



# Pedestrian Safety in Delaware African American Task Force Infrastructure and Environment Subcommittee

## Presented By:

Peter Haag, P.E., PTOE

Delaware Department of Transportation

Chief of Traffic Engineering

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# Presentation Outline

- Delaware's Strategic Highway Safety Plan
- Statewide Pedestrian Crash Statistics
- Pedestrian Safety Countermeasures in Action
- Strategies & Actions for Improving Pedestrian Safety
- Question & Answer Session



2021-2025

# Delaware Strategic Highway Safety Plan



# What is an SHSP?

- Comprehensive, multi-year, **data driven** transportation safety plan with a goal of reducing highway fatalities and serious injuries on all public roads
- Establishes consistent statewide goals, objectives, emphasis areas, priorities, and countermeasures with stakeholders and other transportation plans
- Makes effective use of crash data to determines priorities
- Addresses **4 E's of Highway Safety**
  - Engineering
  - Education
  - Enforcement
  - Emergency Medical Services







# Delaware Strategic Highway Safety Plan



## GOAL

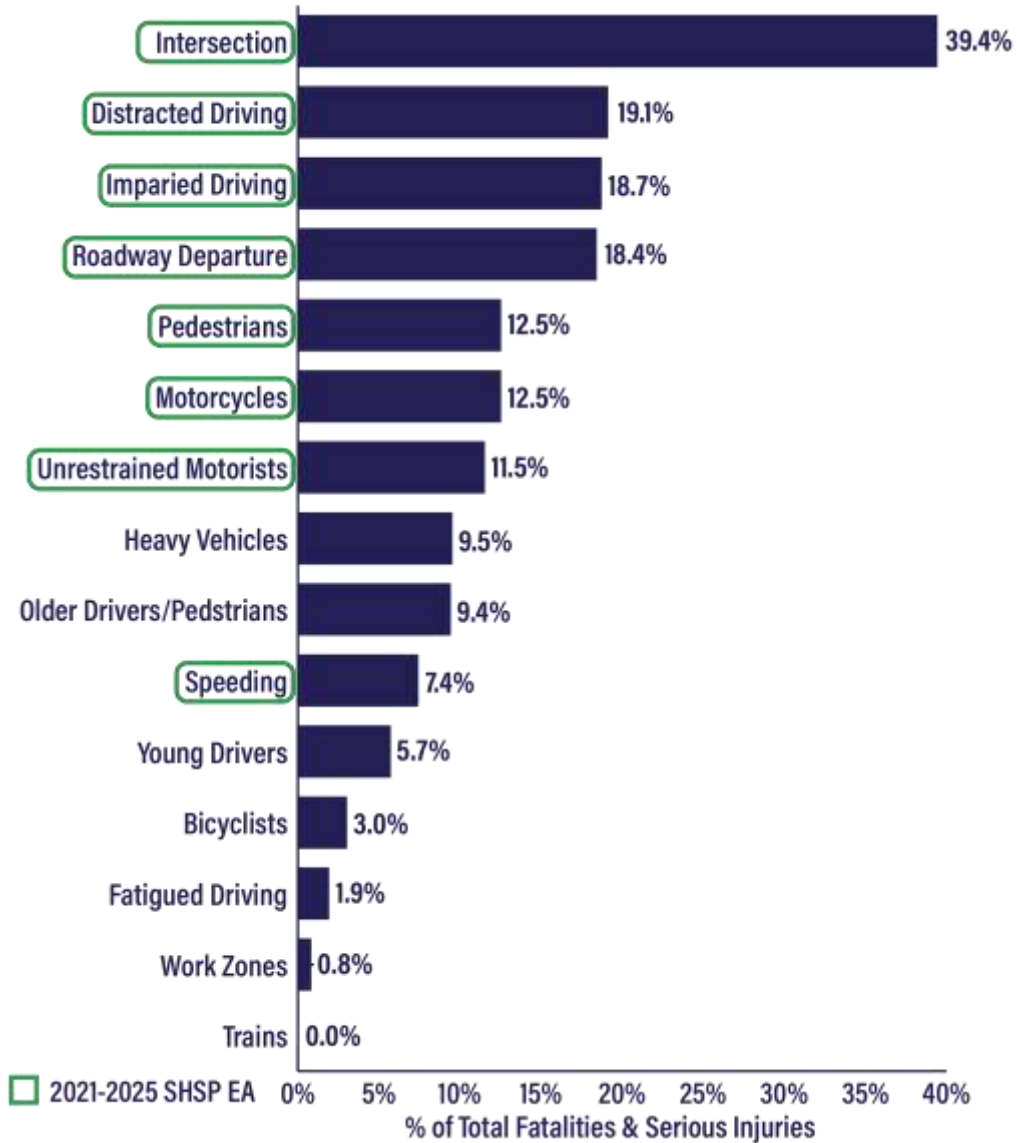
The Delaware Strategic Highway Safety Plan: **Towards Zero Deaths** aims to eliminate fatalities and serious injuries on Delaware's roadways through a multi-agency approach that utilizes education, enforcement, engineering and emergency medical service strategies.

## OVERALL OBJECTIVE

Delaware's 2021-2025 SHSP objective is to **reduce fatalities and serious injuries by 15% over the next five years** to ultimately reach the goal of zero fatalities and serious injuries on Delaware's roadways.



