

Local Safety Peer Exchange

A Municipal Perspective



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General Statistics

| COUNTY | JURISDICTION | | | | | | TOTAL |
|------------------------|--------------|------------|-------------|---------------|-----------------------|---|---------------|
| | NJDOT | Authority | County | Municipal | Park (State,Local) | Federal Agency FWS, NPS, Military | |
| Atlantic | 145 | 57 | 371 | 1,395 | 9 | 8 | 1,986 |
| Bergen | 106 | 40 | 440 | 2,412 | 0 | 0 | 2,998 |
| Burlington | 156 | 38 | 501 | 1,930 | 219 | 61 | 2,904 |
| Camden | 102 | 28 | 389 | 1,535 | 7 | 0 | 2,062 |
| Cape May | 74 | 31 | 201 | 731 | 26 | 0 | 1,063 |
| Cumberland | 89 | 0 | 540 | 679 | 0 | 0 | 1,308 |
| Essex | 61 | 19 | 213 | 1,375 | 10 | 0 | 1,679 |
| Gloucester | 154 | 20 | 400 | 1,143 | 0 | 0 | 1,717 |
| Hudson | 35 | 21 | 53 | 515 | 2 | 0 | 626 |
| Hunterdon | 115 | 1 | 237 | 1,078 | 15 | 0 | 1,446 |
| Mercer | 119 | 14 | 173 | 1,213 | 10 | 1 | 1,530 |
| Middlesex | 139 | 40 | 295 | 2,094 | 9 | 1 | 2,578 |
| Monmouth | 205 | 27 | 365 | 2,770 | 26 | 131 | 3,523 |
| Morris | 162 | 0 | 296 | 2,107 | 19 | 10 | 2,594 |
| Ocean | 141 | 39 | 608 | 2,174 | 110 | 37 | 3,108 |
| Passaic | 55 | 5 | 235 | 1,029 | 10 | 0 | 1,333 |
| Salem | 86 | 9 | 353 | 430 | 5 | 1 | 884 |
| Somerset | 106 | 0 | 230 | 1,398 | 0 | 0 | 1,735 |
| Sussex | 111 | 0 | 314 | 907 | 87 | 13 | 1,433 |
| Union | 68 | 20 | 176 | 1,160 | 6 | 0 | 1,430 |
| Warren | 103 | 5 | 256 | 697 | 31 | 44 | 1,136 |
| TOTAL | 2,331 | 413 | 6647 | 28,772 | 599 | 308 | 39,071 |
| STATEWIDE TOTAL | | | | | | | 39,071 |

► NJDOT has jurisdiction on just 7% of roads in New Jersey / 66% volume

► In Mercer: 11% County, 79% Municipal, 7% NJDOT

► In Somerset: 14% County, 80% Municipal, 6% NJDOT

Princeton Statistics

- ▶ Consolidated in 2013
- ▶ Borough form of government
- ▶ 18.1 square miles with 120 miles of municipal roadways plus 9 miles of State Highways (including 3 miles of the King's Highway historic district)
- ▶ Mercer County is 12th densest in state (1669 / km²)
 - ▶ Bergen is most dense (4069 / km²)
 - ▶ Middlesex is 2nd most dense
- ▶ Complete Streets policies have been adopted by all municipalities and County in Mercer

