

Traffic Calming Design

September 2025



Excellence in Transportation **Every Trip.**

We strive to make every trip taken in Delaware safe, reliable and convenient for people and commerce.

Every Mode.

We provide safe choices for travelers in Delaware to access roads, rails, buses, airways, waterways, bike trails and walking paths.

Every Dollar.

We seek the best value for every dollar spent for the benefit of all.

Everyone.

We engage our customers and employees with respect and courtesy as we deliver our services.

Delaware Traffic Fatalities

2025 Delaware Total Fatalities as of 08/14/25								
	2025	2024			2023			
	Year-to-date	Year-to-Date		Total	Year-to-date	Year-to-Date		Total
Fatalities	59	81	↓	-27%	130	88	↓	137
Delaware Residents	43	67	↓	-36%	110	70	↓	110
Person Types								
Vehicle Occupant	32	43	↓	-26%	62	70	↓	89
Pedestrian	15	15			34	13	↑	+15%
Bicyclist	2	3			5	2		5
Motorcyclist	9	13		-44%	21	11	↓	-18%
Other Person Type	1	1	↓	-75%	5	0	↑	+100%
Crash Types								
Curve Related	15	15	↓	-40%	23	19	↓	-53%
Roadway Departure	27	30	↓	-10%	42	47	↓	-43%
Intersection	16	34	↓	-53%	48	20	↓	-20%
Passenger Crossover	1	0	↑	+100%	0	7	↓	-86%
Wrong Way	2	2		0%	4	1	↑	+100%
Work Zone	4	5	↓	-20%	5	6	↓	-33%