# 2021-2025 SHSP Emphasis Areas



**REDUCE**  
**Pedestrian**  
**Fatalities & Serious Injuries by**  
**15%**  
from **76 to 64,**  
over the next **5 years.**

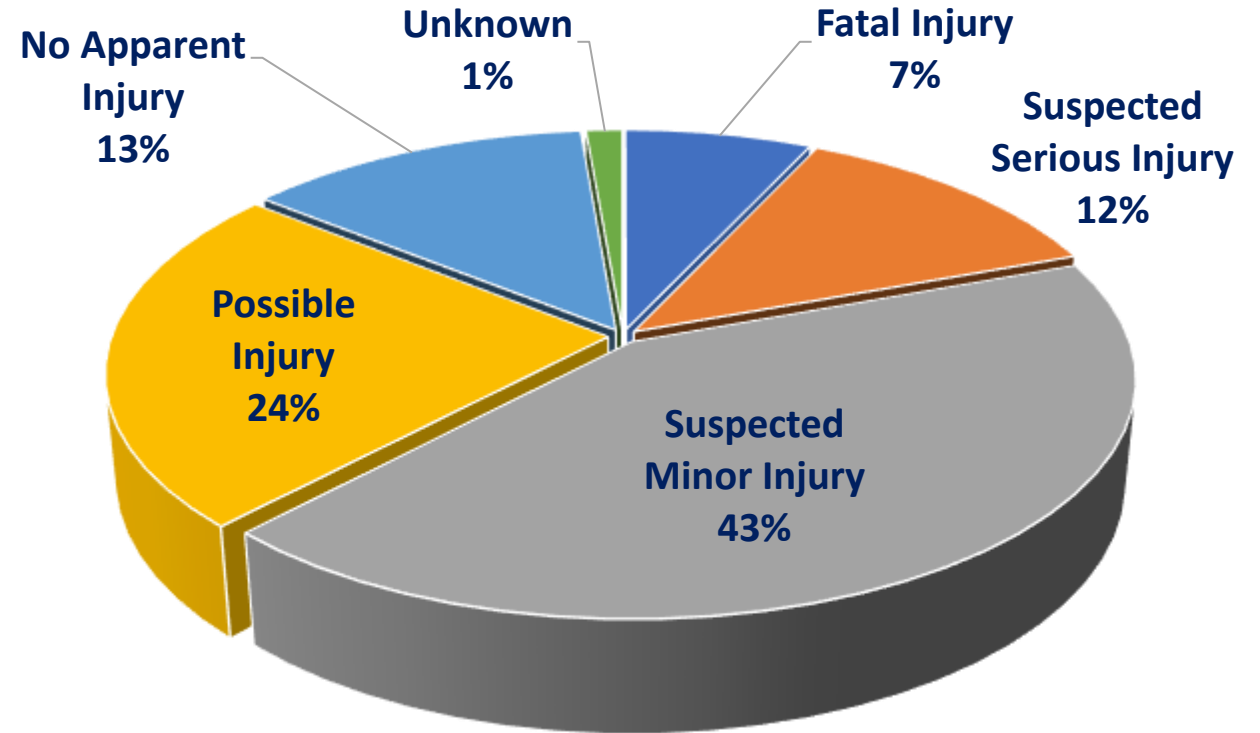


# Statewide Pedestrian Crash Statistics



# Statewide Pedestrian Crash Statistics

- Jan. 16, 2016 – Dec. 31, 2020
- Source: DelDOT's CARS Program
- All crash severities
  - Property Damage Only
  - Injury
  - Fatal
- Overall crash statistics
  - 1,721 pedestrian crashes
  - 1,796 pedestrians involved
  - 142 pedestrians killed
  - 221 pedestrians seriously injured
  - 759 pedestrians with minor injuries
  - 420 pedestrians with possible injuries

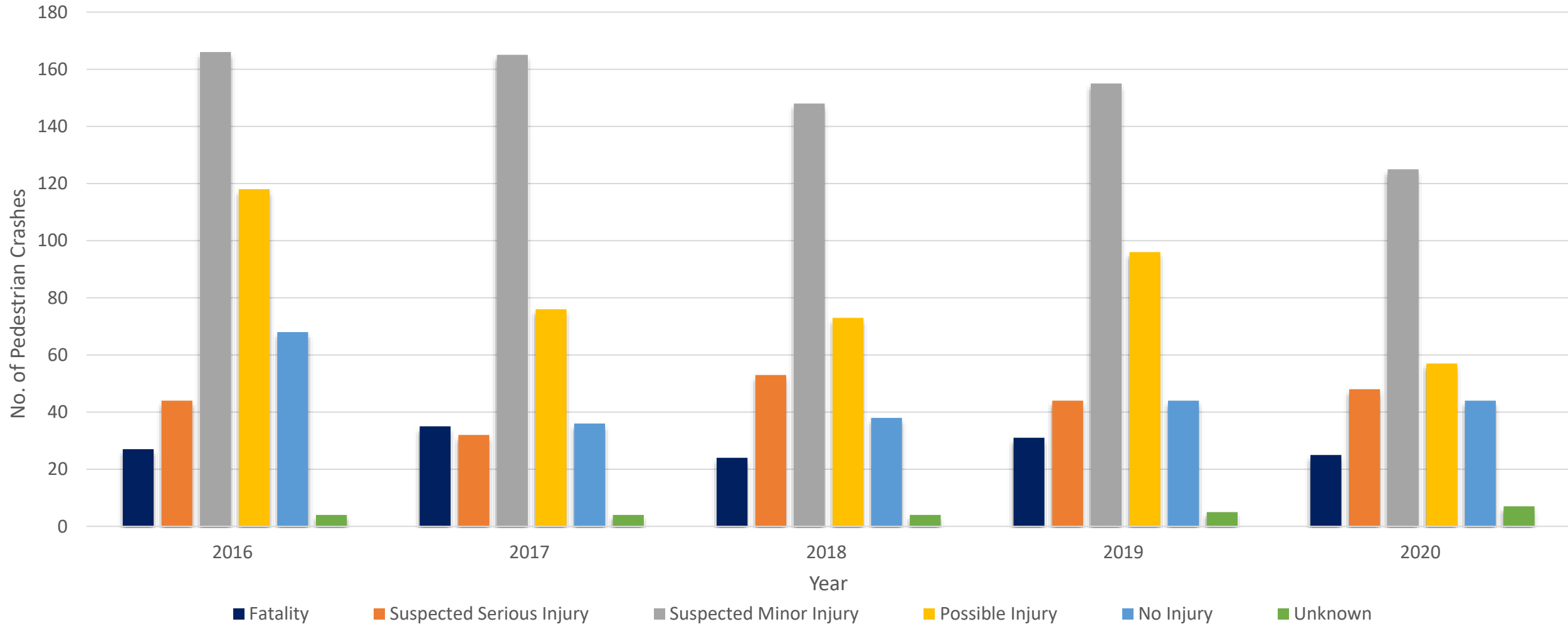






# Statewide Pedestrian Crash Statistics

*Statewide, pedestrian crashes accounted for 1.3% of all crashes and 24% of all fatalities from 2016 through 2020*





