resource. When used as components of a stormwater management system, green infrastructure practices, such as bioretention basins, green roofs, porous pavement, rain gardens, and vegetated swales, can produce a variety of environmental, social and economic benefits.

This action provides guidelines for implementing green infrastructure projects that will reduce your community's impervious coverage and stormwater runoff. Municipalities can earn up to 20 points for three levels of green infrastructure implementation, including:

- **Tier 1 Implement Green Infrastructure Demonstration Projects.** Complete two green infrastructure demonstration projects and/or implement one green infrastructure policy. Green infrastructure projects include one or more of the green infrastructure practices shown in the [Green Infrastructure Guidance Manual for New Jersey](#): Rain Gardens, Bioswales, Downspout Planters, Stormwater Planters, Cisterns, Permeable Pavements, Tree Filter Boxes, and Green Roofs. Tier 1 replaces both the previous Green Roofs and Rain Gardens Actions in the Innovation &



Getting Started | Resources available for Free

Complete Streets 101

+ **Complete Streets Training**

October 16, 2019 (Wednesday)

8:00am-4:30pm

NJTPA, Newark, NJ

October 24, 2019 (Thursday)

8:00am-4:30pm

Highlands Council

Chester, NJ

January 9, 2019 (Thursday)

9:30am-4:00pm

Rowan College of South Jersey – Cumberland

Vineland, NJ

Register: <http://bit.ly/2019CompleteStreets>



WALKABLE COMMUNITY WORKSHOP

Thursday, December 6, 2018
1 pm to 5 pm

JOIN US TO ADDRESS
WALKABILITY ON
BERNARDS AVENUE!

Sacred Heart Chapel
47 Bernards Avenue
Bernardsville, NJ

For more information email:
heaslyv@tcnj.edu

To RSVP visit: <http://bit.ly/BernardsvilleWCW>

WORKSHOP AGENDA

1:00 pm
Welcome and Walkable Community Presentation
2:00 pm
Walking Audit
4:00 pm
Debrief and Next Steps
5:00 pm
Adjourn

A Walkability Workshop engages town employees, residents, business owners and workers on issues regarding walking and biking in a community. After hearing on what to look for, workshop participants will walk a half-mile corridor assessing their existing streets and sidewalks and identifying issues to overcome to ensure safer conditions for pedestrians and bicyclists. After the workshop, a report will be prepared with recommendations on improvements to address key locations and issues identified in the workshop.

This effort is part of the Complete Streets Technical Assistance Program, which is a collaborative venture between Sustainable Jersey (S.J.), the Voorhees Transportation Center at Rutgers University (VTC), and the North Jersey Transportation Planning Authority (NJTPA). Funded by the NJTPA, the program is designed to support municipal government efforts to implement complete streets.



RUTGERS

Getting Started | Resources available for Free

Complete Streets 101

+ Complete Streets Technical Assistance

Planning level assistance to advancing a Complete Streets initiative in your community.

+ 13 Municipalities in the NJTPA region

+ Technical Assistance project options include:

- + Bicycle Corridor or Network Plan
- + Complete Streets Conceptual Rendering
- + Crime Prevention through Environmental Design
- + Temporary Demonstration Project Guidance
- + Walkable Community Workshop



Red Bank

Temporary Demonstration Project

Cranford

Conceptualization

Glen Rock

Walkable Community Workshop

Case Studies:

Complete Streets at the local level



Case Study | Red Bank, NJ

Drs James Parker Blvd. Tactical Urbanism

+Purpose and Need

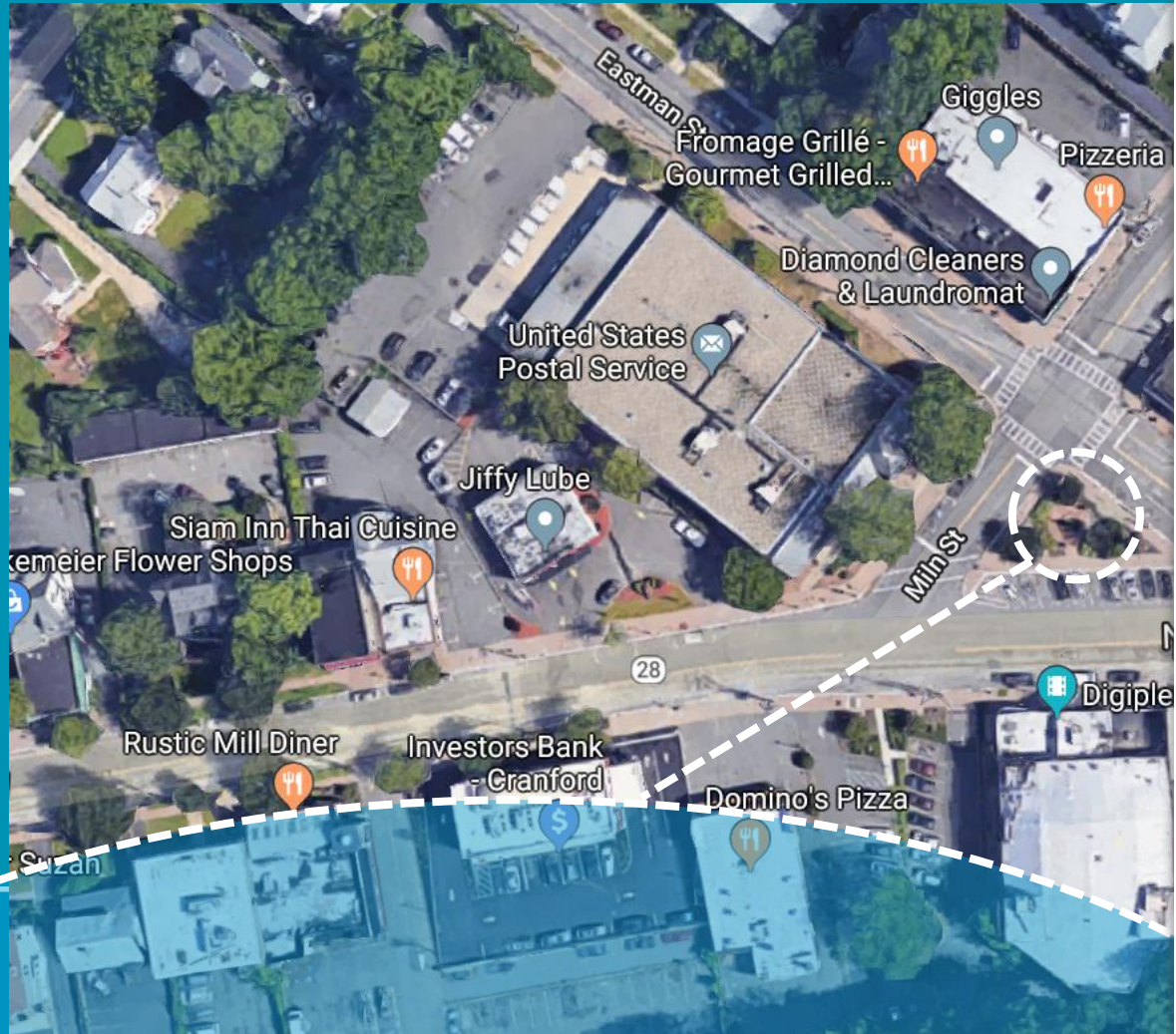
- +High pedestrian activity
- +Multiple social services
- +Speeding vehicles
- +Conflicting traffic movements
- +Blocked sight lines
- +Improve safety
- +Public art