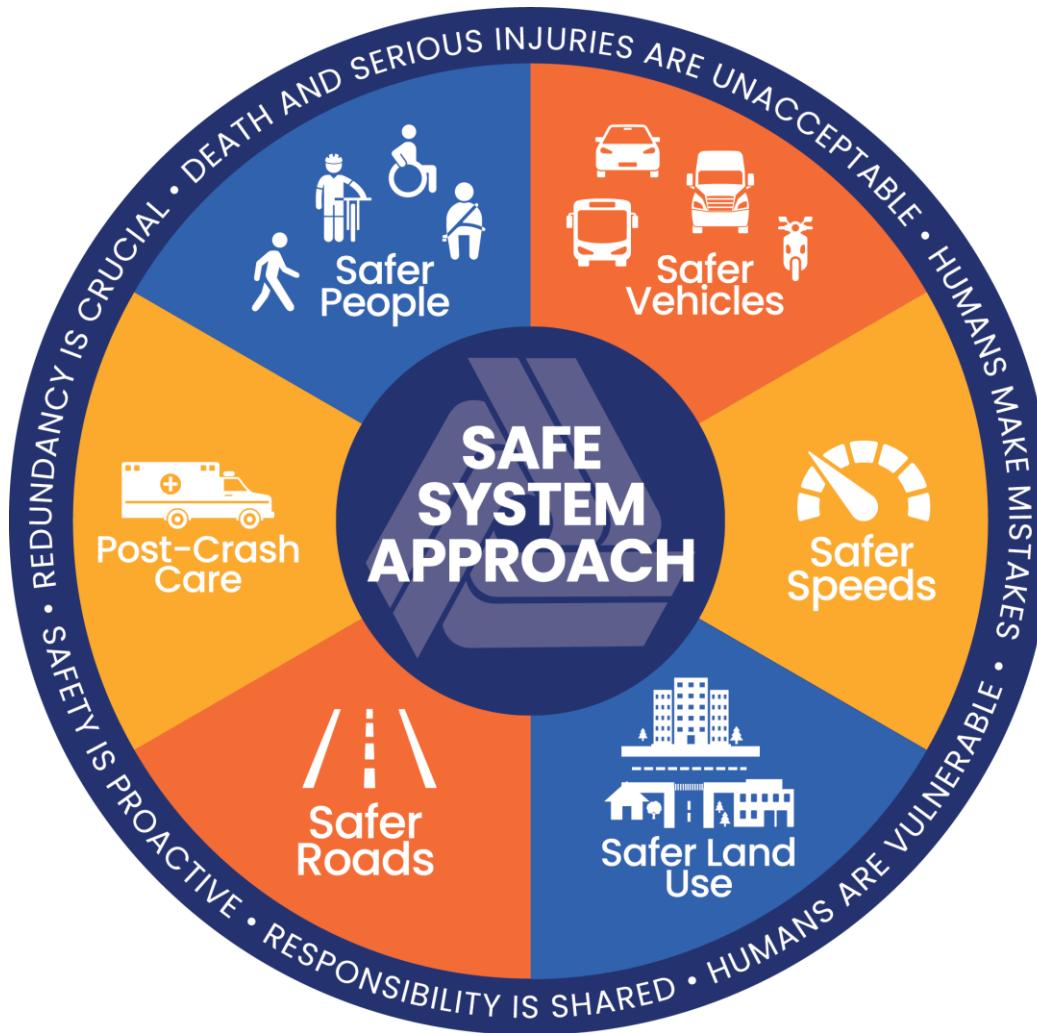
UPDATE WITH LATEST STATS BEFORE PRESENTATION

Outline

- **Safe System Approach**
- Traffic Calming Design Manual (TCDM) Updates
- Implementing Traffic Calming through the Development Coordination Process



Safe System Approach



Objectives

- Reduce the severity of conflicts between all road users
- Modify travel speeds to match roadway conditions
- Reduce impact forces so that collisions are never deadly

Safe System Approach

Traditional Approach vs. Safe System Approach



Safe System Approach

Safer Road Users