# DE Pedestrian Fatalities vs. Region

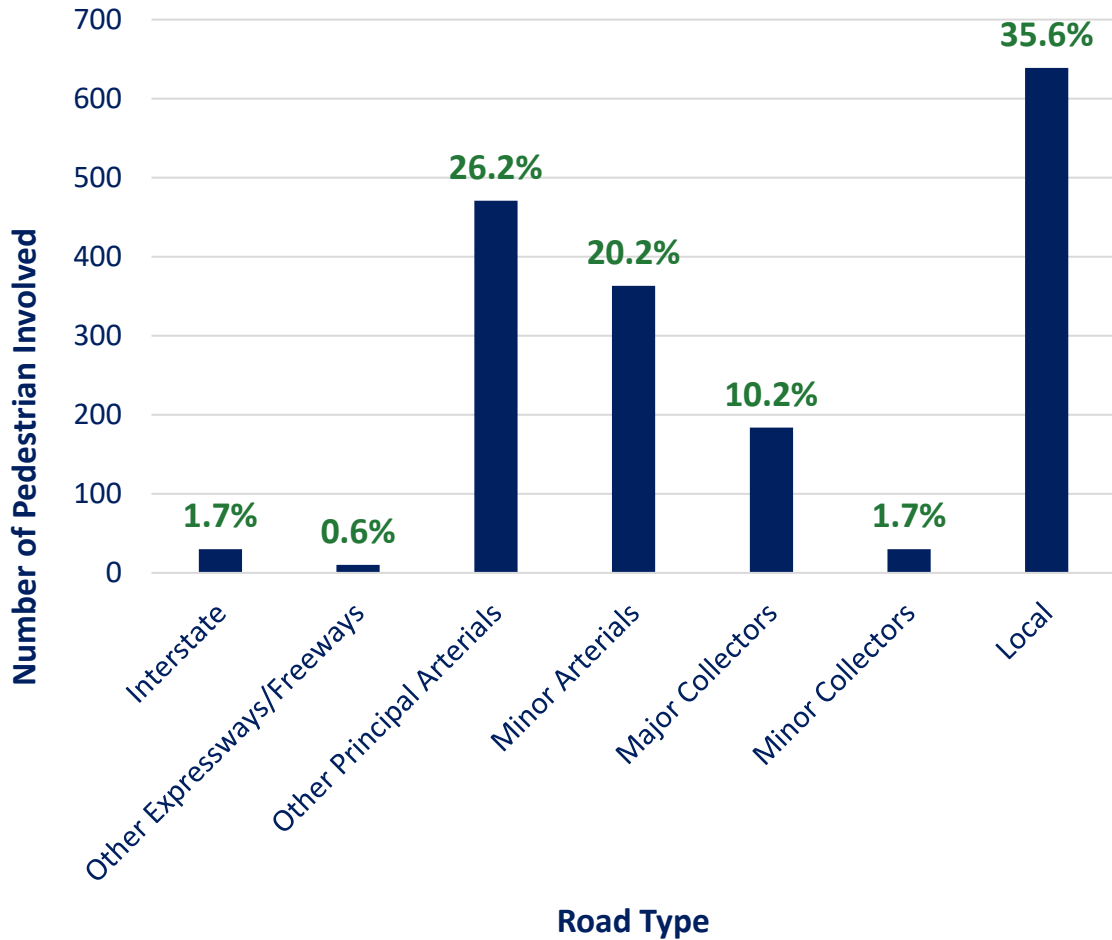
Pedestrian fatalities per 100k population	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Delaware	1.85	2.41	1.69	2.45	1.98	2.94	2.70	2.67	3.70	2.84	3.43	2.38	3.29
D.C.	3.23	1.52	2.33	2.15	1.29	1.11	1.39	1.37	1.93	1.17	1.59	1.57	1.28
Maryland	2.06	2.06	1.98	1.75	1.75	1.63	1.82	1.69	1.53	1.73	1.88	2.12	2.03
Pennsylvania	1.21	1.10	1.06	1.14	1.15	1.28	1.15	1.26	1.18	1.32	1.15	1.54	1.15
Virginia	1.14	0.98	0.93	0.91	0.90	1.20	0.91	1.06	0.92	1.45	1.31	1.39	1.44
West Virginia	1.49	0.72	1.15	0.70	1.08	1.67	1.51	1.03	1.03	1.31	1.43	1.22	1.73
Max. State Rate/Yr	3.23 (DC)	2.67 (FL)	2.51 (FL)	<b>2.45</b> <b>(DE)</b>	2.57 (FL)	<b>2.94</b> <b>(DE)</b>	<b>2.70</b> <b>(DE)</b>	3.55 (NM)	<b>3.70</b> <b>(DE)</b>	3.51 (NM)	3.54 (NM)	3.96 (NM)	3.96 (NM)
Min. State Rate/Yr.	0.38 (WY)	0.28 (NE)	0.37 (WY)	0.44 (NE)	0.38 (NE)	0.24 (SD)	0.14 (ND)	0.48 (NE)	1.48 (ID)	0.63 (NE)	0.66 (ND)	0.52 (ME)	0.48 (VT)

