

Near-Miss Video Screening – A Safety Improvement Tool for Delaware’s Intersections

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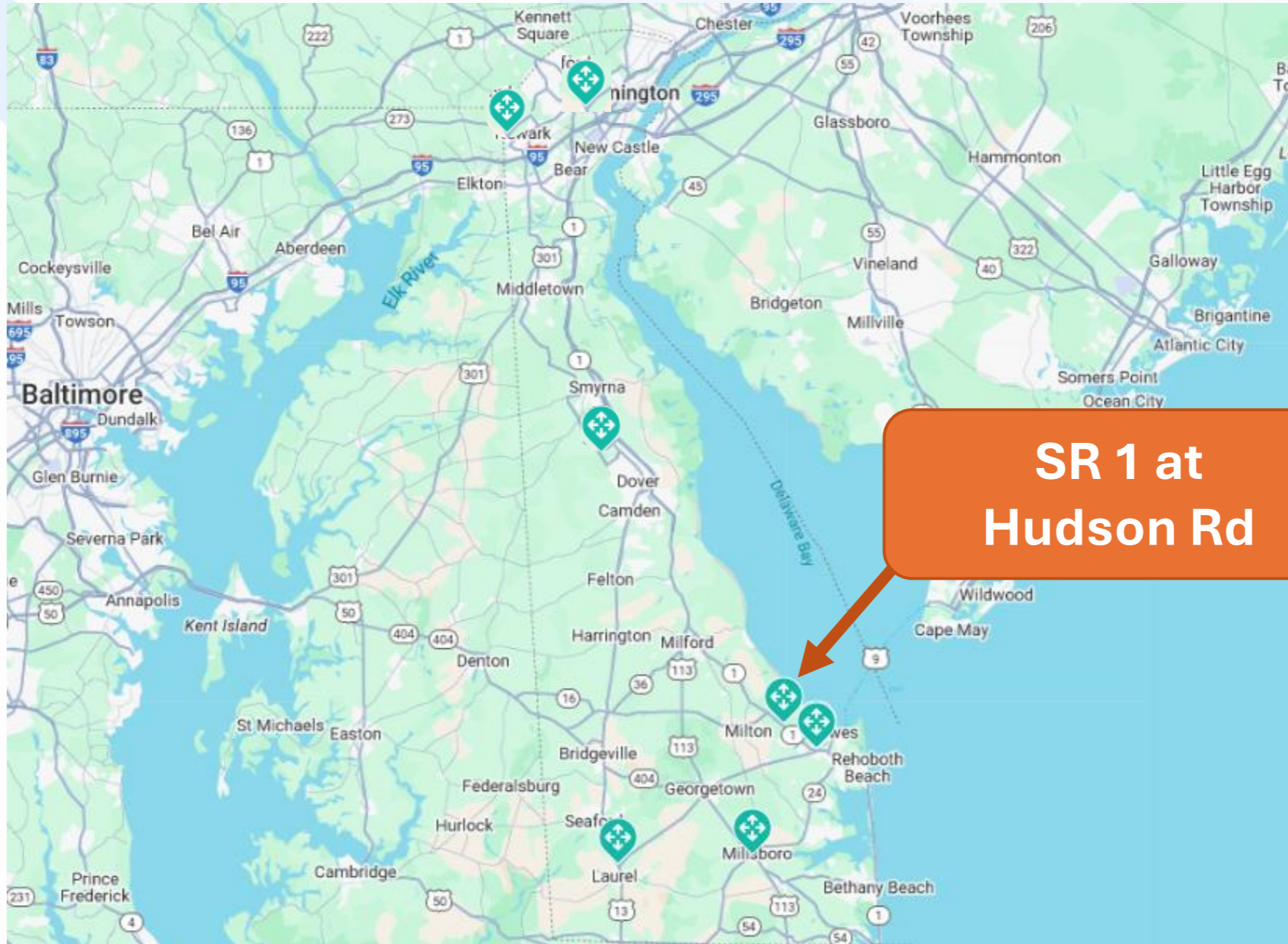


