

# Local Safety Peer Exchange

A Municipal Perspective



# General Statistics

- ▶ State DOT has jurisdiction on just 7% of roads in New Jersey / 66% volume
- ▶ Counties and municipalities maintain 35,000+ miles of roadways
  - ▶ In Mercer County, the County maintains 180 miles & Municipalities maintain 1,200+ miles
  - ▶ Princeton maintains 120 miles
    - ▶ 105 miles of sidewalks and pathways
  - ▶ West Windsor maintains 120+ miles

# Princeton Statistics

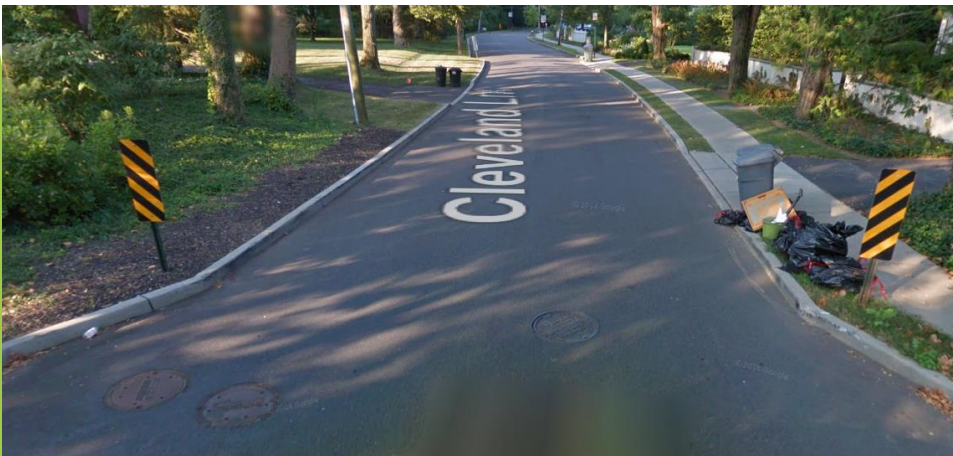
- Prior to 2013, Princeton was two communities: Borough of Princeton and Township of Princeton

	Borough	Township
Road miles	20	100
Speed limits	25 and less	25 - 45
Population	12,000+	16,000+
Size	1.8 sq. mi.	16.5 sq. mi.
Density	6,679 / sq. mi.	1,010 / sq. mi.

# Former Borough Traffic Calming Program

- ▶ Began in 1994
- ▶ Goals: Create safer roads, reduce speeds, don't shift traffic to other roadways
  - ▶ Neighborhood desires: Save trees, keep on-street parking

