

University of Delaware Living Labs Research Group

1/22/2026

Pedestrian Council Meeting



Who We Are...

We are a University of Delaware research collaborative supported by the Delaware Department of Transportation (DelDOT) designed to assist Delaware communities in planning, implementing, and evaluating active transportation pop-up demonstrations.



The Team

Matt Harris, UD, Associate Policy Scientist
Paul Moser, DelDOT, Professional Engineer
Nina David, UD, Associate Professor
Anna Wik, UD, Associate Professor
Alex McClellan, UD Graduate Research
Fellow



What We Do...

Living Lab seeks to **assist** Delaware local governments, community-based organizations (CBOs), and school districts in **planning**, **executing**, and **evaluating** active **transportation pop-up demonstrations**. These pop-ups include traffic calming, placemaking, open streets, safe routes, and activity-friendly spaces



Why Did We Do This Project?

The Town of Middletown asked us to take a closer look at Cochran Street because **speeding had become a concern**. We wanted to make the street safer and more welcoming for kids, families, and neighbors. With heavy foot traffic occurring between Silver Lake Elementary, the library, and the YMCA, calming traffic here helps everyone, especially students, **feel safer** and more comfortable getting around.

What does the process look like?

START

Start with a plan or idea

Introduce the public and roll out survey

Coordinate with Stakeholders

Develop ideas based upon feedback

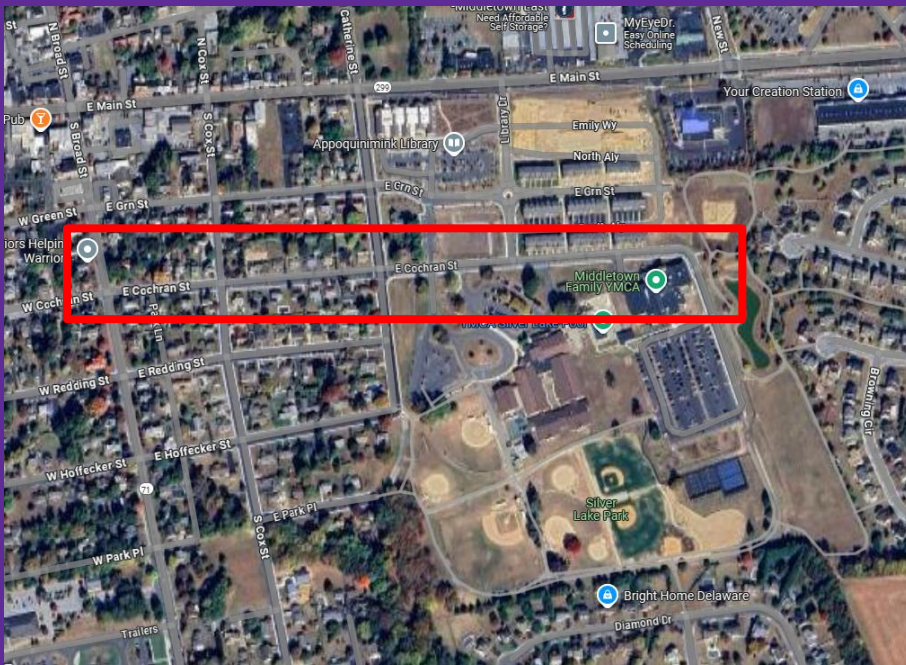
Share feedback on project with stakeholders and community

Install interim installation and gather feedback during demonstration period

FINISH

Middletown Project

East Cochran Street / S. Catherine Street



Challenges and Opportunities:

- Speed Reduction
- Crossing Safety
- Placemaking

Stakeholders

- Silver Lake Elementary School
- Crossing Guards
- The YMCA
- The Library
- Residents
- Anyone who utilizes the corridor

Outreach

Outreach Events:

- Middletown Public Library: May 26th
- Middletown Farmers Market: May 28th
- Silverlake Back to School Night, Sept, 18th

Results of Outreach Events:

- 30 surveys completed
- 36 conversations with residents

Common Themes:

- Additional Crosswalks
- Lots of traffic and moving vehicles with the School
- Traffic moves at what feels an unsafe speed
- Traffic utilizes Library Parking areas as cut-through
- Not much Tree canopy





SAFER STREETS, STRONGER COMMUNITIES: LIVING LABS AT WORK ON YOUR BLOCK

Why Did We Do This Project?:
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What's Happening on E Cochran Street?:

- **Public Greening / Placemaking:** Adding trees, planters, benches, or art helps transform streets into community spaces, not just roads for cars. These features make walking more pleasant, help calm traffic, and create a more welcoming corridor that connects Silver Lake Elementary, the library, and the YMCA.
- **Chicane:** A gentle S-curve in the road, created with curb extensions or islands. Drivers weave slightly left and right, which slows traffic by 5-13 mph. The extra space can hold greenery, benches, or art, making the street safer and more welcoming.
- **Speed Hump:** A smooth, stretched-out bump in the road that slows cars to about 15-20 mph. Well-designed humps cut speeding and greatly reduce crash risks.



What Are the Results?:

- Max speed recorded was reduced from 64 mph to 43 mph
- 85th percentile speed (the speed at or below which 85% of drivers are traveling) was reduced from 31 mph to 22 mph
- Average speed was reduced from 25.8 mph to 17.8 mph

HOW DO YOU FEEL ABOUT THESE IMPROVEMENTS? SCAN THE QR CODE HERE TO LET US KNOW:



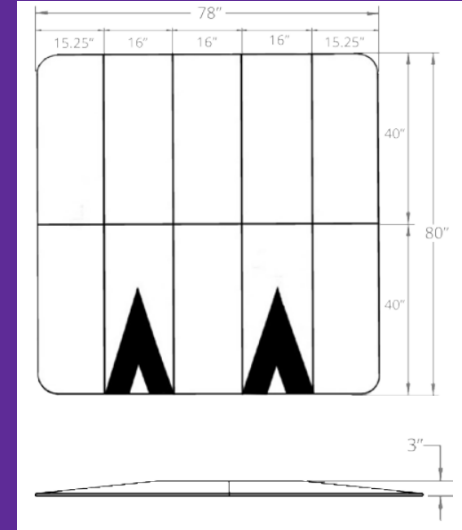
Funding for pop-up project materials

- **Materials that used for the Middletown Pop-up Project**
 - **\$14,000 for traffic calming materials** (Funded by the Delaware Pedestrian Council)
 - \$5,000 for modular rubber curbs for chicanes
 - \$9,000 for speed cushions
 - **\$8,837** for planters/plants/tools/traffic control (Provided by the Town of Middletown)
 - Design of the traffic calming layout by DelDOT Staff
 - Outreach by UD Living Labs Staff under DelDOT SPR Grant
 - Installation of the traffic calming materials by Middletown Public Works

Pop-Up Demonstration - Interventions



Speed Cushion: a 3" speed hump with wheel cut outs to allow larger emergency response vehicles with wider axles to pass through. Also allows bikes and scooters to ride through without riding over the bump.



Pop-Up Demonstration - Interventions



Chicane: 6' curb extensions throughout the road which require drivers to slow down and adjust their drive path.

While there is still a 20' clear roadway width at the chincanes, some people may choose to yield to oncoming traffic.

The extra space can hold greenery, benches, or art, making the street safer and more welcoming.

Pop-Up Demonstration - Interventions



Public Greening / Placemaking: Adding trees, planters, benches, or art helps transform streets into community spaces, not just roads for cars. These features make walking more pleasant, help calm traffic, and create a more welcoming corridor that connects Silver Lake Elementary, the library, and the YMCA.