Locations in Study

1. College Ave – Delaware Ave
2. N Walnut St – E Front St
3. US 13 – Hickory Ridge Rd/Spring Meadow Dr
4. Belltown Rd/Salt Marsh Blvd – Rd 285/Plantation Rd
5. Belltown Rd – US 9
6. Hudson Rd – DE 1
7. US 13 – US 9
8. Delaware Ave – SR 24 (Laurel Rd)



Location Map



SR 1 at
Hudson Rd



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Route 1 crossovers: Cars stack up, so do crashes

Since 2012, five intersections have seen 212 collisions



Traffic piles up at Nassau Road after a crash in the crossover in July. MELISSA STEELE PHOTO

By Melissa Steele • September 15, 2017

A school bus with two students still on board was stopped in a crossover median, waiting to merge onto Route 1 northbound, when it was struck by a car.

The bus driver and a boy on the bus were uninjured; an 11-year-old girl was later taken to a hospital for an undetermined injury.

But the driver of the car was trapped when his car became stuck under the bus. The 26-year-old man was flown to Christiana Medical Center in critical condition.

"These crossovers are crazy," said a neighbor who came out to witness the commotion off Reynolds Road. "The cars come so fast, you can't see them coming."

It's a scenario played out daily up and down the dual highway from the Milton area and south to Lewes.



There have been 33 crashes at Minos Cor the past five years. MADDY LAURIA PHOTO



Woman, 71, seriously injured in two-car crash on Route 1 at Hudson Road



EDITORIALS

Changes needed at Route 1-Hudson Road

September 5, 2025

Yet another serious accident occurred at the intersection of Route 1 and Hudson Road last week — the second major crash at this location in just a few months. Each time, Route 1 was shut down and traffic was diverted onto alternate routes, causing widespread disruption.

This most recent incident was particularly disastrous, as it happened on a Friday afternoon at the start of a holiday weekend, compounding traffic woes and public safety risks.

Hudson Road has become a popular alternative route for travelers heading westbound to Route 9 or south to destinations like Long Neck in an effort to avoid congestion in the Five Points area. It's also a key commuter corridor, often backed up during morning and evening rush hours.

With many drivers exceeding the posted 55 mph speed limit on the straight stretch between Route 16 and the Nassau Bridge, this crossover has grown increasingly dangerous. It's long past time for meaningful action.

At a Five Points Working Group meeting in April 2019, Delaware Department of Transportation officials proposed several projects to be completed by the end of that year. Among them were short-term improvements to four Route 1 crossovers between Milton and Lewes. While upgrades were made at Cave Neck Road and Route 5, progress at Hudson Road and nearby Eagle Crest Road has lagged significantly.

Public crash data shows more than 60 accidents at the Route 1-Hudson Road intersection between 2011 and 2023. That's not just a statistic; that's a red flag. The urgency is real, and something must be done.

At the same time, drivers must do their part. Sitting at the front of the line waiting for a safe gap in traffic can be frustrating, but taking risks isn't worth the cost. Don't gamble with your life, your passengers' lives or the lives of others on the road.

Until DelDOT makes long-overdue changes at this and other dangerous intersections across the Cape Region, be patient, be courteous and be safe.