# Former Borough Examples

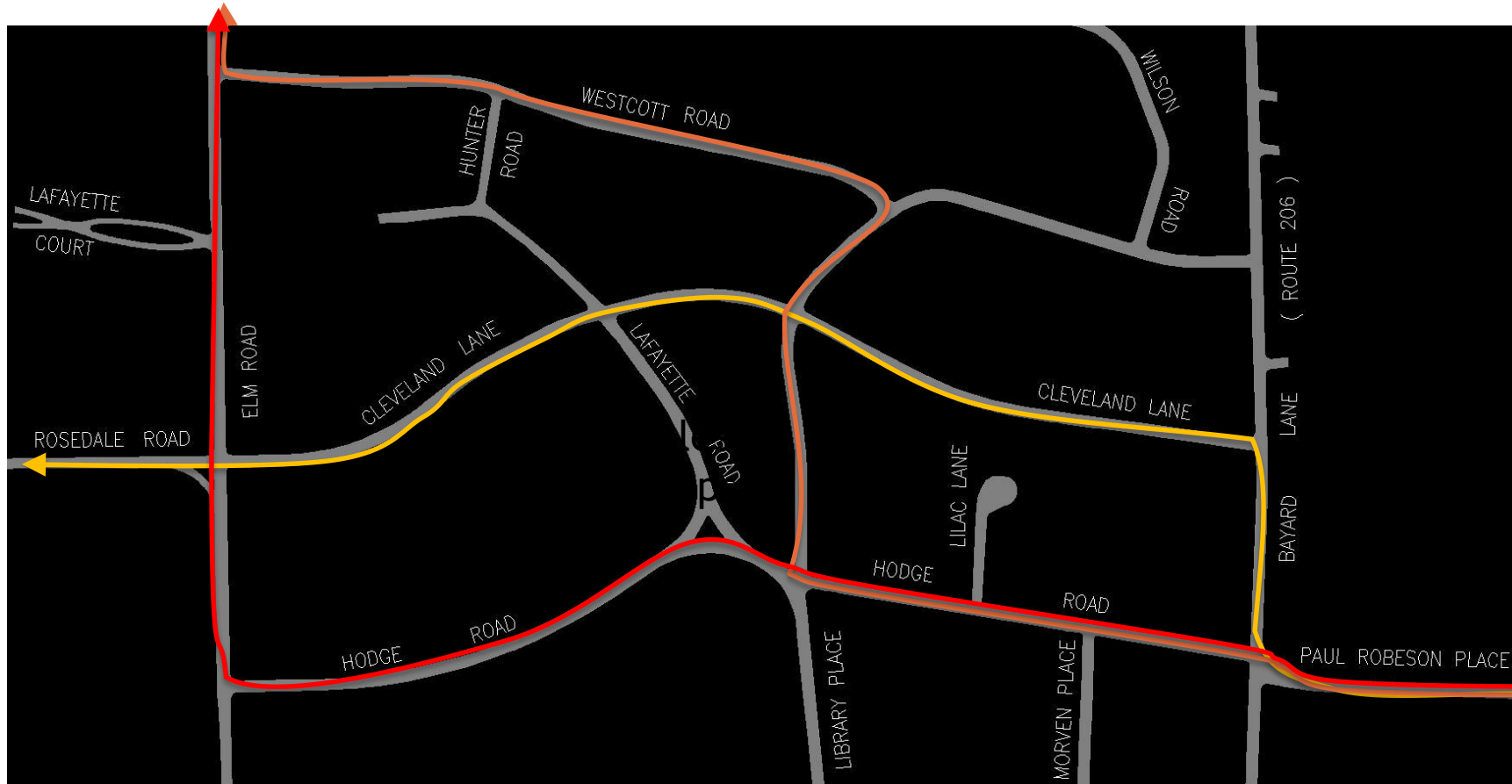


# Hodge Road AADT and Speed (Avg / 85<sup>th</sup> Percentile)





# Western Section Traffic Calming



Speed tables  
Speed humps  
Mini circles

Realigned geometry  
Splitter islands  
Bumpouts - mid-block and intersections

# Former Township Policy on Traffic Calming

- Township Policy created in 2002 prohibiting speed humps (vertical deflections)

Sgt. Michael Henderson, Traffic Safety Officer, said that a significant number of people would die due to delayed response of emergency vehicles from the humps in the roadways. Sgt. Henderson also said that the police would be opposed to planting trees in the center of roads.

Greg Paulson, Princeton First Aid and Rescue Squad, said that the humps cause great concern about impediments to response time. He also said that going over the humps was a hazard to both the patients and passengers in the emergency vehicles.

As a result, the Traffic Safety Committee recognizes that there are (and will continue to be) some circumstances in which some kinds of traffic calming devices and policies will be, on balance, of benefit to the community at large. At the same time, the Traffic Safety Committee believes that the risk to emergency service workers, emergency vehicles, and the general public relating to the installation of speed humps, speed bumps, and raised traffic islands outweighs any benefits derived. The Township therefore prohibits the installation of these types of devices on municipal streets within Princeton Township.