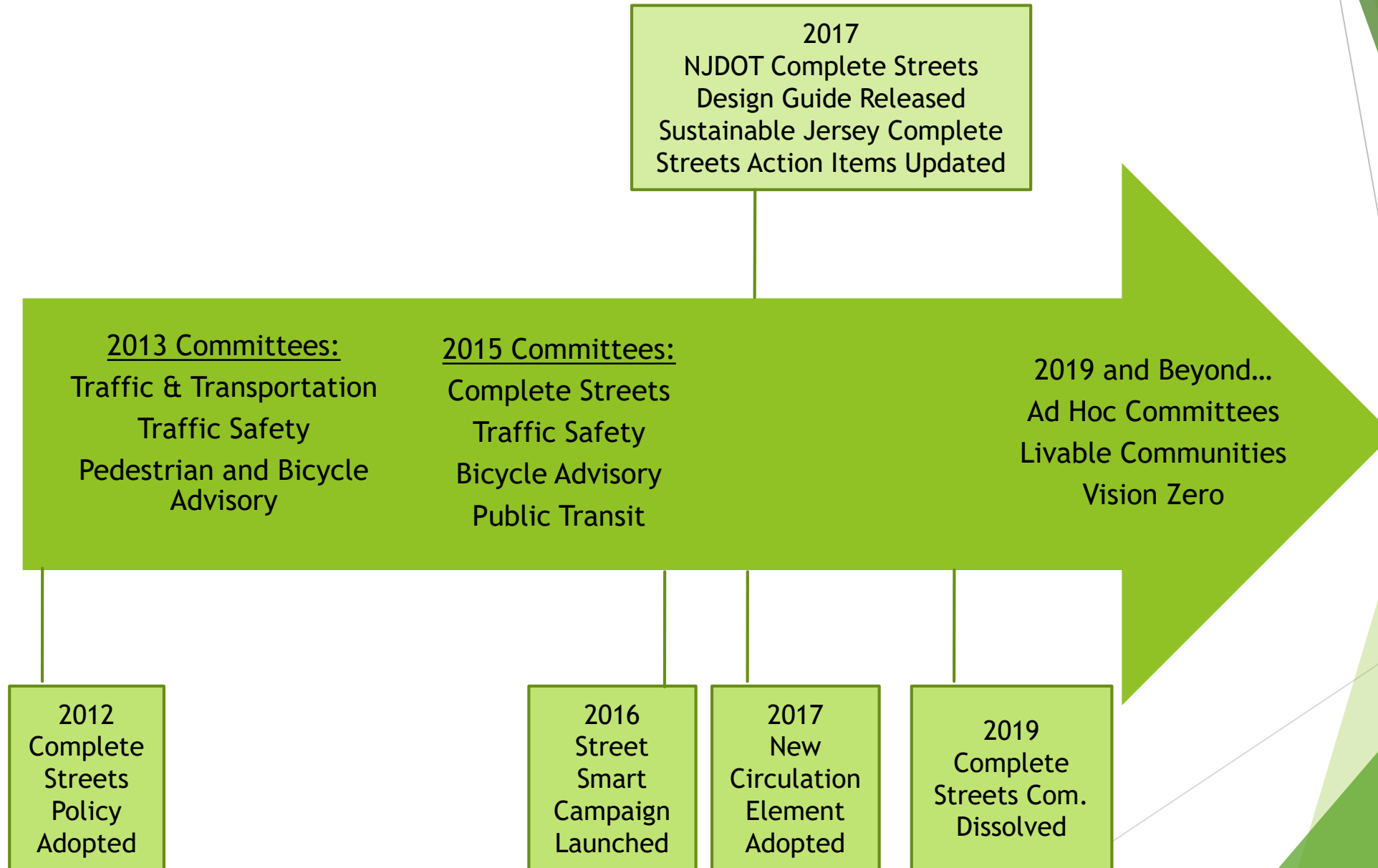


Municipal Traffic Safety Concerns

- ▶ Vehicle speeds
- ▶ Volume - Waze, Apple Maps, etc.
- ▶ Public rights of way are valuable and have many competing needs in a livable community
- ▶ Road users don't always follow the rules
- ▶ Distracted driving is increasing
- ▶ Curbing, striping, tree plantings, radar speed signs, and police enforcement are not enough
- ▶ A walkable and bikeable town is often less friendly to drivers, especially for parking
- ▶ Bumpouts are undesirable to bicyclists and Public Works - but they have advantages for pedestrians
- ▶ Equity



Progression in Safety Integration



2019 Transportation Ad Hoc Committees

- ▶ Traffic Calming
- ▶ Crosswalks, Lighting and Pedestrian Safety Group
- ▶ Transportation Communications