Steamboat Landing Rd
AADT (2024): > 30,000
Speed Limit: 35 MPH

Coastal Hwy (SR 1)
AADT (2024): > 30,000
Speed Limit: 55 MPH

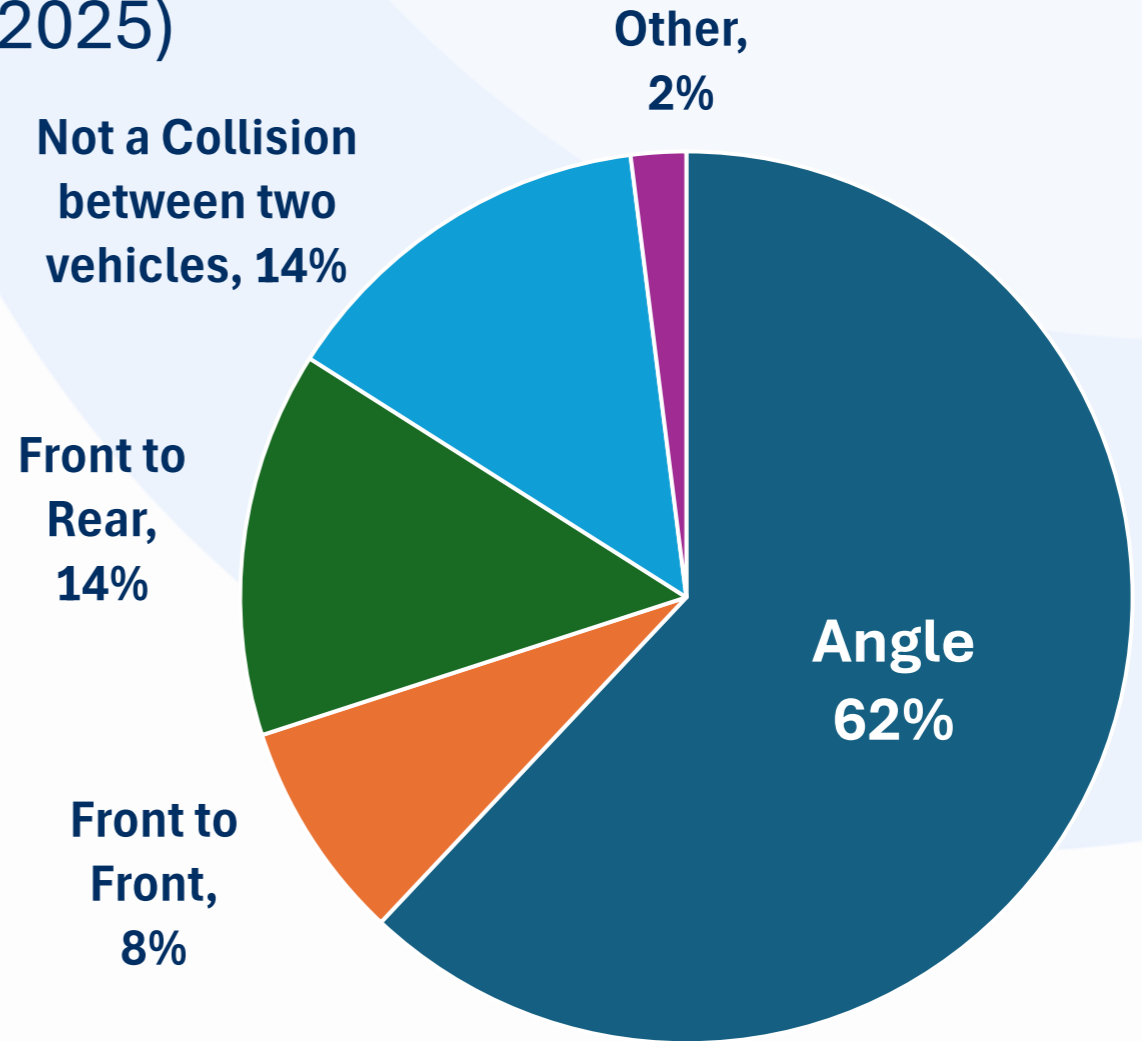
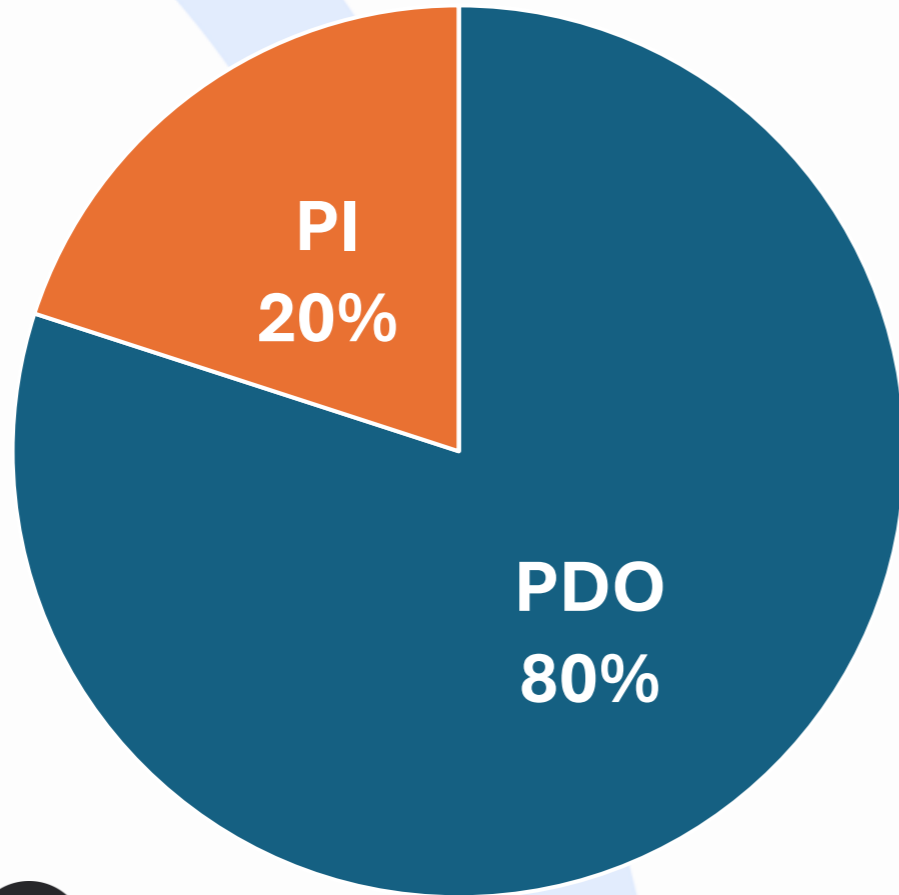


