

THE RECONSTRUCTIONISTS

How two Windham police officers became one of the state's most coveted crash scene teams – 'it's like putting a puzzle together.'



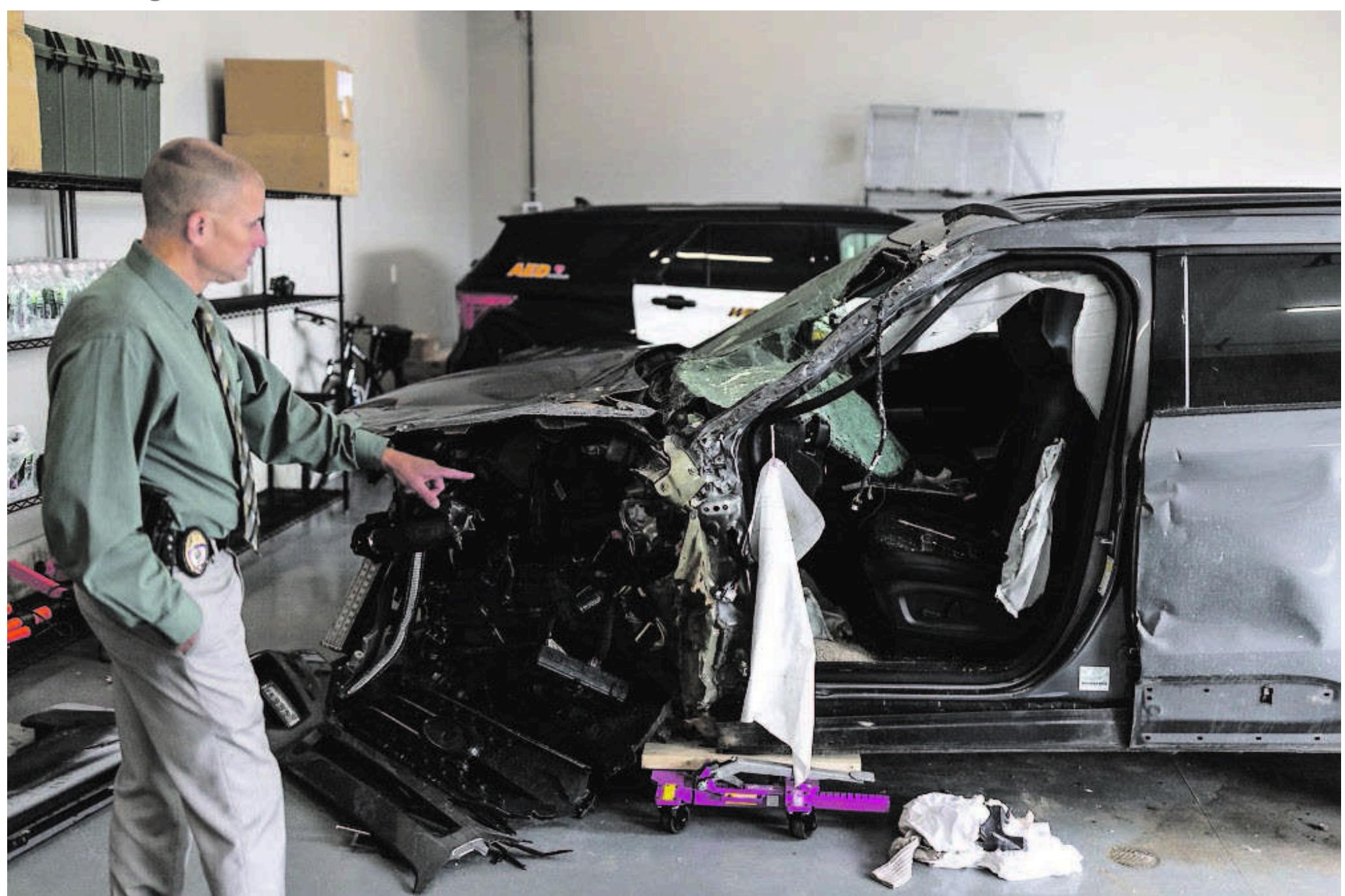
When Detective Gene Gallant started at the Windham Police Department in 2005, crash reconstructionists responded to calls with tape measures. Since then, technological upgrades have made their work quicker and more accurate.



Capt. Jason Burke with one of the drones he uses for crash reconstructions.

The Windham Police Department has five drones: two that produce thermal images, two that fly

well at night and one that flies indoors. The photos the drones provide make plotting and measuring a crash scene much easier.



Windham Police Detective Gene Gallant points out a detail on a car they're waiting to do a vehicle autopsy on at the Windham Police Department on Tuesday.

BY MORGAN WOMACK STAFF WRITER

WINDHAM — Detective Gene Gallant's office is not unlike a seventh-grade science classroom. His desk is littered with photos of family and fingerprint sheets. Microscopes, tools and a stainless steel fume hood are perched atop muted blue cabinets lining the white walls.