Addresses every mode of transportation

Safer Vehicles

Utilizes safety measures that incorporates the latest technology

Safer Speeds

Higher speeds increase crash severity; reducing speeds can accommodate human injury tolerances

Safer Roads

Designing to accommodate human mistakes and injury tolerances can reduce the severity of a crash

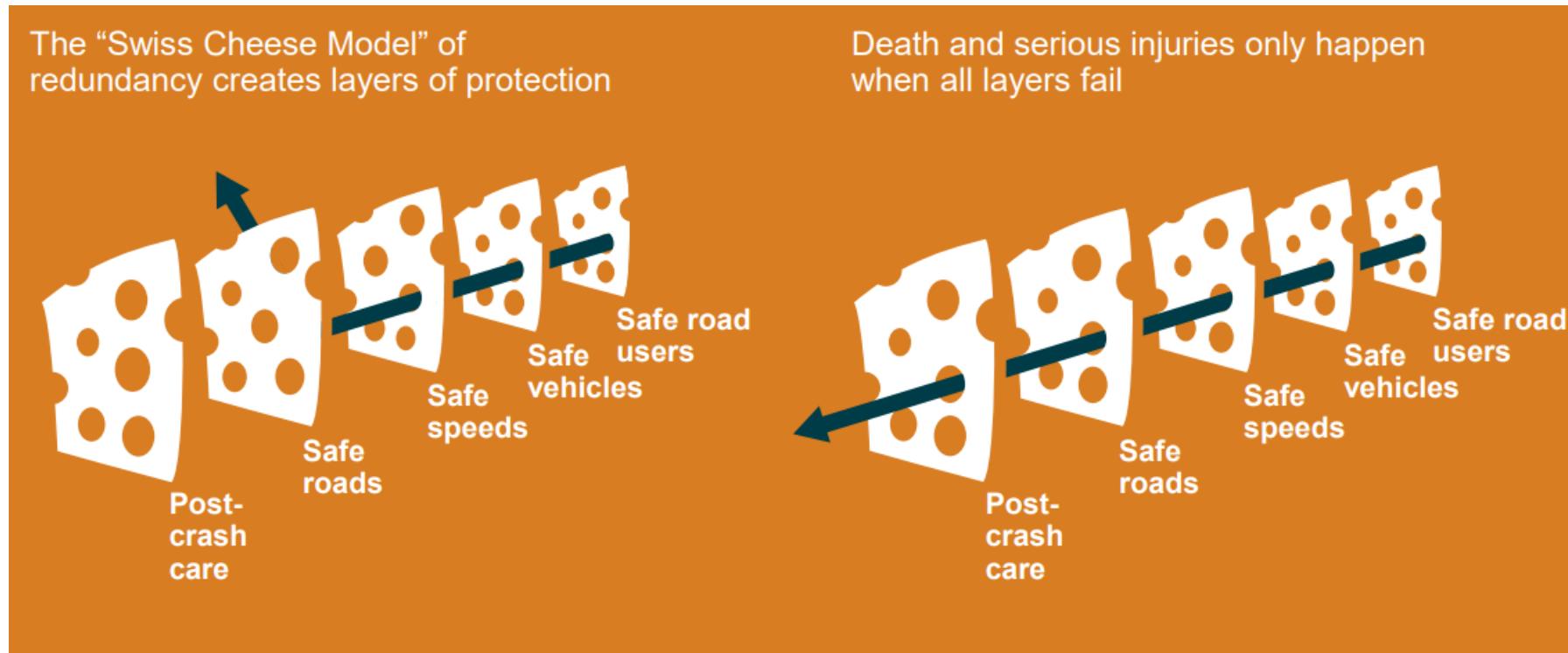
Safer Land Use

Reducing distances between destinations minimizes crash potential by making walking, biking, and transit safer and a viable alternative to driving