Hudson Rd
AADT (2024): > 30,000
Speed Limit: 45 MPH



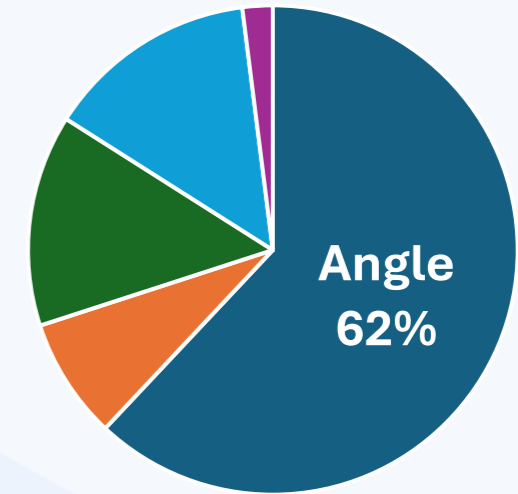
Crash Summary

- 50 total crashes (June 2022 – June 2025)



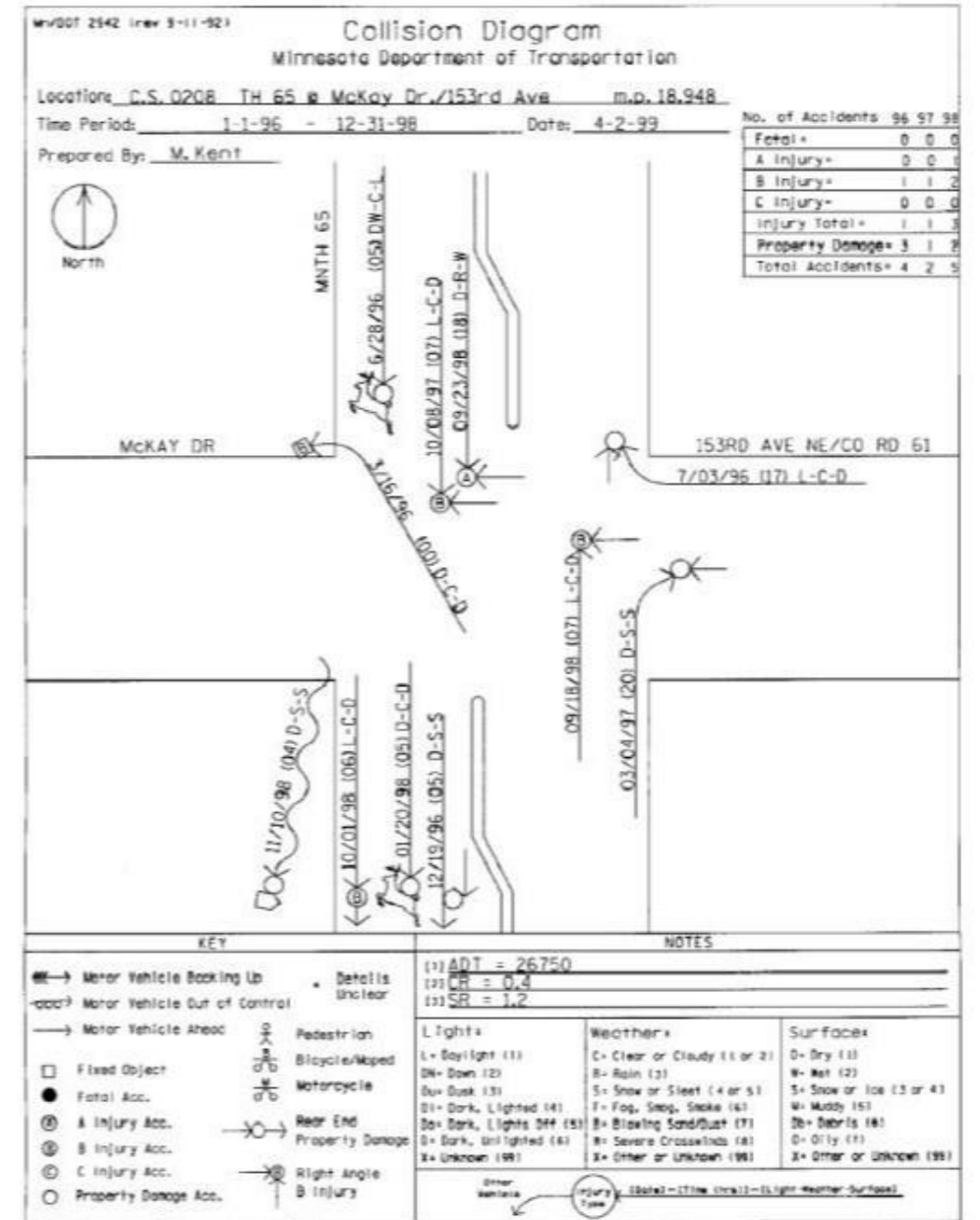
Crash Summary

- **50 total crashes** (June 2022 – June 2025)
- 31 angle crashes, 28 of which were median related
 - **24 SB / EB crashes** ←
 - 1 SB / WB crash
 - 3 crashes within the median



Traditional Study Options

1. Crash data analysis
2. Evaluate existing traffic control
3. Detailed field review
4. Implement low-cost countermeasures
5. Highway Safety Manual