# Consolidated Princeton Traffic Calming - A Work in Progress

- ▶ Prohibition of vertical traffic calming sustained in 2013 after consolidation
  - ▶ Main issues and conflicts:
    - ▶ Overall citizen safety - bike / ped and emergency response
    - ▶ Environmental - increased emissions
    - ▶ Risk of lawsuits and municipal civil liability
- ▶ Reconsideration of the prohibition in 2017
  - ▶ Speeding is not going away
  - ▶ Volume is not going away
  - ▶ Curbing, striping, tree plantings and radar speed signs are not solving the problem
  - ▶ Bumpouts are not desired by bicyclists or Public Works

# Princeton's Engineering Design Process

- ▶ Notify residents of upcoming project and request utility information
- ▶ Request sewer review and tree review by Public Works staff
- ▶ Complete the Complete Streets checklist
  - ▶ Gather police reports and identify if there are engineering solutions
- ▶ Prepare a conceptual plan
  - ▶ Review bicycle mobility plan, sidewalk master plan, and other reference documents
- ▶ Conduct a design neighborhood meeting
- ▶ Finalize design and award contract
- ▶ Conduct a preconstruction neighborhood meeting
- ▶ Big Question: How should the various transportation committees be incorporated into the design process?

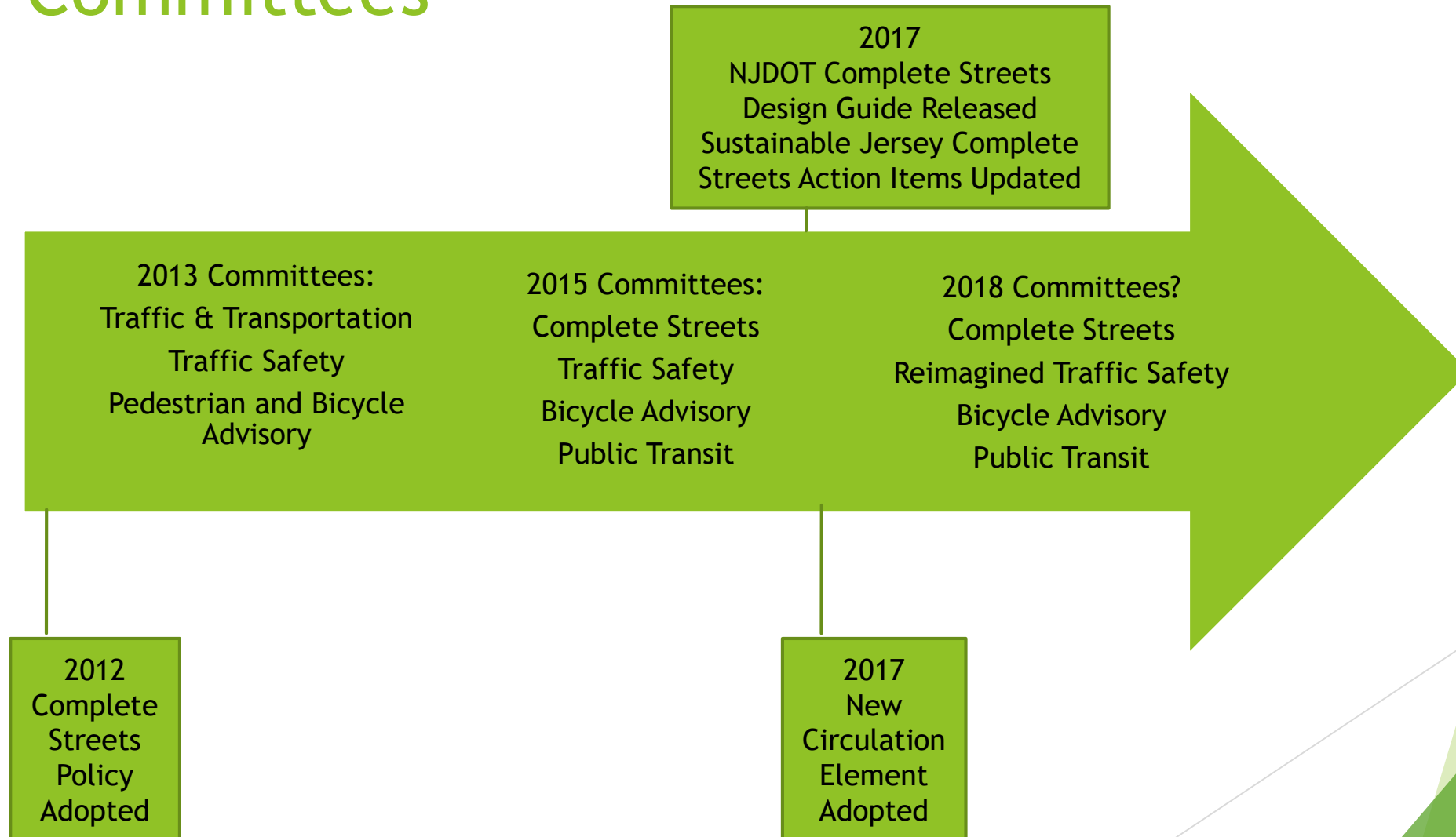
# Roadblocks



- ▶ Historic
- ▶ Loss of parking
- ▶ Constricted space
- ▶ Perceived loss of property value
- ▶ Tree removals
- ▶ Road maintenance issues
- ▶ Priorities
- ▶ Conflicts between ped needs and bicyclist needs
- ▶ The Squeaky Wheel



# Reformulation of Transportation Committees



# The Road Forward



## ► Institute Complete Streets

1. Build Your Complete Streets Team
2. Establish Internal Review Procedures
3. Training
4. Inventory and review of planning and design documents
5. Implement a Complete Streets Project



2017 State of New Jersey  
Complete Streets  
Design Guide



- ▶ Use Complete Streets Checklist and Road Safety Audits
- ▶ Use Safety Voyager to supplement police crash reports
- ▶ Reference FHWA Proven Safety Countermeasures



Roadside Design Improvement at Curves



Reduced Left-Turn Conflict Intersections



Systemic Application of Multiple Low Cost Countermeasures at Stop-Controlled Intersections