**States in NHTSA's Region 3**

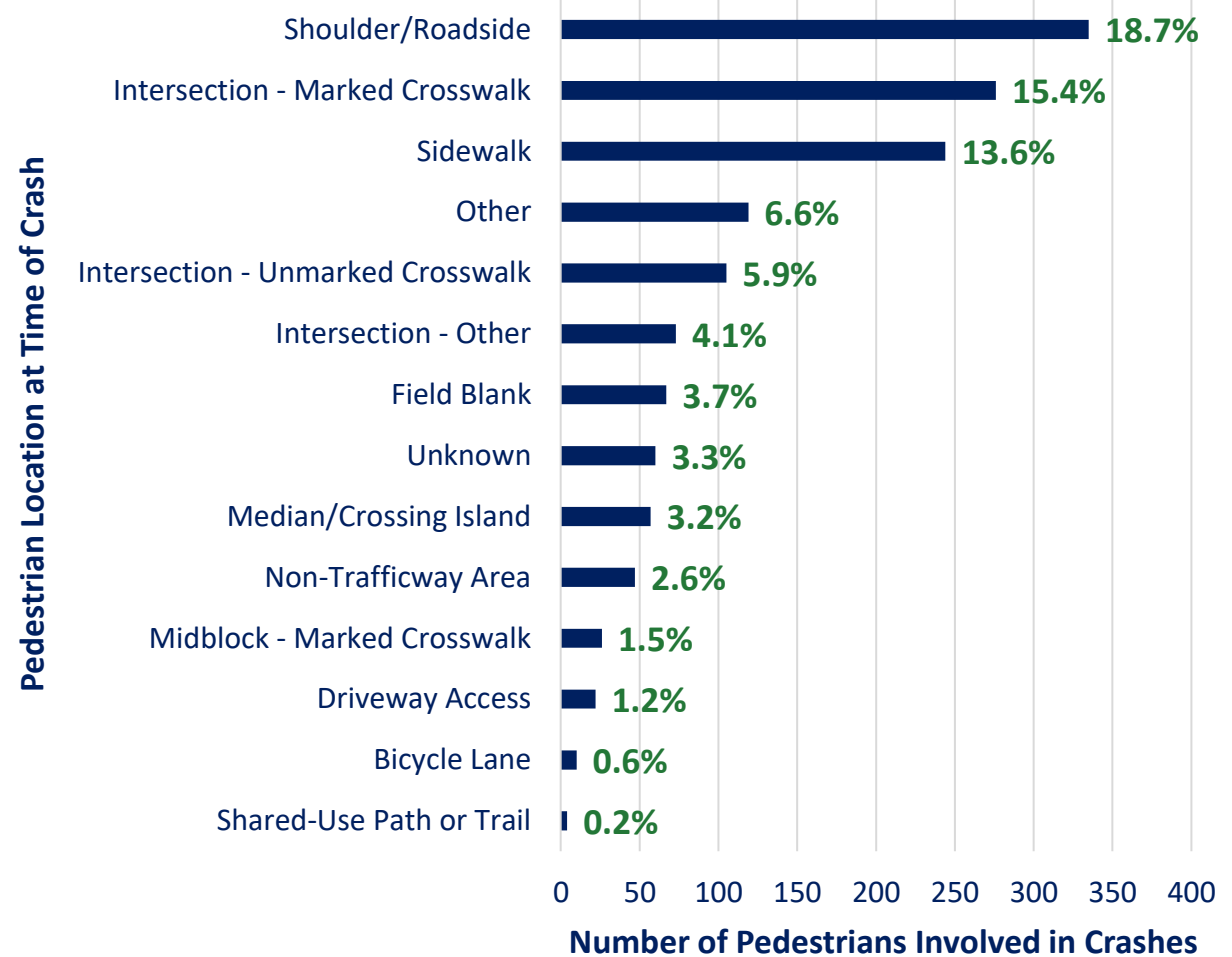


# Statewide Pedestrian Crash Statistics – Where?

**45% of pedestrian fatalities occurred on Principal Arterials**



**85% of pedestrian fatalities were non-intersection related**



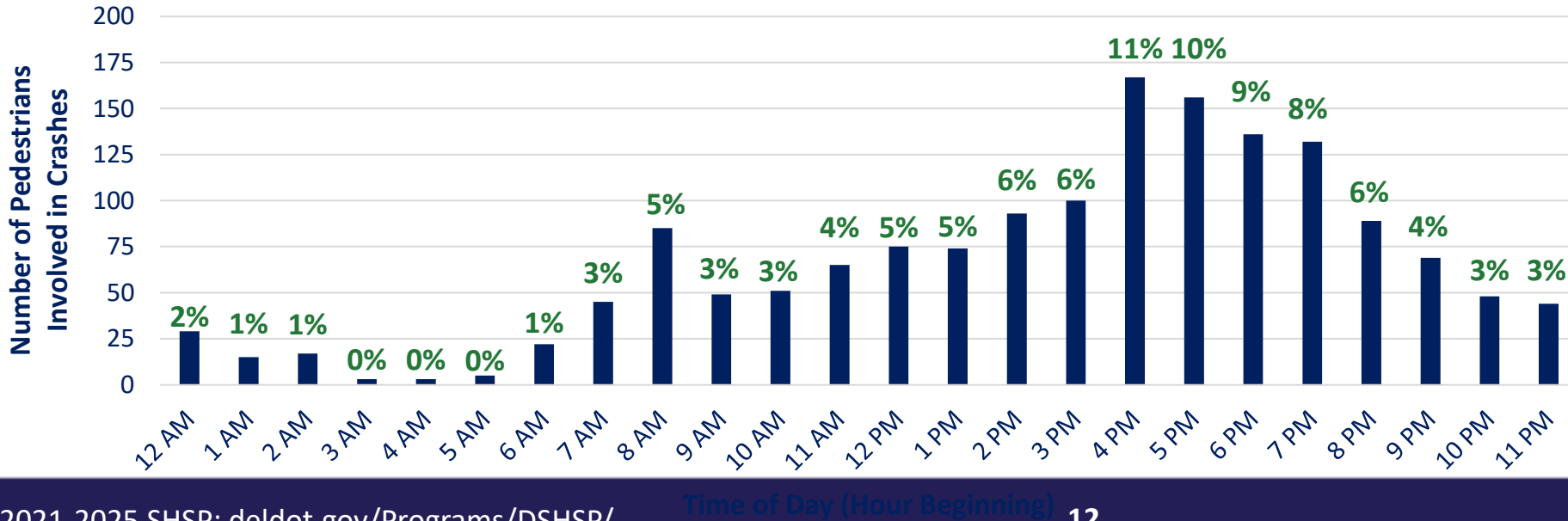
% of Total Pedestrians Involved in Crashes