Middletown Project. Data Results

Speed - Volume Matrix																		
Date Range: 2024-11-04 - 2024-11-11																		
Direction: Both																		
Date Span	Total	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86+
00:00 - 00:59	9			4	2	2			1									
01:00 - 01:59	81	24	57															
02:00 - 02:59	57	9	44	2	2													
03:00 - 03:59	4	3	1															
04:00 - 04:59	100			1	26	53	19	1										
05:00 - 05:59	400		1	12	108	197	70	12										
06:00 - 06:59	547	3	5	18	169	247	87	17	1									
07:00 - 07:59	666	9	7	17	176	318	120	16	2	1								
08:00 - 08:59	912	4	6	55	321	379	134	13										
09:00 - 09:59	1195	4	21	85	372	503	181	27	2									
10:00 - 10:59	1170	4	10	79	397	473	178	24	3	2								
11:00 - 11:59	950	3	13	91	389	316	114	20	3	1								
12:00 - 12:59	783	2	18	90	268	298	89	14	3	1								
13:00 - 13:59	585	3	17	54	185	228	80	14	2	2								
14:00 - 14:59	610	2	11	53	211	212	97	20	4									
15:00 - 15:59	741	7	26	77	233	259	115	21	2		1							
16:00 - 16:59	1030	3	10	80	316	412	165	36	6	1			1					
17:00 - 17:59	1100	5	20	110	393	444	108	18	1		1							
18:00 - 18:59	1053	5	20	89	416	392	118	11	2									
19:00 - 19:59	718	6	22	87	300	228	62	10	3									
20:00 - 20:59	372	5	14	42	126	120	47	16		2								
21:00 - 21:59	186	20	58	15	35	40	16	2										
22:00 - 22:59	57	18	30	4	4	1												
23:00 - 23:59	5				2	3												

	Before
Avg Speed	25.81 mph
85th percentile speed	31 mph
Max speed	64 mph

Middletown Project. Data Results

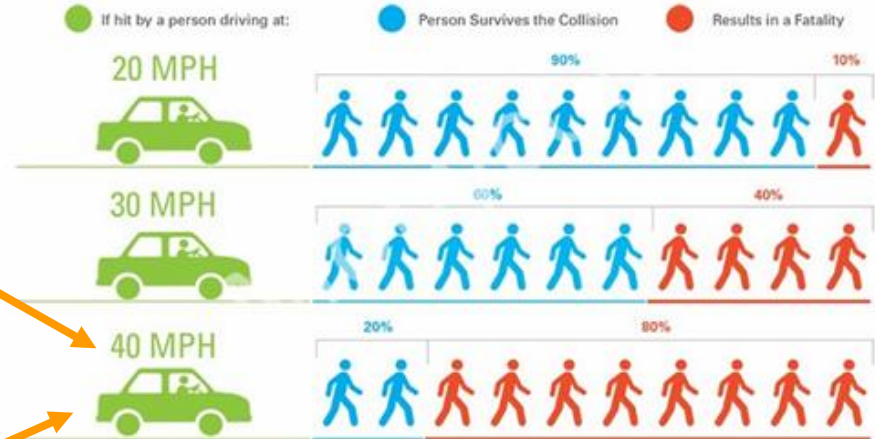
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Before

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02:00 - 02:59	57	9	44	2	2													
03:00 - 03:59	4	3	1															
04:00 - 04:59	100			1	26	53	19	1										
05:00 - 05:59	400		1	12	108	197	70	12										
06:00 - 06:59	547	3	5	18	169	247	87	17	1									
07:00 - 07:59	666	9	7	17	176	318	120	16	2	1								
08:00 - 08:59	912	4	6	55	321	379	134	13										
09:00 - 09:59	1195	4	21	85	372	503	181	27	2									
10:00 - 10:59	1170	4	10	79	397	473	178	24	3	2								
11:00 - 11:59	950	3	13	91	389	316	114	20	3	1								
12:00 - 12:59	783	2	18	90	268	298	89	14	3	1								
13:00 - 13:59	585	3	17	54	185	228	80	14	2	2								
14:00 - 14:59	610	2	11	53	211	212	97	20	4									
15:00 - 15:59	741	7	26	77	233	259	115	21	2		1							
16:00 - 16:59	1030	3	10	80	316	412	165	36	6	1			1					
17:00 - 17:59	1100	5	20	110	393	444	108	18	1		1							
18:00 - 18:59	1053	5	20	89	416	392	118	11	2									
19:00 - 19:59	718	6	22	87	300	228	62	10	3									
20:00 - 20:59	372	5	14	42	126	120	47	16		2								
21:00 - 21:59	186	20	58	15	35	40	16	2										
22:00 - 22:59	57	18	30	4	4	1												
23:00 - 23:59	5				2	3												