Post-Crash Care

First responders, medical care, crash investigation, incident management, and justice

Safe System Approach



Outline

- Safe System Approach
- **Traffic Calming Design Manual (TCDM) Updates**
- Implementing Traffic Calming through the Development Coordination Process



What is Traffic Calming?

*"The primary purpose of traffic calming is to **support the livability and vitality of residential and commercial areas** through improvements in **non-motorist safety, mobility, and comfort**. These objectives are typically achieved by **reducing vehicle speeds or volumes on a single street or a street network**.*

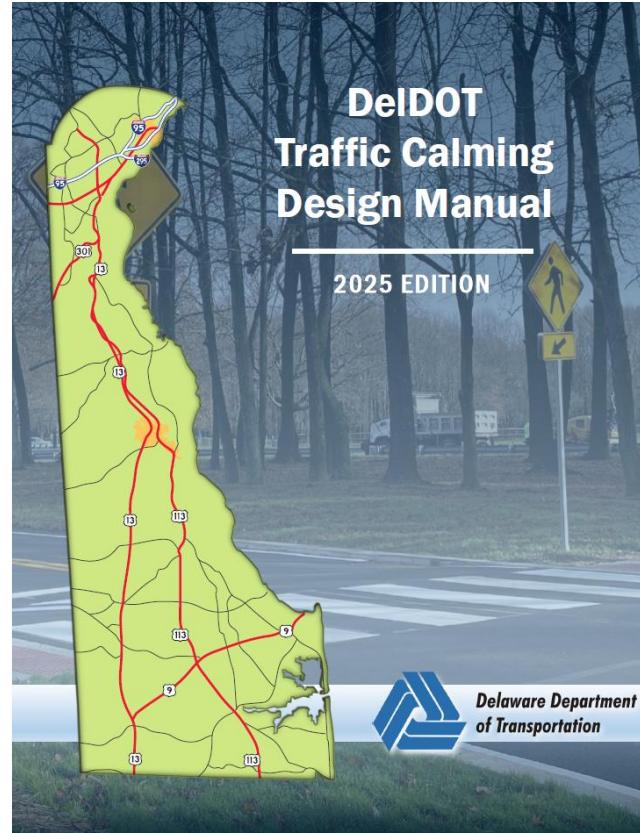
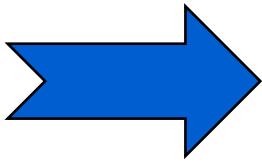
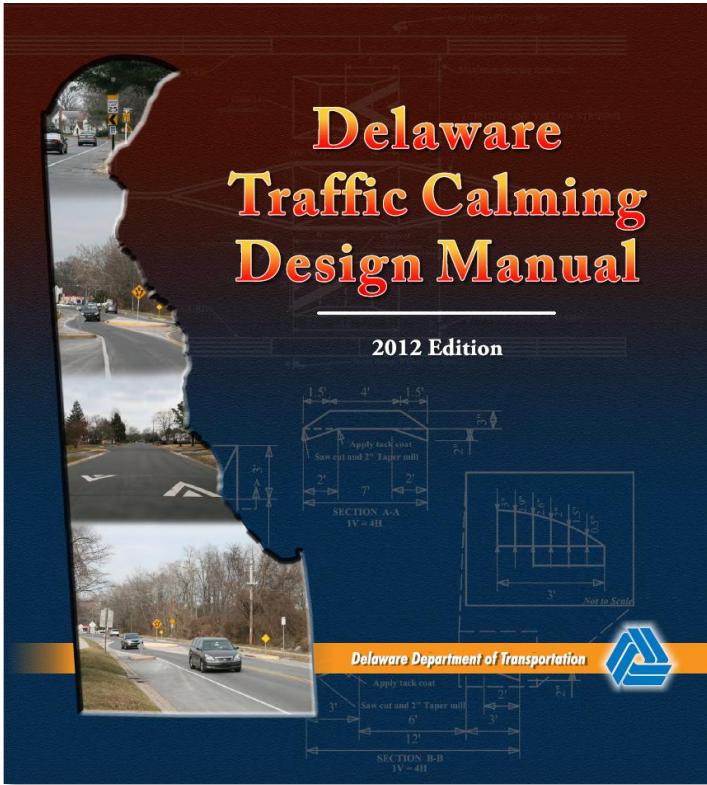
Traffic calming measures consist of horizontal, vertical, lane narrowing, roadside, and other features that use self-enforcing physical or psycho-perception means to produce desired effects."