Text Ref.: 11-5.02

July 1, 2000

COLLISION DIAGRAM

FIGURE
11.4





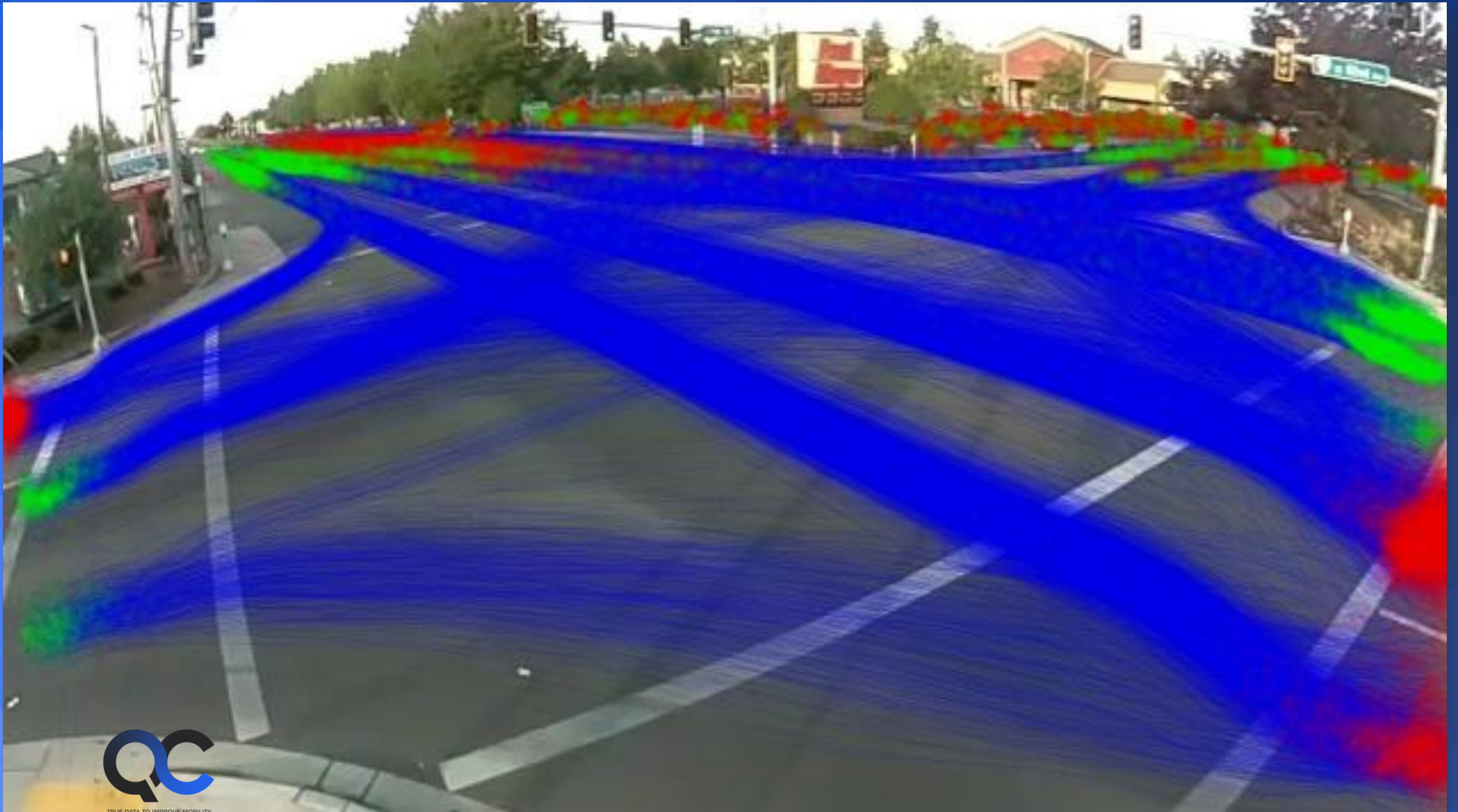
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Near-Miss Conflict Analysis



Hudson Rd – DE 1

Site Name	Total Hours Studied	Total Conflicts			Veh - Veh Conflicts			Ped - Veh Conflicts			Bike - Veh Conflicts		
		0.0 - 1.5s	1.5 - 2.0s	2.0 - 3.0s	0.0 - 1.5s	1.5 - 2.0s	2.0 - 3.0s	0.0 - 1.5s	1.5 - 2.0s	2.0 - 3.0s	0.0 - 1.5s	1.5 - 2.0s	2.0 - 3.0s
College Ave - Delaware Ave	24	17	28	105	0	0	10	14	23	85	3	5	10
N Walnut St - E Front St	24	22	36	153	0	0	1	20	29	135	2	7	17
US 13 - Hickory Ridge Rd/Spring Meadow Dr	24	0	1	3	0	0	3	0	1	0	0	0	0
Belltown Rd/Salt Marsh Blvd - Rd 285/Plantation Rd	24	22	72	317	21	71	315	1	0	2	0	1	0
Belltown Rd - US 9	24	0	2	12	0	0	6	0	2	3	0	0	3
Hudson Rd / Steamboat Landing Rd - DE 1	24	6	25	256	6	25	256	0	0	0	0	0	0
US 13 - US 9	24	2	2	4	1	2	3	1	0	1	0	0	0
Delaware Ave - SR 24 (Laurel Rd)	24	2	10	73	2	9	70	0	0	2	0	1	1

Site Name	Highlights	Diagrams	Trajectories	Average Speed (MPH)
	By Location	By Location	Bike/Ped	Thru Vehicles
College Ave - Delaware Ave	Video Compilation	Summary Diagrams	Trajectories	22.4
N Walnut St - E Front St	Video Compilation	Summary Diagrams	Trajectories	31.6
US 13 - Hickory Ridge Rd/Spring Meadow Dr	Video Compilation	Summary Diagrams	Trajectories	29.2
Belltown Rd/Salt Marsh Blvd - Rd 285/Plantation Rd	Video Compilation	Summary Diagrams	Trajectories	51.5
Belltown Rd - US 9	Video Compilation	Summary Diagrams	Trajectories	44.9
Hudson Rd / Steamboat Landing Rd - DE 1	Video Compilation	Summary Diagrams	Trajectories	64.2
US 13 - US 9	Video Compilation	Summary Diagrams	Trajectories	34.1
Delaware Ave - SR 24 (Laurel Rd)	Video Compilation	Summary Diagrams	Trajectories	38.6