Case Study | Red Bank

Tactical Urbanism







Case Study | Cranford *Conceptualization*

Case Study | Cranford, NJ

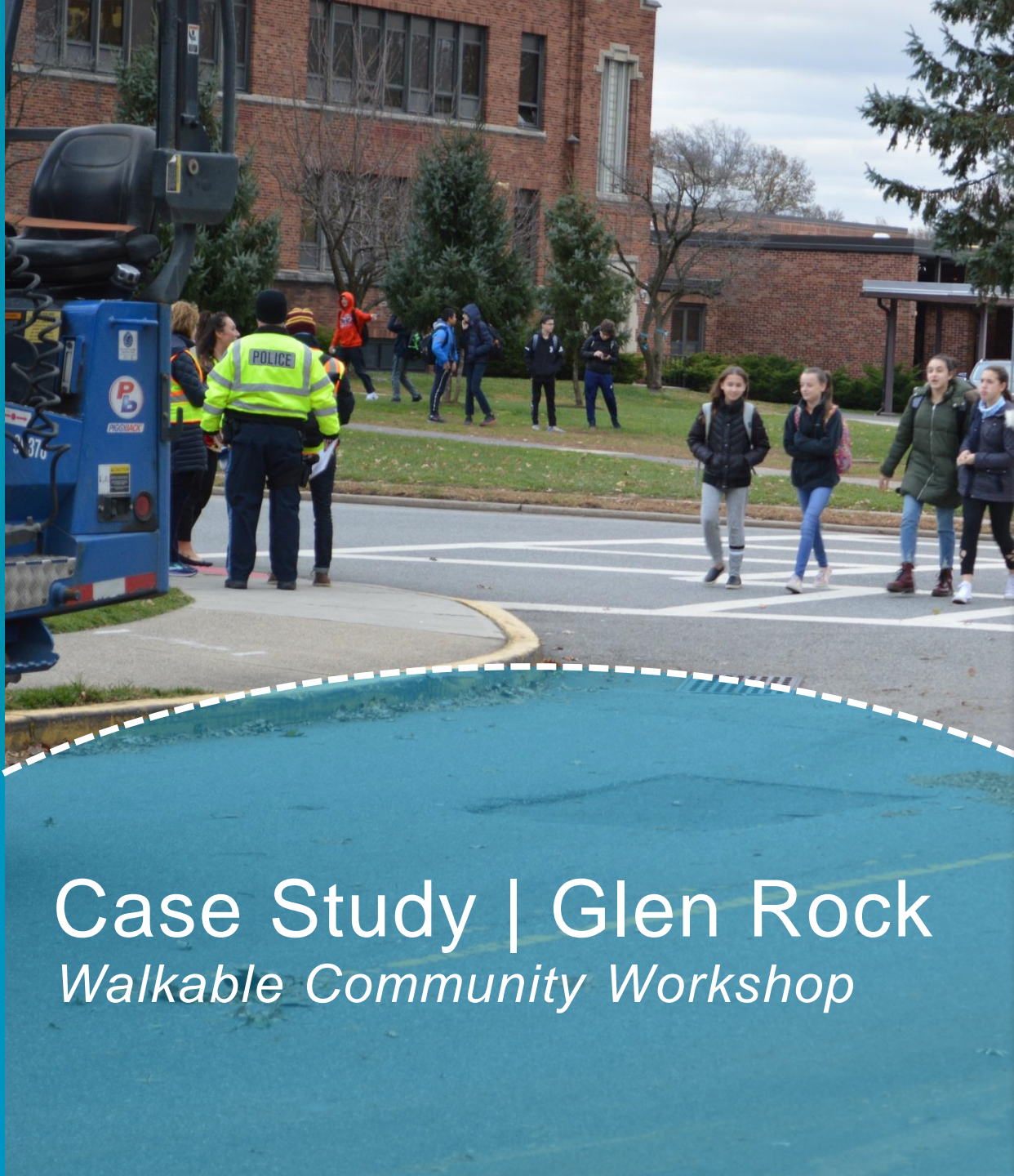
Post Office Plaza Conceptualizations

+Purpose and Need

- +Promote local business
- +Create new public space
- +Add greenery
- +Add public art
- +Support events
- +Improve safety
- +Simplify traffic movements