# Statewide Pedestrian Crash Statistics – When?

	12A	1A	2A	3A	4A	5A	6A	7A	8A	9A	10A	11A	12P	1P	2P	3P	4P	5P	6P	7P	8P	9P	10P	11P	Totals
Sunday	3	14	3	2			1			2	4	2	3	4	3	1	5	11	16	11	10	9	4		108
Monday	4	1		1	3	1	2	3	16	3	3	8	5	4	13	8	10	19	13	11	12	12	7	3	162
Tuesday	7	7	5	1		5	10	15	22	18	21	28	24	23	32	39	44	56	43	45	43	32	30	16	566
Wednesday	3		3	3	2		4	8	14	9	6	7	11	10	8	13	16	15	21	12	14	17	6	5	207
Thursday	7	5	7	3	4	6	16	10	16	10	8	17	13	10	17	18	13	27	29	15	24	17	14	13	319
Friday	5	2		1		2	6	7	13	9	4	2	19	14	8	11	11	13	32	20	13	16	11	8	227
Saturday	8	9	5	2	5	5	5	3	3	5	3	7	8	4	8	13	17	5	19	18	19	19	11	6	207
<b>Totals</b>	<b>37</b>	<b>38</b>	<b>23</b>	<b>13</b>	<b>14</b>	<b>19</b>	<b>44</b>	<b>46</b>	<b>84</b>	<b>56</b>	<b>49</b>	<b>71</b>	<b>83</b>	<b>69</b>	<b>89</b>	<b>103</b>	<b>116</b>	<b>146</b>	<b>173</b>	<b>132</b>	<b>135</b>	<b>122</b>	<b>83</b>	<b>51</b>	<b>1796</b>

Lower Frequency Higher Frequency XX Number of Pedestrians Involved in Crashes

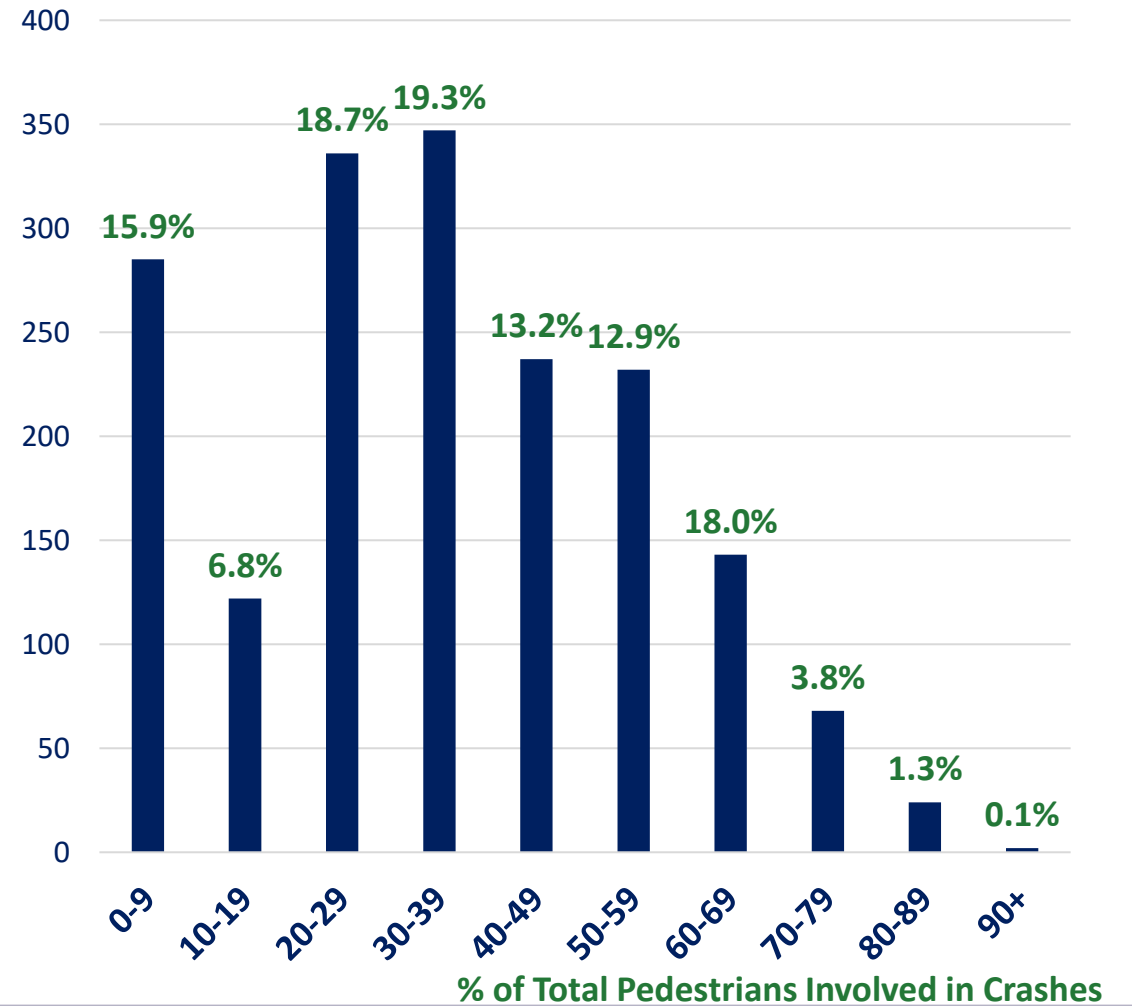
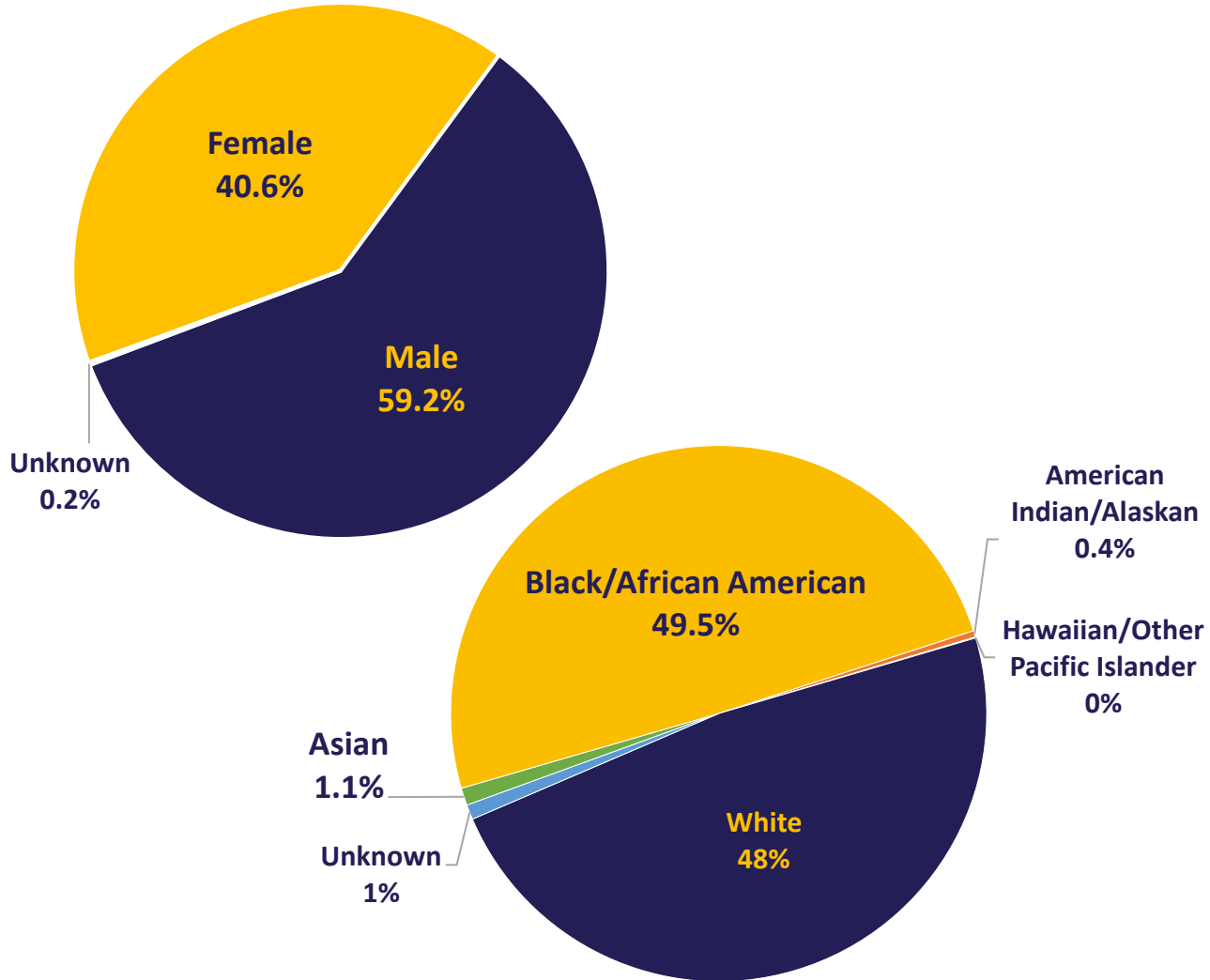