- FHWA Traffic Calming ePrimer



Traffic Calming Design Manual

- The latest version of the TCDM was adopted in April 2025



DelDOT Traffic Calming

- The TCDM was developed to:
 - Provide administrative procedures needed to evaluate and implement traffic calming measures
 - Provide guidance on applications for traffic calming
 - Provide guidance on geometric design, signing, and pavement marking related to traffic calming measures
- Often used to retrofit existing roadways
- Goal for new developments/redevelopments
 - Achieve traffic calming objectives from the start

"In new developments, developers may choose to incorporate traffic calming measures into the design of their projects, or traffic calming measures may be requested by DelDOT, through the review and approval process." – DelDOT TCDM

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Traffic Calming Measures

**Horizontal
Measures**

**Vertical
Measures**



Horizontal Traffic Calming Measures

Lateral Shift



Source: ITE Traffic Calming State of the Practice, August 1999

Chicane



Realigned Intersection



Traffic Circle & Mini-Roundabout



Horizontal Traffic Calming Measures

Choker



Median Island



Corner Extension /
Bulbout



Partial Closure



Horizontal Traffic Calming Measures

Diagonal Diverters



Source: ITE Traffic Calming State of the Practice, August 1999

Intersection Barriers



Source: ITE Traffic Calming State of the Practice, August 1999

Road Diet / Roadway Reconfiguration



Forced Turn Islands



Source: ITE Traffic Calming State of the Practice, August 1999

Traffic Calming Measures

**Horizontal
Measures**

**Vertical
Measures**



Vertical Traffic Calming Measures

Goal: Design roadways so these devices are not necessary

Speed Humps



Speed Cushions

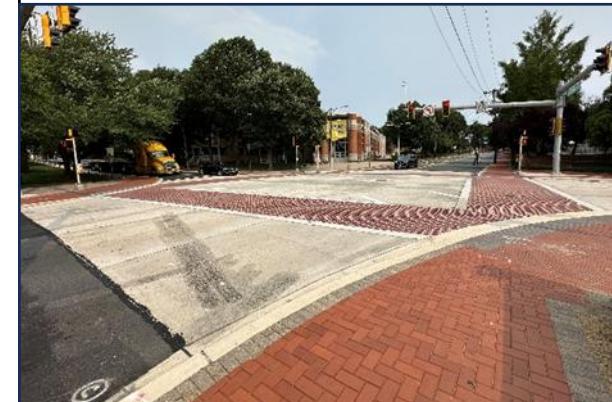


Source: City of Alameda Traffic Calming Toolbox, February 18, 2003

Speed Tables & Raised Crosswalks



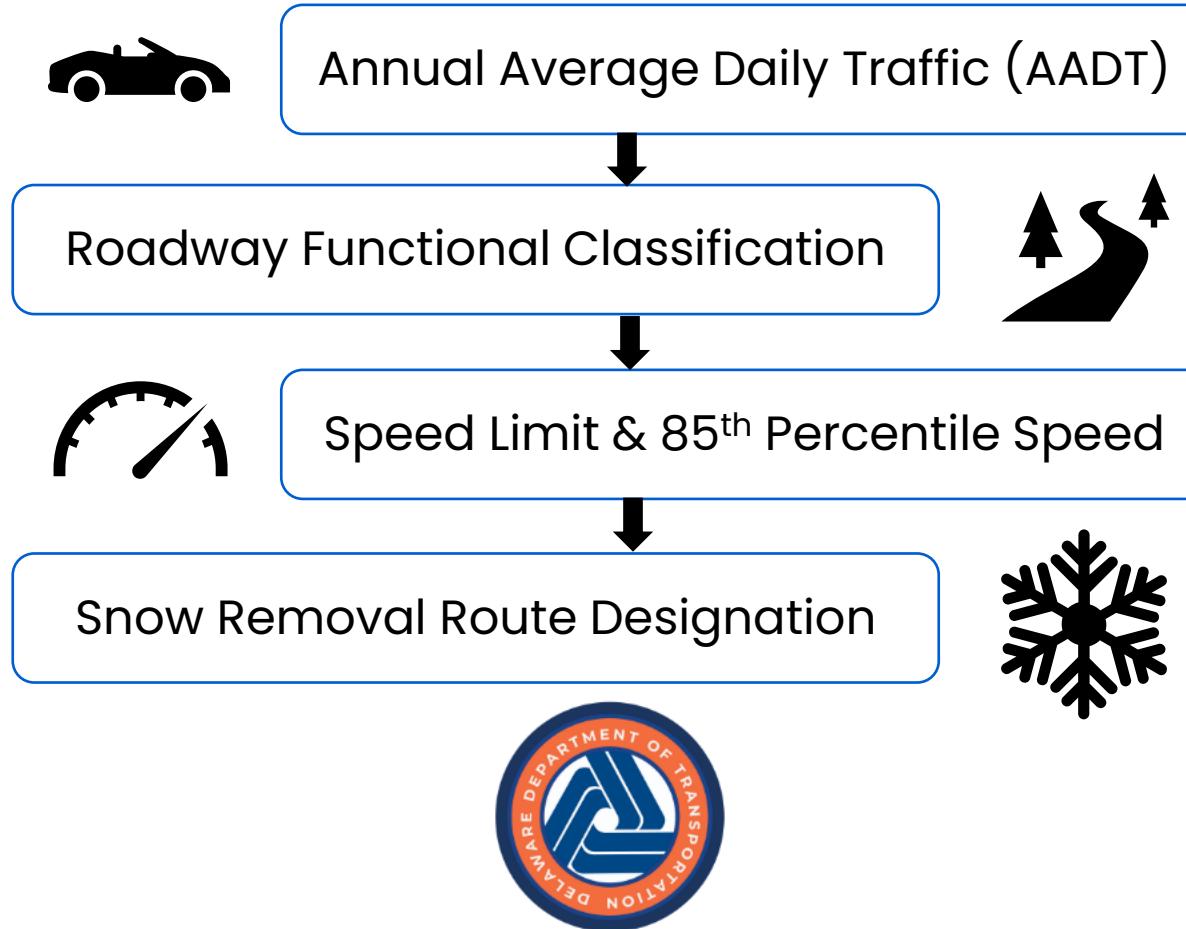
Raised Intersections



NEW

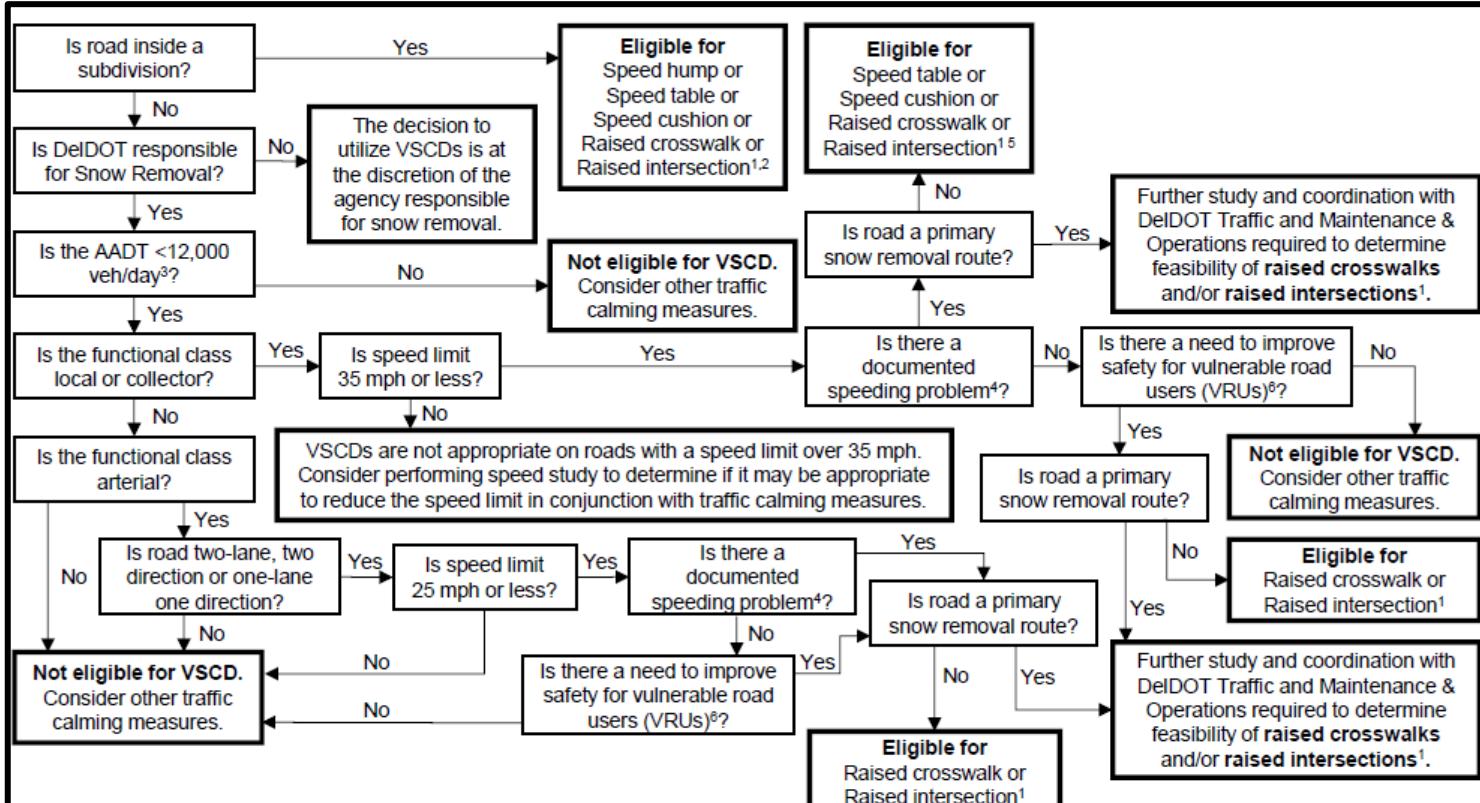