Veh-to-Veh

Steamboat Landing Rd



70



Near Misses	Conflict Rate
8	11%
National Avg	Percentile
8.6	58%
Average Thru Speeds	
--	



DE 1

DE 1



22318

210



Near Misses	Conflict Rate
9	4%
National Avg	Percentile
20.9	11%
Average Thru Speeds	
--	

22318

27869



Near Misses	Conflict Rate
21	14%
National Avg	Percentile
20.9	61%
Average Thru Speeds	
--	



151

27869



Near Misses	Conflict Rate
231	14%
National Avg	Percentile
14.0	100%
Average Thru Speeds	
64.2	



1605

Hudson Rd



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QualityCounts.net



The Solution?



Hudson Rd – DE 1: After Study

Site Name	Total Hr	Total Conflicts			Veh - Veh Conflicts		
		0.0 - 1.5s	1.5 - 2.0s	2.0 - 3.0s	0.0 - 1.5s	1.5 - 2.0s	2.0 - 3.0s
Steamboat Landing Rd/Hudson Rd - Rt 1	120	0	6	67	0	6	67

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QualityCounts.net

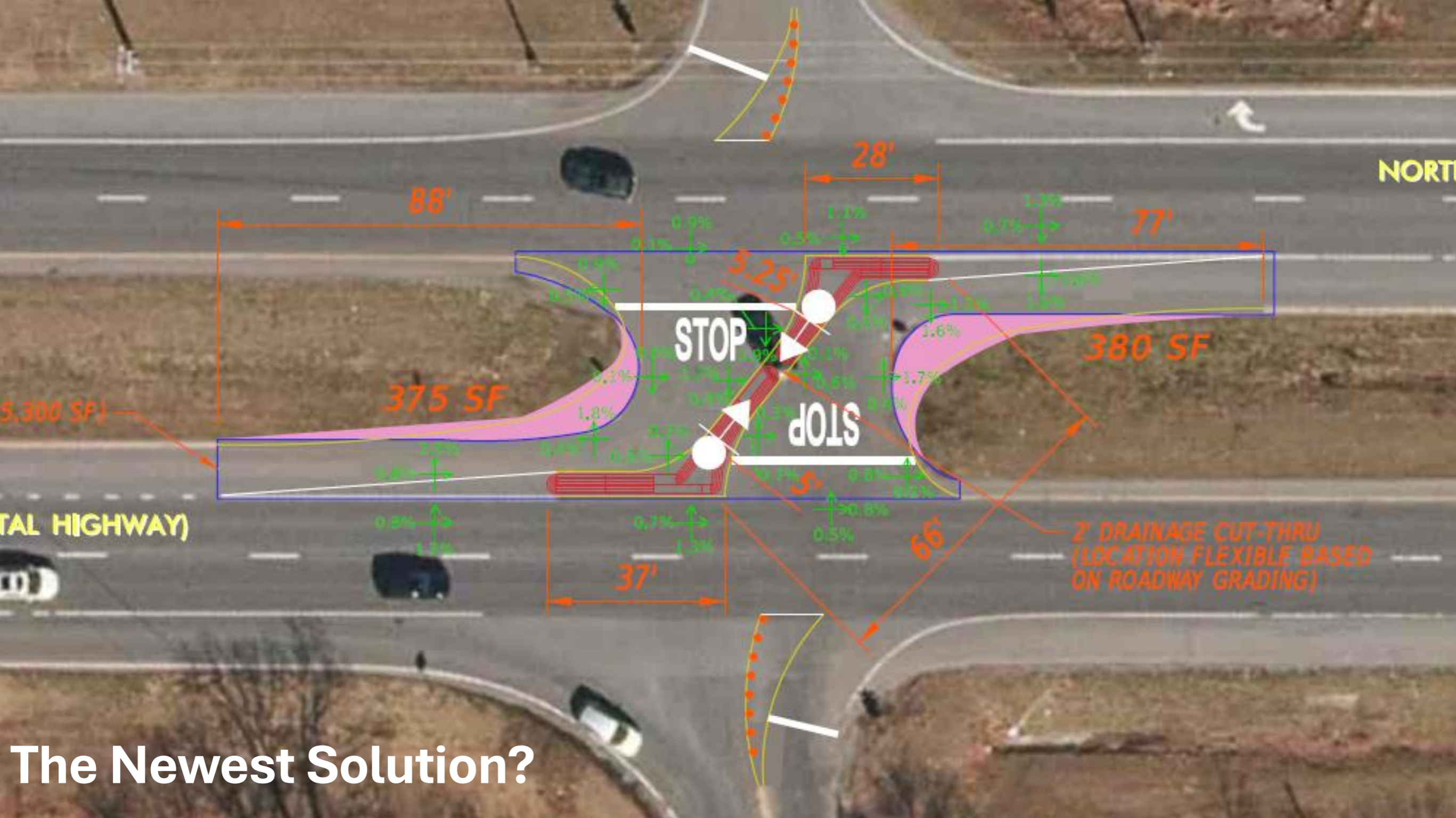


Hudson Rd – DE 1: Results

RESULTS

- The average of 14.6 in a 24-hour span in the after study compares to 287 conflicts in the 24 hours collected in the before study.
- There were 231 conflicts between NBLs and EBTs in the 24 hours of the before period and there were 8.2 per day in the after period, a 97% reduction.
- When compared to similar roadways in our database, the number of NBL vs EBT conflicts was in the 100th percentile nationally in the before period and in the after study, is now in 17th percentile nationally.
- There are still 131 vehicles per day making this “impossible” movement.





NORTHERN HIGHWAY

(5,300 SF)

NORTHERN HIGHWAY)

375 SF

380 SF

2' DRAINAGE CUT-THRU
(LOCATION FLEXIBLE BASED
ON ROADWAY GRADING)

STOP

STOP

The Newest Solution?

Hudson Rd – DE 1: After

EDITORIALS

Reducing risk should be DelDOT's top priority

March 20, 2026

Safety improvements on busy highways rarely happen by accident. They come from careful study, thoughtful planning and, just as importantly, a willingness to admit when a fix doesn't fully solve the problem. The Delaware Department of Transportation deserves credit for [doing exactly that](#) at the Route 1 intersection with Hudson Road and Steamboat Landing Road near Milton.