When Gallant was in school, he hated math and science. Now he spends hours every week solving real-life physics problems, rushing to car crash scenes and analyzing data at his computer.

He and Capt. Jason Burke are credited with advancing the Windham Police Department's crash reconstruction team, helping make it among the best in the state. The small but mighty team is still growing, with one person currently in training.

The department was the first municipal police agency in the state to get drones and one of the few with a full reconstruction kit to pull crash data from vehicles.

With all that tech, they're often called in to assist other agencies in southern Maine.

This year, the team had fully reconstructed 15 crashes as of Sept. 10 — nine in Windham and six for other departments.

Windham spans about 50 square miles. The area is busy, with U.S. Routes 202 and 302, State Route 115 and River Road bringing in frequent traffic, so the department's 31 officers deal with more than their "fair share" of crashes, Police Chief Kevin Schofield said.

A majority of the crashes they reconstruct have resulted in serious injuries or death, Schofield said.

Knowing exactly what happened and who may be at fault can help any potential criminal prosecution.

But not all crashes need to be considered a crime scene. The evidence also can be given to the Maine Department of Transportation for traffic safety analysis, insurance companies or civil attorneys, Gallant said.

‘IT’S LIKE PUTTING A PUZZLE TOGETHER’

When Windham’s team is called to a scene, Burke and Gallant first photograph each piece of evidence.

Then they paint the street to mark them, map the scene with a drone and impound the vehicles involved.

While the officers have other police duties, Burke said he sticks with reconstruction because he enjoys problem-solving. If they ever get stumped, the officers pull out their toy cars to visualize what might have happened.

“I like the scene work very much,” Gallant said. “It’s like putting a puzzle together.”

When Gallant started at the department in 2005, he said crash reconstructionists went on scene equipped with tape measures. Since then, technological upgrades have made the work quicker and more accurate, meaning roads can reopen sooner, Schofield said.

The department now owns five drones: two that produce thermal images, two that fly well at night and one that flies indoors. Before the drone program started in June 2018 (six months after state

police), measuring and plotting out a crash scene took an hour or two, Gallant said, but now it takes about 15 minutes.

“We’re getting an actual picture of the crash scene, not just dots on a piece of paper,” Gallant said.

The drones also can be used to help in search-and-rescue missions and find fugitives, he said. Last year, Windham flew its drones three times in criminal cases and 22 times for non-criminal cases, according to a Maine Criminal Justice Academy report.

Burke and Gallant participate in annual science and math events at Gorham Middle School and Windham High School, showing off their drones for the middle schoolers and staging a crash for the high school students to reconstruct.

The officers visited high school math classes four times last winter.

“I’m sure that over the years, some students have gained some level of interest,” Schofield said.

“Whether it’s getting into crash reconstruction or at least understanding how to apply what they’re learning in math, science and physics to their future careers and interests.”

‘A FORCE MULTIPLIER’

Aside from the Maine State Police, Windham is also the only department in Maine with a complete kit to interpret crash data, Burke said.

Vehicles are equipped with a small metal box called an airbag control module which stores data, like the speed, seat belt use and input from the brakes and accelerator. Other agencies have lower-level kits that don’t work with every car, Burke said.

After a crash, police can hook up a kit to pull that data out and analyze it. The kit is stored in a hefty black box with various cords and a green rectangle, about a foot long, which connects to a

computer and uploads a neat PDF graphing the crash data.

The cords, which connect to the airbag control modules, are stacked in individual marked Ziploc bags because they each match a different make of vehicle.

Windham has the equipment to do this for most types of cars, but because companies rolled out this technology after the 1990s, it won't work for older vehicles, Gallant said.

Although they can find exact numbers after uploading the data to their computers, the officers still make initial calculations and measurements at the crash site. Their estimates of the car's speed are pretty accurate and often come within a few miles per hour of the actual speed, Gallant said.

Once they get back to their desks, Burke and Gallant take between 10 to 180 hours to fully reconstruct a scene, depending on the complexity of the crash, Burke said. The process is based on physics – measuring angles, calculating height and weight differences and change in velocity.

They are required to complete crash reports within two months to stay certified in Maine. But the process can be delayed when waiting for lab results and information from the state's medical examiner.

The department has a solid reputation in the crash reconstruction field, Schofield said, and they are called by other agencies "quite a bit."

While they've conducted six full reconstructions for other agencies, sometimes they just assist with their drones and technology.

"A lot of departments just don't have the resources," Schofield said.

With such demand, he monitors the team for burnout and restricts how much they help to within Cumberland County and some areas of York County.

Cumberland County Sheriff Kevin Joyce said his office used to have all of the equipment about 10 years ago, but since people have retired, the agency's reconstruction technology is "antique."

The sheriff's office has its own crash reconstructionists, but Windham has the state's "subject matter experts."

"It's been a force multiplier in the fact that I've never heard of any time when Windham hasn't been able to come out and help us when we've needed them," Joyce said.

Morgan Womack — (207) 791-6216 mwomack@metln.org