VISION ZERO 



| FORGIVING DESIGN | FORGIVENESS OF SLOW SPEEDS |
|----------------------------------|---|
| Increases safety at high speeds | Fosters the safety of slow speeds |
| Wide travel lanes | Narrow travel lanes |
| Broad, smooth curves | Short, tight curves |
| Clear zone free of fixed objects | Variety of fixed objects (light poles, trees, mail boxes, planter boxes, etc) directly adjacent to the travel way |
| Wide shoulders | Shoulders are used for parking, bike lanes, and loading zones |
| Feels comfortable to drive fast | Feels dangerous to drive fast |

Princeton's Road Safety Design Process

- ▶ Review Safety Voyager, crash reports
- ▶ Gather road AADT and speed data from DVRPC and / or speed radar signs
- ▶ Complete the Complete Streets checklist
- ▶ Review the Master Plan for bicycle mobility, pedestrian, and other prescribed improvements
- ▶ Conduct a site visit
- ▶ Identify potential FHWA proven safety countermeasures for use
- ▶ Discuss findings with Traffic Safety Committee (staff-led committee with Engineering, Police, and Public Works representatives)
- ▶ Prepare a conceptual plan
- ▶ Conduct a design neighborhood meeting and gain neighborhood perspective
- ▶ Adapt conceptual plan

Successful Pilots

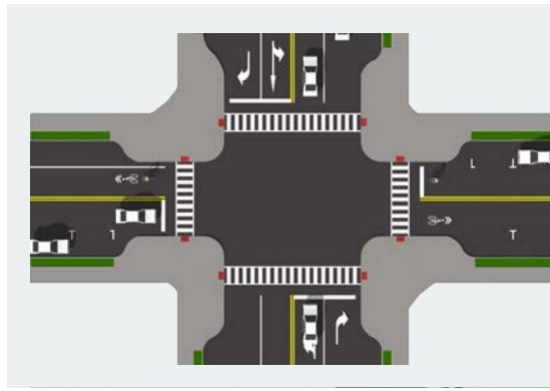


- Speed cushions near a park

- Bike lane pilot on a minor collector road; parking removed for 2 weeks



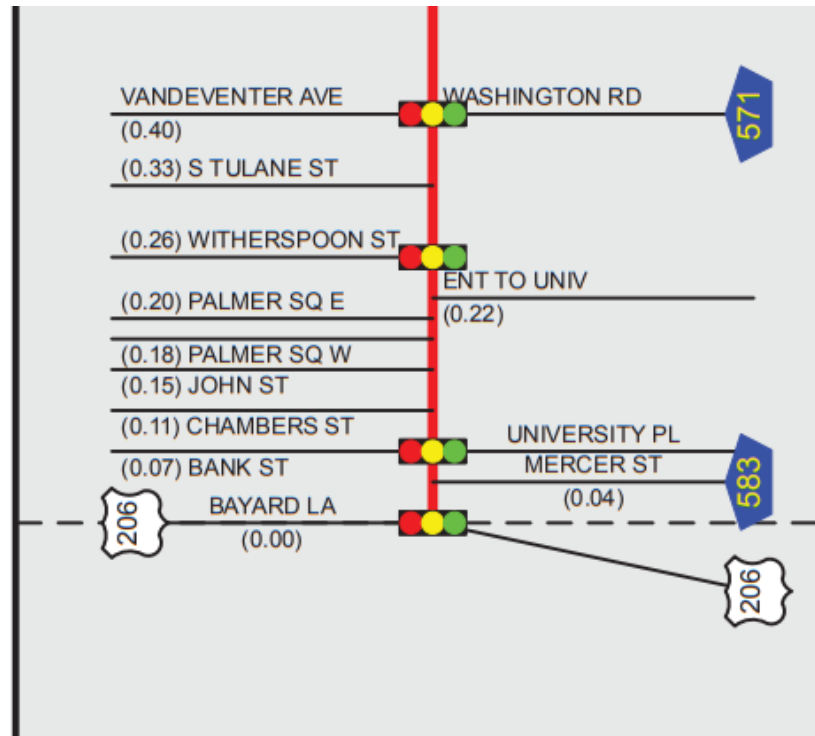
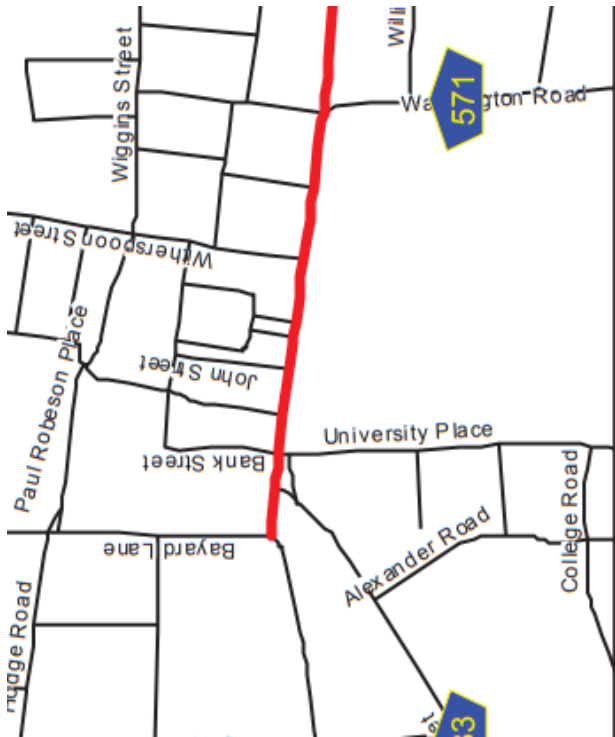
Roadblocks