Before any changes were made, DelDOT worked with consultant Quality Counts to study traffic patterns using modern near-miss detection technology. The results were alarming. Drivers attempting to cross two lanes of Route 1 to reach the median were involved in near-miss conflicts nearly 16 times higher than the national average. With more than 30,000 vehicles traveling the corridor each day at speeds exceeding 60 mph, it was clear the intersection posed a serious safety risk.



DelDOT struggles with human behavior

Despite crossover changes, motorists still put themselves in dangerous driving situations



DelDOT responded by restricting certain movements and directing drivers to make U-turns at designated crossovers. The change worked, as near misses dropped dramatically. But the follow-up study revealed something equally troubling: Many motorists simply ignored the new traffic pattern. Drivers continued to cross illegally through the median, often pushing through plastic delineators rather than merging southbound to make a legal U-turn. In doing so, they created new and potentially more dangerous conflicts.

Road safety depends on both good engineering and good judgment. DelDOT has shown its commitment to the first. Motorists must do their part with the second.

Before changing the traffic pattern at the Route 1 intersections with Hudson and Steamboat Landing roads near Milton, the Delaware Department of Transportation worked with a consultant to evaluate near misses.

The results showed motorists crossing two lanes to the Route 1 median had nearly 16 times more near misses than the

Too often, public projects are built and never revisited, even when problems remain. In this case, DelDOT continued to monitor the results, worked with engineers and law enforcement, and made further adjustments. That willingness to evaluate and improve should be the rule, not the exception.

Hudson Rd – DE 1: Post Construction



Hudson Rd – DE 1: Post Construction



Hudson Rd – DE 1: Post Construction



Hudson Rd – DE 1: Post Construction



Hudson Rd – DE 1: Post Construction



THANK YOU!



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