Case Study | Glen Rock

Walkable Community Workshop

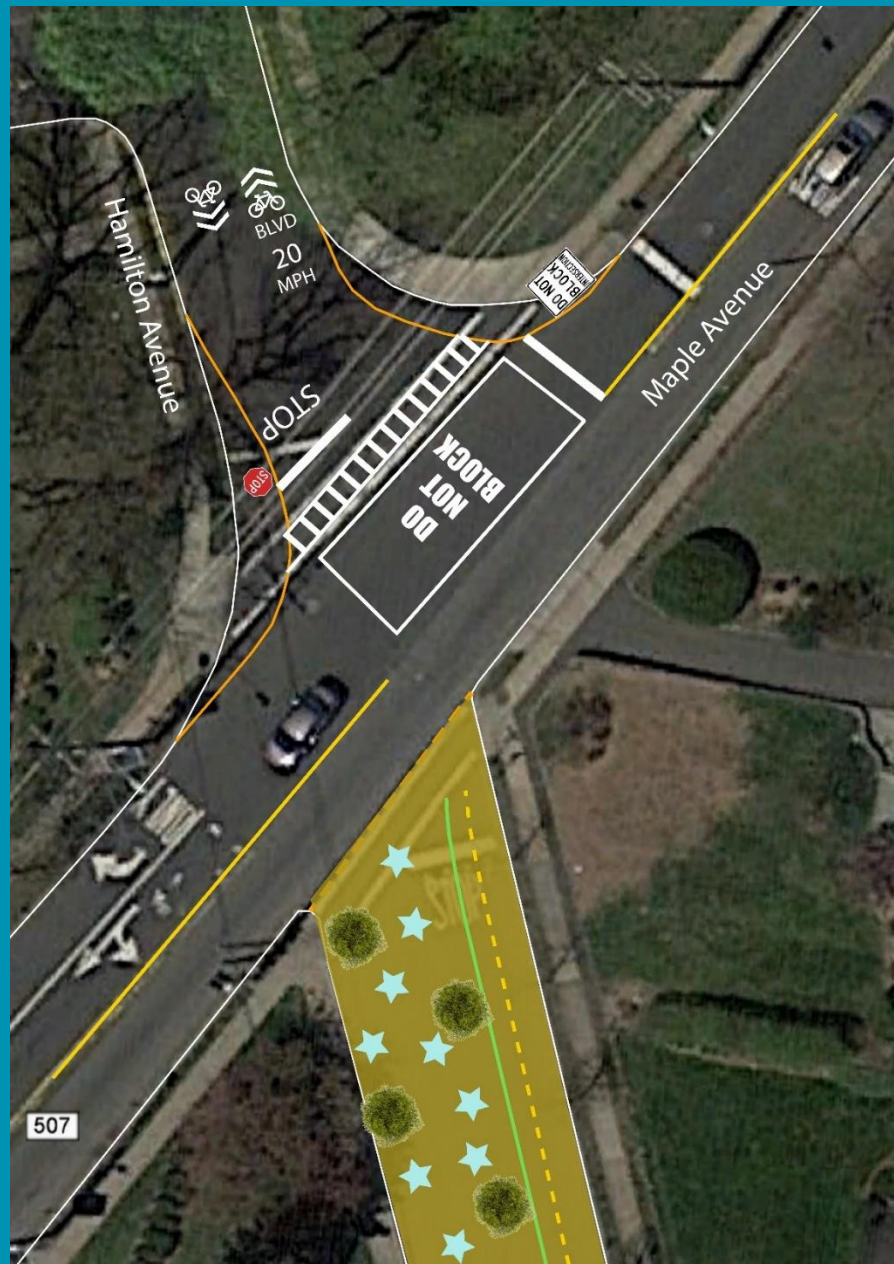
Case Study | Glen Rock, NJ

Walkable Community Workshop

+Purpose and Need

- +Educate local officials, municipal employees, and residents
- +Popular walking route to schools
- +Potential bicycle corridor
- +Speeding traffic
- +Simplify traffic movements





← → ↻ njtpa.org/Planning/Regional-Programs/Complete-Streets.aspx


NJTPA About NJTPA Planning Projects & Programs Data & Maps News

Regional Programs

Planning > Regional Programs > Complete Streets

Complete Streets

Complete streets are streets designed for all users, all modes of transportation, and all ability levels. They balance the needs of drivers, pedestrians, bicyclists, transit riders, emergency responders, and goods movement based on the local context.



Complete Streets Technical Assistance Program

The NJTPA, is partnering with Sustainable Jersey (SJ), the Voorhees Transportation Center at Rutgers University (VTC), and Together North Jersey (TNJ) on Streets Technical Assistance Program. Municipal governments require knowledge, skills, and resources to develop complete streets-related solutions, and the program supports their efforts. Selected municipalities will receive free direct technical assistance to complete a specific task related to advancing a complete streets initiative in their communities. No direct funding to municipalities is provided.

Another round of technical assistance is being offered on a competitive basis during 2020. The deadline for applications is December 20, 2019. In addition, three full-day training sessions are being offered on October 16, 2019, October 24, 2019 and on January 9, 2020. The free sessions provide overview of complete streets, the many resources available to assist municipal elected officials, administrators, engineers, planners, and others in advancing complete streets initiatives. Details are [posted here](#).

During 2019, nine municipalities participated. Final reports for their efforts under the program are available [here](#).

- **Pedestrian Safety Demonstration Project, Red Bank, Monmouth County**
- **Bernards Avenue Walkable Community Workshop, Bernardsville, Somerset County**
- **Complete Streets Conceptualization Report for Post Office Plaza, Cranford, Union County**
- **Hamilton Avenue Walkable Community Workshop, Glen Rock, Bergen County**
- **Pedestrian Safety Demonstration Project, Milltown, Middlesex County**
- **North Beverwijk Road Walkable Community Workshop, North Plainfield, Essex County**

Getting Started | Resources available for Free

Complete Streets 101

+ Complete Streets Technical Assistance

Planning level assistance to advancing a Complete Streets initiative in your community.