**35% of pedestrian fatalities occurred in November, December and January**

% of Total Pedestrians Involved in Crashes



# Statewide Pedestrian Crash Statistics – Who?





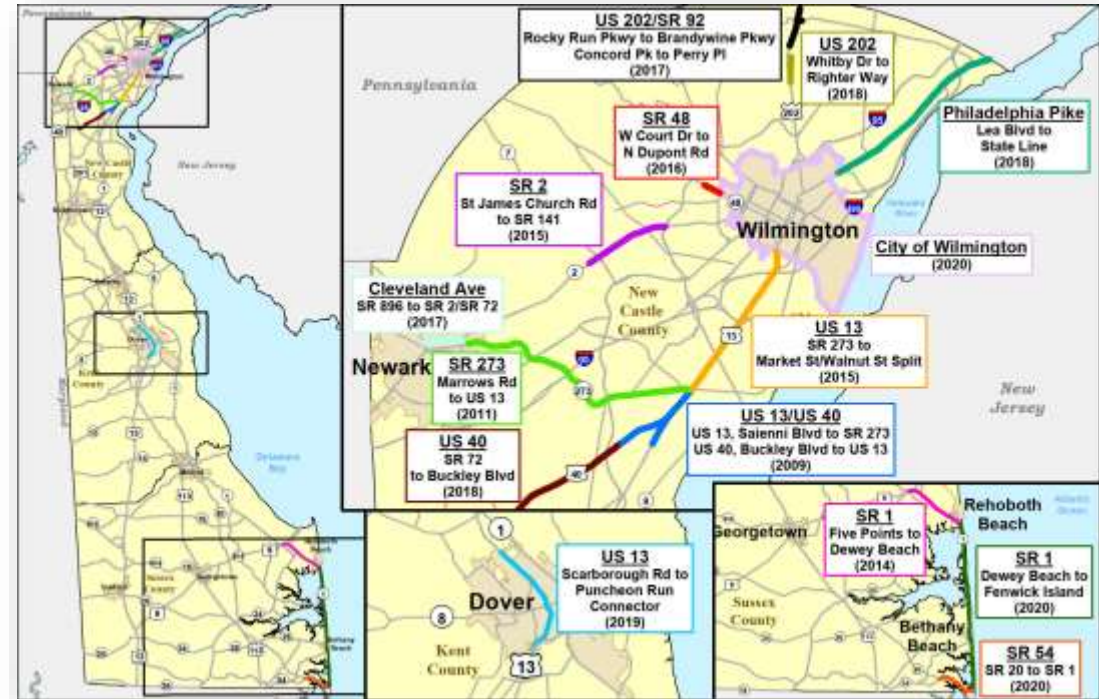


# Pedestrian Safety Countermeasures in Action



# Pedestrian Safety Countermeasures

- Pedestrian Safety Audits
  - Better understand specific pedestrian crash trends
  - Multidisciplinary audit team to review corridors and make recommendations
  - Improvements are implemented as part of existing or future projects and programs
  - Since 2015, DeDOT has completed 10 audits/assessments and implemented various improvements
    - US 13 from Llangollen Boulevard to A Street
    - SR 273 from US 13 to SR 72
    - Kirkwood Highway from St. James Church Road to SR 141
    - US 13 Dover from Scarborough Road to Puncheon Run Connector
    - SR 1 from Lewes to Dewey Beach
    - US 202
    - SR 48 from SR 141 to DuPont Road