Middletown Project. Data Results

- Middletown could have done 197 hours of enforcement for \$15,000 (cost of the project materials)



Speed Data Collection on E Cochran Street

	Before	After
Avg Speed	25.81 mph	17.83 mph
85th percentile speed	31 mph	22 mph
Max speed	64 mph	43 mph

Middletown Project. Data Results

Speed - Volume Matrix

Date Range: 2024-11-04 - 2024-11-11

Direction: Both

Before

Date Span	Total	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86+
00:00 - 00:59	9			4	2	2			1									
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12:00 - 12:59	783	2	18	90	268	298	89	14	3	1								
13:00 - 13:59	585	3	17	54	185	228	80	14	2	2								
14:00 - 14:59	610	2	11	53	211	212	97	20	4									
15:00 - 15:59	741	7	26	77	233	259	115	21	2	1								
16:00 - 16:59	1030	3	10	80	316	412	165	36	6	1			1					
17:00 - 17:59	1100	5	20	110	393	444	108	18	1	1								
18:00 - 18:59	1053	5	20	89	416	392	118	11	2									
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20:00 - 20:59	372	5	14	42	126	120	47	16		2								
21:00 - 21:59	186	20	58	15	35	40	16	2										
22:00 - 22:59	57	18	30	4	4	1												
23:00 - 23:59	5				2	3												

Speed - Volume Matrix

Date Range: 2025-08-31 - 2025-09-08

Direction: Both

After

Date Span	Total	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86+
00:00 - 00:59	50	16	32	1	1													
01:00 - 01:59	9	3	2	1	3													
02:00 - 02:59	2			1	1													
03:00 - 03:59	2				1	1												
04:00 - 04:59	231	7	80	72	68	4												
05:00 - 05:59	749	11	212	299	194	31	2											
06:00 - 06:59	902	15	229	365	273	19	1											
07:00 - 07:59	1191	23	314	543	272	38	1											
08:00 - 08:59	1908	26	549	836	455	41	1											
09:00 - 09:59	2114	48	674	942	422	27	1											
10:00 - 10:59	2106	42	599	1039	401	25												
11:00 - 11:59	1582	22	438	779	318	24	1											
12:00 - 12:59	1355	21	385	599	309	37	3							1				
13:00 - 13:59	1037	12	259	457	276	33												
14:00 - 14:59	1003	15	280	446	222	40												
15:00 - 15:59	986	20	283	421	238	24												
16:00 - 16:59	1378	42	385	590	324	36	1											
17:00 - 17:59	1423	27	408	601	348	36	2	1										
18:00 - 18:59	1257	32	354	560	280	30	1											
19:00 - 19:59	969	25	237	471	215	19	1	1										
20:00 - 20:59	453	3	90	185	156	19												
21:00 - 21:59	144	12	31	50	48	3												
22:00 - 22:59	29	7	7	10	2	3												
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	Before	After
Avg Speed	25.8 mph	17.8 mph
85th % speed	31 mph	22 mph
Max speed	64 mph	43 mph

Demonstration to Permanent

Project Success

Due to the overwhelming data results, despite some opposition in the community, the Town of Middletown moved forward with making the improvements permanent in December of 2026.



Middletown Project. Data Results

But why not just let the police do more enforcement??

- Middletown could have done approximately **185 hours** of overtime traffic enforcement for \$14,000 (cost of the traffic calming materials), or about **46 4-hour shifts**
- These devices are effective 24/7
- There are probably higher priority enforcement locations



What is Next – Dover, DE



What is Next – Milton, DE



What is Next

Clayton, DE



Thank you

We could not have done the work without your assistance and we hope to continue to partner with the Pedestrian Council in the future.