Eligibility for Vertical Measures

New flowchart procedure to determine eligibility based on....



NEW

Vertical Speed Control Devices (VSCDs) Flowchart



Notes:

1. All VSCD profiles should be designed for the posted speed limit. **Raised crosswalks and raised intersections should be prioritized over speed humps, speed cushions, and speed tables where possible. A lighting evaluation should be completed before installing a VSCD.**
2. Inside a subdivision, it is assumed the speed limit is 25 mph and the functional class is local. Speed humps should not be used on roads with speed limits higher than 25 mph.
3. The threshold of 12,000 veh/day is the highest volume where VSCDs have been successfully deployed in Delaware.
4. A speeding problem exists when a speed study finds the 85th percentile speed is at least 5 mph above the posted speed limit.
5. Outside of subdivisions, traffic calming installations with speed cushions or speed tables require a minimum of two devices.
6. A traffic study should be conducted to determine if there is a need for pedestrian/bicyclist accommodations, including a review of pedestrian/bicyclist crash history, consideration of pedestrian/bicyclist generators, and latest NCHRP guidance for pedestrian safety at unsignalized crossings.

Outline

- Safe System Approach
- Traffic Calming Design Manual (TCDM) Updates
- **Implementing Traffic Calming through the Development Coordination Process**



Where else have we seen Traffic Calming before?

- DelDOT Development Coordination Manual (DCM)

3.9 TRAFFIC CALMING

Traffic calming shall be considered in the site plan development. The applicant's engineer shall identify areas where higher traffic speeds and volumes are expected and shall include appropriate traffic calming design elements.

DelDOT's Traffic Calming Design Manual (TCDM) provides detailed guidance regarding the appropriate use, design, signing and marking of traffic calming measures that have been evaluated by DelDOT and are preferred for use.