# Pedestrian Safety Countermeasures

- Rectangular Rapid Flashing Beacon
  - Pedestrian-actuated warning device used at uncontrolled, marked crosswalks
  - Intended to improve compliance with motorists yielding to pedestrians in marked crosswalks
  - First installation in April 2016
  - 43 locations completed since 2016
  - 3 currently under construction
  - 12 planned for future construction
  - 25% average improvement in motorist yielding compliance across all sites







# Pedestrian Safety Countermeasures

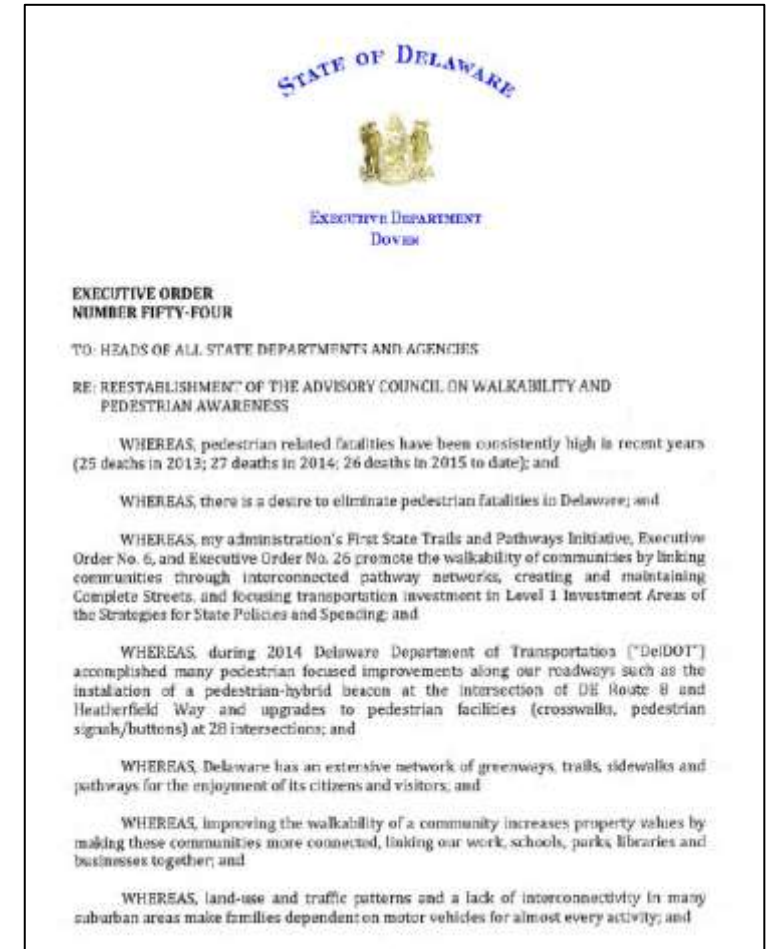
- Other Engineering Countermeasures
  - Painted crosswalks at signalized intersections
  - Pedestrian signalization
  - Marked crosswalks at appropriate mid-block crossing locations
  - Corner sight distance improvements
  - Curb bump outs to decrease crossing distances
  - Median refuge areas
  - Transit improvements
  - Sidewalk connectivity improvements
  - Traffic calming
  - Improved warning signage
  - Barriers to prevent undesired mid-block crossings





# Pedestrian Safety Countermeasures

- Advisory Council on Walkability and Pedestrian Awareness (Pedestrian Council)
  - Established October 12, 2015, by Governor Markell
  - Appointed membership included state agencies, planning councils, advocacy groups and the public
  - Areas of focus:
    - Identifying gaps in the system of pedestrian paths and sidewalks
    - Provide advice regarding design standards for crosswalks, sidewalks, and pathways ensuring ADA compliance
    - Provide advice regarding implementation of DeDOT's Sidewalk and Multi-Use Path Maintenance Policy
    - Review traffic rules to help support a safe pedestrian environment
    - Provide advice regarding accessibility and connectivity in an effort to make transit a more viable option
    - Developing strategies for pedestrian safety education and awareness
  - Subcommittees:
    - Built Environment
    - Legislative
    - Education and Enforcement



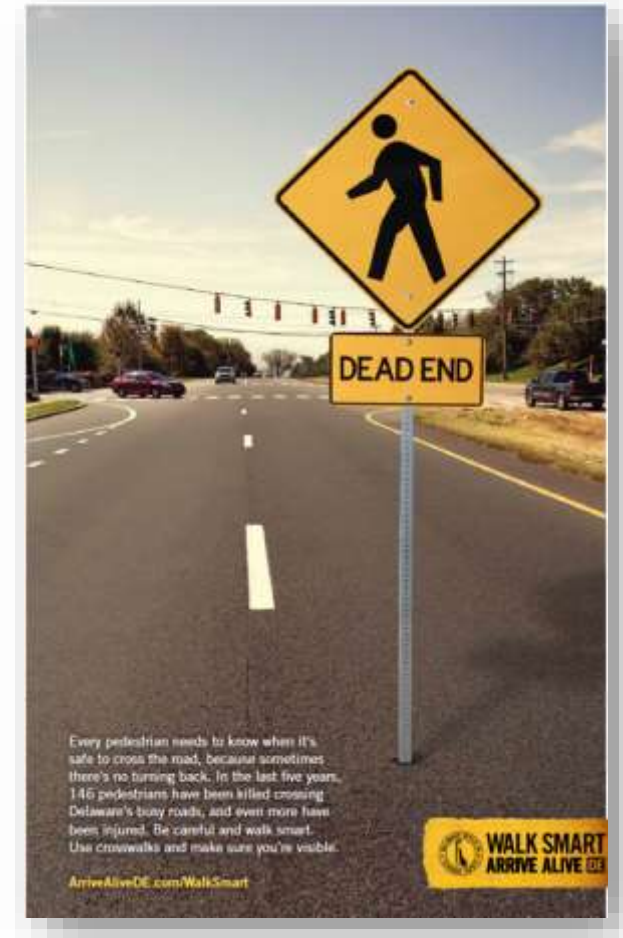
Pedestrian Council website: [https://deldot.gov/Programs/pedestrian\\_council/index.shtml](https://deldot.gov/Programs/pedestrian_council/index.shtml)