- + NJTPA Website – links to the previously completed projects
- + Webinar: TBD – October 2019
- + Further Information: Sustainable Jersey website
- + Applications due: **December 20, 2019**



Today's Presenters

- Michael Dannemiller, NV5
- Peter Kremer, WSP USA
- Anne Heasley, Sustainable Jersey
- **Jennifer Duckworth,**
Tetra Tech, Millburn Pedestrian
Safety Advisory Board



Applying Complete Streets

Case Study: Millburn, New Jersey





- Millburn Township in Essex County has a population of ~20,500 residents, 200 retailers, top ranked schools, the South Mountain Reservation, Mall at Short Hills, Greenwood Gardens, Cora Hartshorn Arboretum, and Paper Mill Playhouse.
- Improvements included road-diet, curb bump-outs, green infrastructure, bike parking, widened sidewalks, high-visibility crosswalks, pedestrian lighting, signage, and seating.
- Won prestigious 2017 Complete Streets Excellence award.
<https://vimeo.com/238866642>
- Data indicate crashes dropped 28% from 2014–2018.



Applying Complete Streets

Safe Routes to Schools

- **Municipal Government = Complete Streets**
- **School Government = Safe Routes to Schools**
 - » Certification program
 - » Levels Gold, Silver, Bronze, First Steps
- **Teams help implement programs for both programs.**

Planning Levels	
	School Achievements <ul style="list-style-type: none">Complete an online nomination form.Identify a SRTS Champion to begin building a team (should not be a SRTS Coordinator).
	Municipality Achievements <ul style="list-style-type: none">Complete an online nomination form.Identify a SRTS Champion (should not be a SRTS Coordinator).
	School Achievements <ul style="list-style-type: none">Complete First Steps achievement.Support Letter (Word) from school or district.Hold at least two SRTS programs or events (for example, walk/bike to school day, bike rodeo, bike or pedestrian safety education event, safety contest, etc.) from the past 12 months.In place of one action transportation level practice (for example, bike parking, secure storage, bus and walk drop off/pick up locations, staggered dismissal for walk/bike, safe routes to bus stops, student pedestrian/bike, winter walking programs, etc.).
	Municipality Achievements <ul style="list-style-type: none">Complete First Steps achievement.Support Letter (Word) from municipality.Meet CRP of the following requirements:<ul style="list-style-type: none">Lead, provide staff or perform activities at two SRTS events from the past 12 months.Complete a <i>Final Observation Report</i> for top 8 located Crossing Guard locations.Implemented an innovative SRTS project, subject to approval.
	School Achievements <ul style="list-style-type: none">Meet bronze level achievements.Meet CRP of the following requirements:<ul style="list-style-type: none">Voluntarily/obligatory assessment andReconvene School Board & Department Travel Mode Tables.Implementation of at least two SRTS programs or events or other transportation level practice from the past two years.Ongoing personnel safety level program (for example, Walking Wednesdays, <i>Walking School Bus</i>).
	Municipality Achievements <ul style="list-style-type: none">Meet bronze level achievements.Meet CRP of the following requirements:<ul style="list-style-type: none">Perform annual training of all Crossing Guards and monitoring of crossing guards.Lead, provide staff and/or perform activities at a total of at least six SRTS events from the past two years.Implement an innovative SRTS project, subject to approval.
	School Achievements <ul style="list-style-type: none">Meet silver level achievements.Show ongoing support of SRTS from PTO, Green Team, School Wellness Council, etc.Meet CRP of the following requirements:<ul style="list-style-type: none">School Travel Plan with the 8 mandatory components from the past 6 years.Adopt a supportive SRTS policy.Implemented an innovative program/project, subject to approval.
	Municipality Achievements <ul style="list-style-type: none">Meet silver level achievements.Show ongoing support from Green Team, Borough Council, Borough Administration, etc.Adopt a Comprehensive Policy that meets minimum standards.Complete CRP of the following requirements:<ul style="list-style-type: none">Active participation from the completion of School Travel Plan from the past 6 years.Conduct an annual Crossing Guard Policy.Implementation of an innovative SRTS project, subject to approval.

Thank you

- Michael Dannemiller, NV5
- Peter Kremer, WSP USA
- Anne Heasley, Sustainable Jersey
- Jennifer Duckworth, Tetra Tech,
Millburn Pedestrian Safety
Advisory Board