- ▶ Historic
- ▶ Level of Service
- ▶ 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



Case Study - NJ 27 Nassau Street (MP 0.0 -0.4)



Case Study - NJ 27 Nassau Street (MP 0.0 -0.4)



ALL
CRASHES
2013-2018

Temporal Crash Details

| | | | | | | | |
|---|----|----------|------|------|------------|------|-----|
| Y | < | 2014 | 2015 | 2016 | 2017 | 2018 | > |
| M | | Jan | Feb | Mar | Apr | May | Jun |
| | | Jul | Aug | Sep | Oct | Nov | Dec |
| D | SU | MO | TU | WE | TH | FR | SA |
| R | | 1/1/2013 | | | 12/31/2018 | | |

Apply Temporal Filter Changes

Mercer County, NJ, State of New Jersey, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA

Powered by Esri

Crash Count: 269

SRI: 00000027__ [0-0.41]Date: 2013-1-1;2018-12-31

State Route Identifier

Mile Post

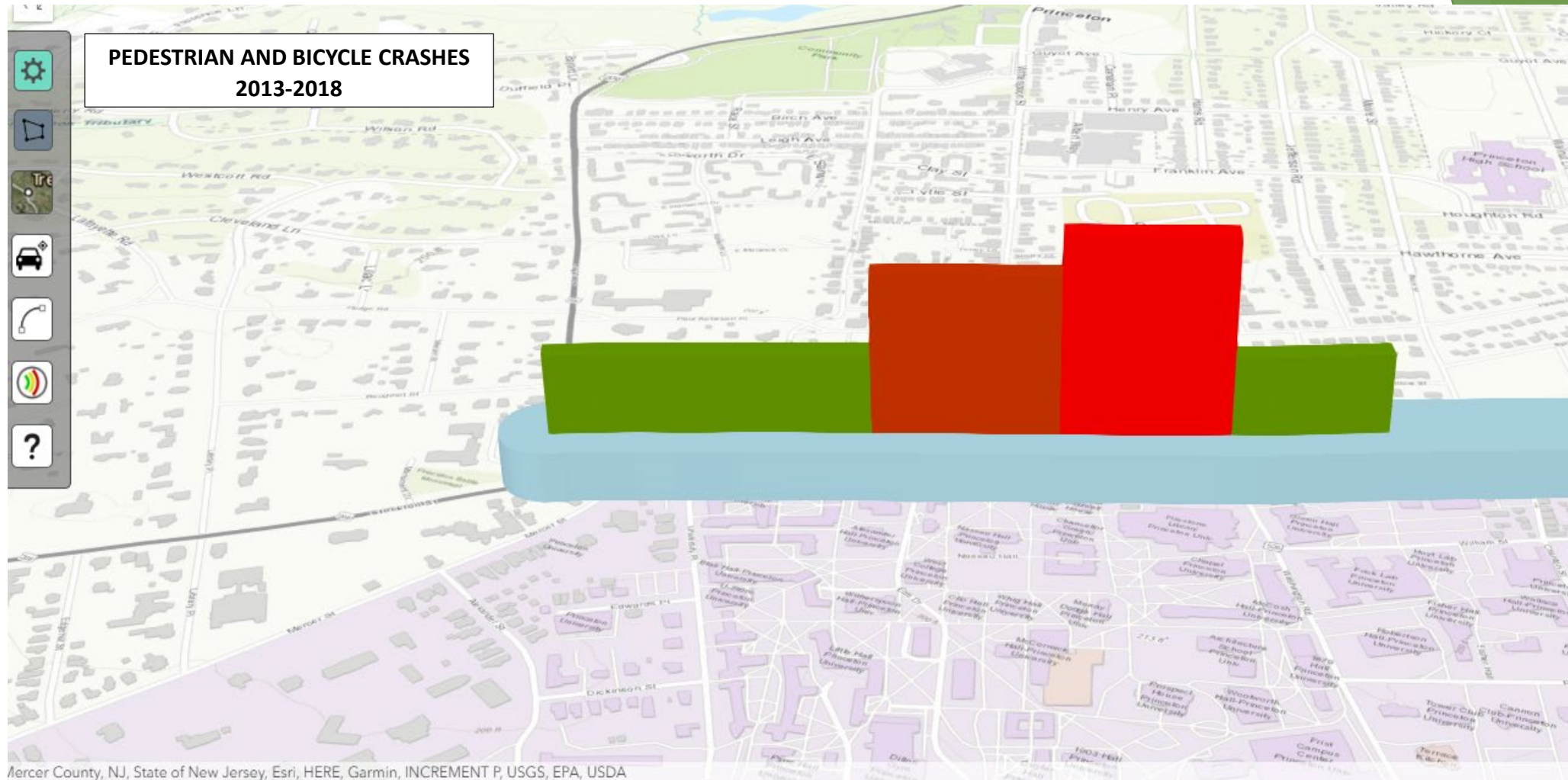
Crashes at Mile Post

00000027__
00000027__
00000027__
00000027__
00000027__

0.0
0.1
0.2
0.3
0.4

82
36
52
66
33

PEDESTRIAN AND BICYCLE CRASHES 2013-2018



Mercer County, NJ, State of New Jersey, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA



Crash Count: 15

SRI: 00000027__ [0-0.41] Date: 2013-1-1; 2018-12-31, Severity: (Fatality, Injury), Crash Type: (Pedestrian, Pedalcyclist), Pedestrian/Cyclist Involved



State Route Identifier

Mile Post

Crashes at Mile Post

00000027__

0.0

2

00000027__

0.1

2

00000027__

0.2

4

00000027__

0.3

5

00000027__

0.4

2

The Bureau of Traffic Engineering (BTE) has reviewed the request and prepared Synchro simulation models to compare the current level of service (LOS) with the LOS of the proposed operation. The models with the pedestrian only phase is forcing the traffic signals to run over capacity, increases the overall intersection delays, increased queue lengths and decrease the operation LOS. This will inevitably lead to additional requests to improve the operation LOS to decrease the delays. There is no functional way to maintain the current LOS with a pedestrian only phase at this time. Since all three intersection currently have pedestrian amenities and pedestrian phasing in the current timing directives, BTE is not recommending the installation of the pedestrian only phase at the three intersections.



Pedestrian killed at Washington and Nassau Street intersection

QUESTIONS?

- ▶ What strategies do municipalities have for getting NJDOT to make Complete Streets improvements to a state highway located in a downtown?
- ▶ Have any NJ municipalities pursued a traffic calming master plan?
- ▶ Are there NJ codes / policies regarding street lighting?
- ▶ Do you use USLimits2 in addition to 85th percentile for speed limit establishment?
- ▶ What are your success stories for safety improvements?

Thank you!

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