# Pedestrian Safety Countermeasures

- Pedestrian Education Countermeasures
  - Managed by Delaware Office of Highway Safety
  - Continued education outreach campaigns
    - Targeted media outreach
  - Community outreach
    - Alliance Sports Marketing
      - Cross Country Races
      - Elementary school programs
    - Corporate/Public Partner Program
    - OHS Safety Conference
    - Banners for schools
    - Beach events: Partnership with Ocean City Pedestrian Task Force
    - Pedestrian Speed Demo



**WALK SMART. ARRIVE ALIVE DE**



# Strategies & Actions for Improving Pedestrian Safety



# Strategies & Actions for Improving Pedestrian Safety

- Strategy 1: Develop and distribute consistent public information messages to educate the public about pedestrian safety
  - Increase targeted public outreach, based on specific data-driven trends
  - Increase awareness regarding pedestrian infrastructure improvements and incorporate educational outreach in conjunction with implementation of pedestrian improvement projects
  - Develop and distribute targeted public information messages to increase public awareness regarding safety issues during vehicle breakdowns
- Strategy 2: Develop educational training programs to improve pedestrian safety awareness
  - Incorporate pedestrian (and other road user) laws and rules of the road into Drivers Education and Defensive Driving curricula
  - Develop an educational outreach program for school children targeting pedestrian safety issues
  - Develop and implement formal crossing guard certification requirements, similar to programs for flaggers in highway work zones



# Strategies & Actions for Improving Pedestrian Safety

- Strategy 3: Strengthen pedestrian safety laws and enforcement efforts
  - Utilize a strategic law enforcement and social services approach to address substance abuse related to pedestrian crashes and behaviors
  - Conduct high-visibility enforcement campaigns targeting both pedestrians and drivers to promote pedestrian safety
  - Support expansion of legislation permitting the use of automated speed enforcement in Delaware
  - Evaluate the need for a “Pedestrian Safety Behavior Modification” class and require those charged with various pedestrian safety violations to participate in the class



# Strategies & Actions for Improving Pedestrian Safety

- Strategy 4: Install effective engineering countermeasures to improve pedestrian safety
  - Continue conducting pedestrian safety audits at high-crash locations and critical corridors and incorporate pedestrian behavioral surveys into the audits
  - Install infrastructure improvements to reduce pedestrian exposure, the potential for pedestrian/vehicle conflicts, and increase pedestrian visibility
  - Perform before/after studies to evaluate and identify the most effective pedestrian safety treatments
  - Research, and where appropriate, implement innovative pedestrian detection at signalized intersections and at other locations along high-risk corridors where driver feedback can be provided via signs and signals





# Strategies & Actions for Improving Pedestrian Safety

- Strategy 5: Develop policies and/or guidelines to support pedestrian safety measures
  - Consider revising DelDOT's design policies and guidelines to promote design practices that reduce vehicular speeds and promote pedestrian safety
  - Revise DelDOT's Development Coordination Manual to require additional pedestrian infrastructure improvements related to new developments
  - Evaluate the need for revisions to DelDOT's Complete Streets policy and implementation plan
  - Initiate a Pedestrian Safety Stakeholder group with membership from appropriate state agencies, advocacy groups and the public to identify pedestrian safety and connectivity improvements, policy updates and improved collaboration between state and local agencies, consistent with the objectives of the 2021-2025 SHSP



# Strategies & Actions for Improving Pedestrian Safety

- Strategy 6: Improve data collection of pedestrian crashes and monitor trends
  - Working with the Division of Substance Abuse and Mental Health (DSAMH), share data to link mental health issues and substance abuse with traffic and pedestrian travel patterns to improve educations outreach to vulnerable populations
  - Correlate pedestrian crashes with population changes associated with summer resort seasons, holiday shopping and other times that increase pedestrian activity and if necessary, identify appropriate pedestrian safety countermeasures
  - Correlate pedestrian crashes to income levels and homeless populations in Delaware and if necessary, identify appropriate pedestrian safety countermeasures
  - Implement best practices for the use of the new pedestrian origin-destination data to capture improved data about pedestrian travel patterns and crashes
- Strategy 7: Improve emergency services and incident management to address pedestrian safety
  - Evaluate the expansion of DelDOT's Motorist Assistance Patrol (MAP) to increase services along interstates, freeways, and expressways to reduce pedestrian exposure during vehicle breakdowns



# 2021-2025 Delaware SHSP

*Thank you for your time and interest in  
safety on Delaware's roadways.*

***Peter Haag, P.E., PTOE***  
***Chief of Traffic Engineering***  
***[Peter.Haag@delaware.gov](mailto:Peter.Haag@delaware.gov)***  
***(302) 659-4084***

***Scott Neidert, P.E., PTOE, RSP***  
***HSIP Manager***  
***[Scott.Neidert@delaware.gov](mailto:Scott.Neidert@delaware.gov)***  
***(302) 659-4075***

**View the SHSP Here: [deldot.gov/Programs/DSHSP/](https://deldot.gov/Programs/DSHSP/)**

Pedestrian specific information can be found at:  
<https://deldot.gov/Programs/DSHSP/index.shtml?dc=pedestrians>

*To Report a Road Condition: <https://deldot.gov/Traffic/ReportRoadCondition/index.shtml>*