Implementing Traffic Calming through the Development Coordination Process

- Curb speeding **before** it's a problem
- Switch from reactive to proactive
- Design for low-speeds, creating safer and more livable communities
- Quick wins for developments:
 - Design narrower roadways
 - Curvilinear instead of long tangent sections
 - Reduce the number of intersections
 - Cul-de-sacs
 - Minimum/variable setbacks
 - Replace four-way intersections with roundabouts
 - Redesign roadways leading up to the development entrances for reduced speeds
 - If long tangent sections cannot be avoided, incorporate traffic calming devices



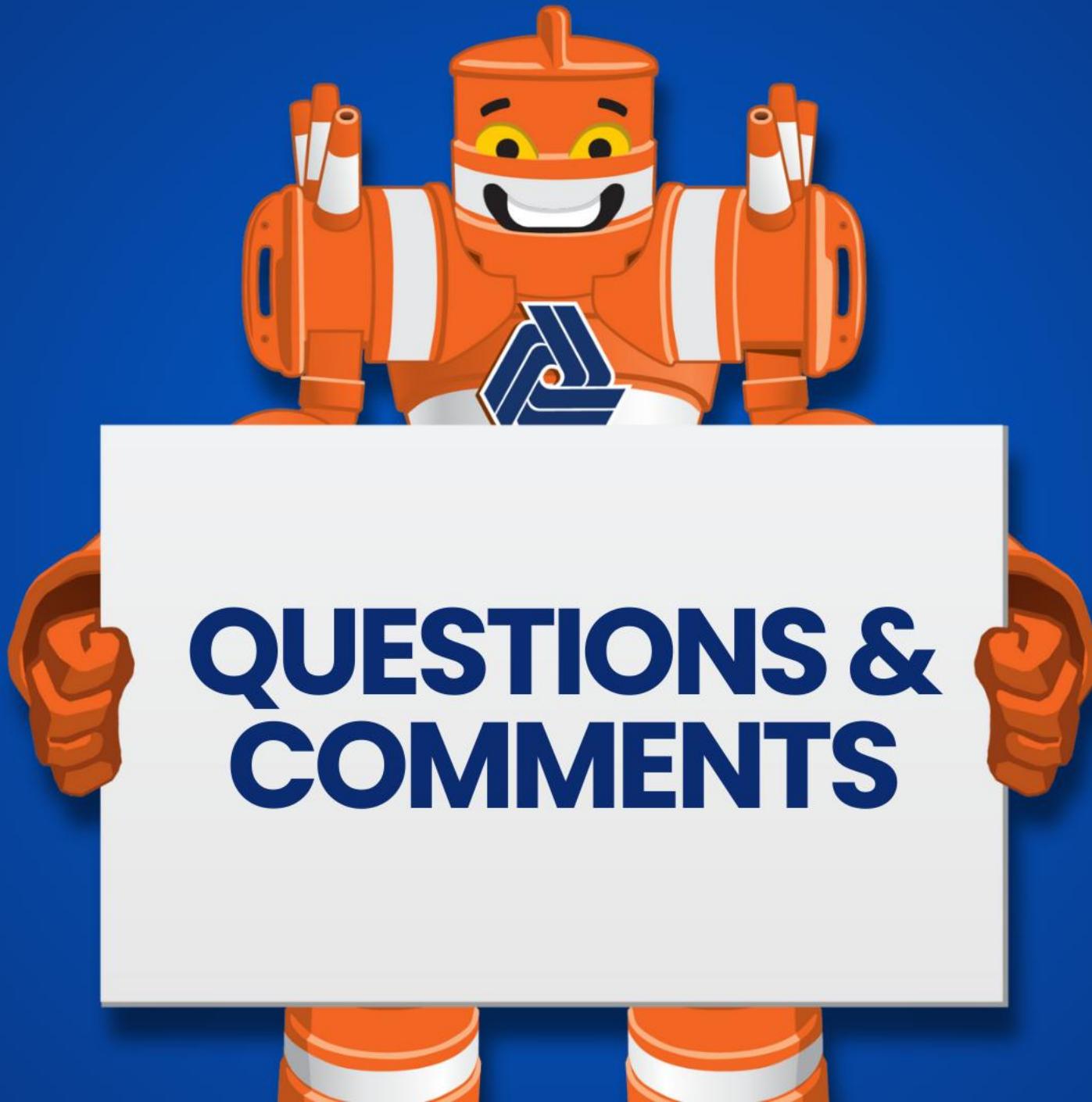
Example



So....Why should we implement Traffic Calming in our plans?

- Traffic calming and speed management can:
 - Improve safety and walkability/bikeability
- Improved safety and walkability/bikeability can:
 - Increase desirability and potentially property values
- Designs with fewer intersections can:
 - Mean more lots, less impervious area, and lower costs







THANK YOU!



<https://linktr.ee/delawaredot>