Leading Pedestrian Interval



Local Road Safety Plan



USLIMITS2



Enhanced Delineation and Friction for Horizontal Curves



Longitudinal Rumble Strips and Stripes on Two-Lane Roads



Median Barrier



Safety Edge<sub>SM</sub>



Backplates with Retroreflective Borders



Corridor Access Management



Dedicated Left- and Right-Turn Lanes at Intersections



Roundabouts



Yellow Change Intervals



Medians and Pedestrian Crossing Islands in Urban and Suburban Areas



Pedestrian Hybrid Beacon



Road Diet



Walkways



Road Safety Audit



- ▶ Ordinance design guidance documents
- ▶ Reformulate the Traffic Safety Committee to be a Staff-level Complete Streets Committee including Health and Human Services professionals
- ▶ Neighborhood Outreach in Concept and Preconstruction Phases
- ▶ Establish Criteria and Map of Potential Traffic Calming Locations

Traffic Calming Criteria					
	Points				
	1	2	3	4	5
Percent of speeding (5MPH above)	10%	20%	30%	40%	50%
Density of Housing (lot size)	40,000sf	30,000sf	20,000sf	10,000sf	>10,000sf
Are there Sidewalks	2 sides		1 side		no sidewalks
Volume of traffic	500 VPD	750 VPD	1,000 VPD	2,000 VPD	3,000 VPD
Other Criteria:	Proximity to Pedestrian destination				

- ▶ Pilot fixes before they are built
- ▶ Participate in regional dialogues
- ▶ Find community champions to advocate for improvements
- ▶ Continue to evaluate modifications



# Princeton's Design Process - Updated

- ▶ Notify residents of upcoming project and request utility information
- ▶ Request sewer review and tree review by Public Works Staff
- ▶ Complete checklist
  - ▶ Use Safety Voyager for crash data, then gather police reports and identify if there are engineering solutions
- ▶ Complete a road safety audit
- ▶ Prepare a conceptual plan
  - ▶ Review bicycle mobility plan, sidewalk master plan, and other reference documents
- ▶ Conduct a design neighborhood meeting
- ▶ Gain approval of the Traffic Safety Committee
- ▶ Pilot potential roadway changes
- ▶ Finalize design and award contract
- ▶ Conduct a preconstruction neighborhood meeting
- ▶ ...

# QUESTIONS?

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