

Turning Tragedy Into Advocacy

On A Mission To Make Truck Crashes
More **Survivable**

Riley Hein

1999 - 2015

Forever Loved, Always Missed
RILEY ERIC HEIN
1999-2015

"We didn't realize we were making memories,
we just knew we were having fun"
Winnie the Pooh



Manzano student identified as person killed in I-40 crash

BY NICOLE PEREZ / JOURNAL STAFF WRITER
Monday, November 16th, 2015 at 6:46pm

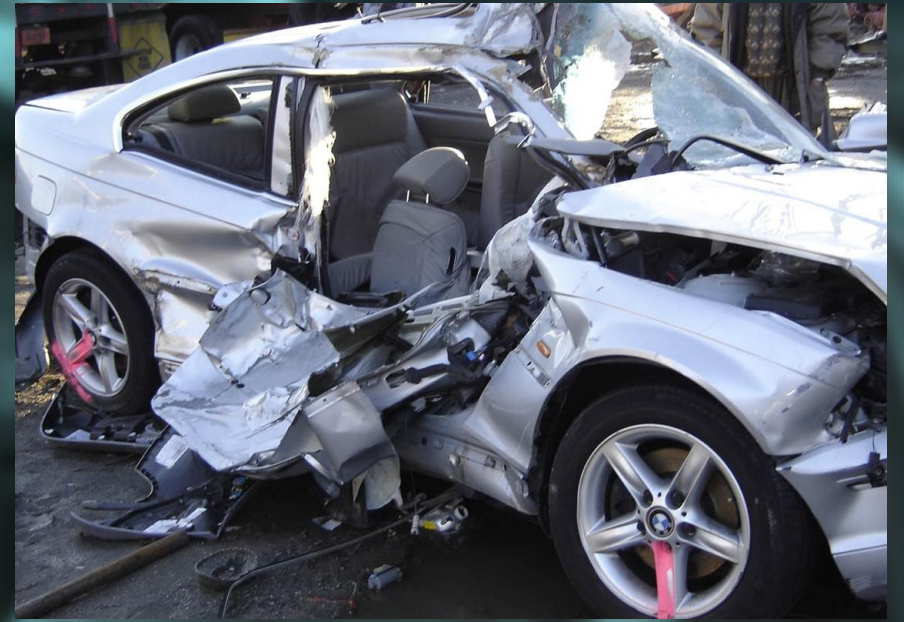
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ALBUQUERQUE, N.M. — The person killed in a fiery crash that closed I-40 Friday morning is Manzano High School junior Riley Hein, school officials confirmed Monday.

Roya Christine Sadigh

1978 - 2004



Sylvia Bingham

1987 - 2009



AnnaLeah Karth

1995 – 2013

Mary Lydia Karth

1999 – 2013



It's not
the crash
that kills

It's the
underride!





**Underride occurs due to a
Geometric Mismatch**





Passenger Compartment Intrusion

Victims of preventable underride include not only occupants of passenger vehicles but also Vulnerable Road Users, including pedestrians, bicyclists, and motorcyclists.

Underride Is A Major Factor In Vulnerable Road User Collisions With Trucks

One example is Sylvia Bingham:

“As a cyclist, she was hit by a straight truck and went underneath that straight truck.”

“It’s not the initial impact. It’s when they go underneath the truck, and they’re hit by the back wheel.”



**Engineers have developed
solutions to prevent underride
and
Passenger Compartment
Intrusion.**

Prevent Underride

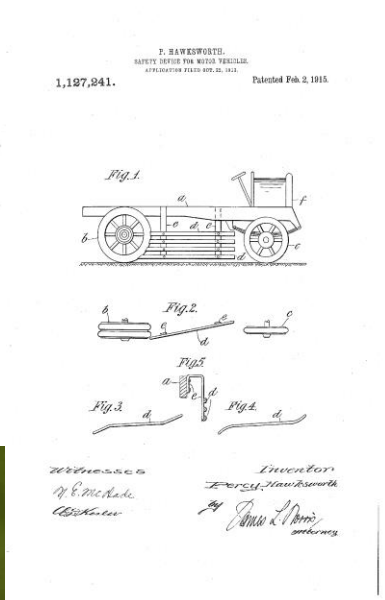
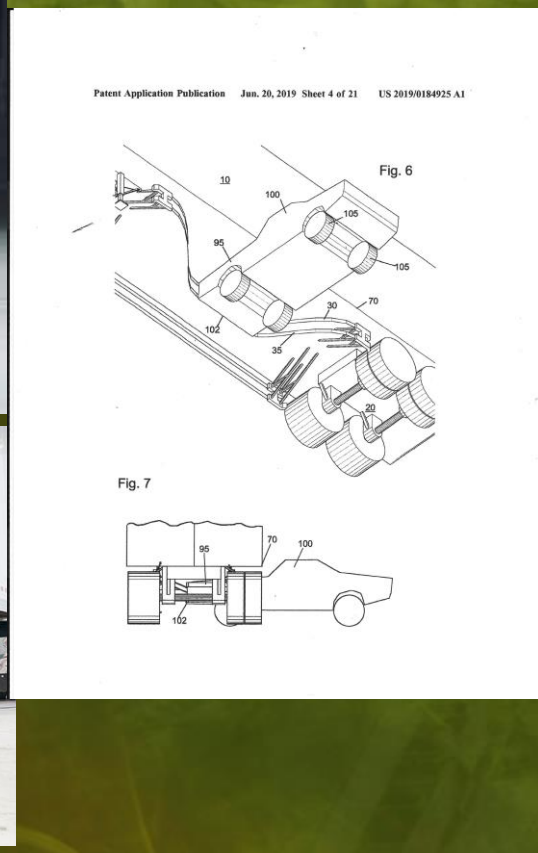
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ENHANCING TRUCK SAFETY

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Collision Safety Consulting





Raleigh engineer creating, testing truck underride crash barriers



Pedestrian-Bike Side Guards for Trucks: How They Work

**A Side Skirt is
a relatively flimsy device,
which is designed to
improve aerodynamics
and save fuel;
it is *not* designed
to prevent underride.**

Lateral Protection Device (LPD) is a term coined for equipment installed on the side of a truck to prevent Vulnerable Road Users (pedestrians, bicyclists, and motorcyclists) from being swept under. It is *not* designed to stop a passenger vehicle from going under.

UNGUARDED
Side Underride Crash Test
Washington, D.C.
March 26, 2019

Unguarded Side Crash Test in D.C.



Side crash tests:

- top car with a side skirt for fuel savings
- bottom car with a side guard behind the side skirt

A Side Underride Guard (SUG) or Side Impact Guard (SIG), on the other hand, is designed to prevent a passenger vehicle from going under a truck. Thankfully, it will *also* protect Vulnerable Road Users from being killed under a truck. And, by the way, it adds to the fuel savings of side skirts.



D.C. Underride Crash Test: Left Side Overall Vertical



SafetySkirt DC Crash Test, March 26, 2019

That is why a SUG or SIG can rightfully be called a LPD+; it does what a LPD is meant to do — and so much more.

**Why on earth would we require
or install equipment on the
U.S. fleet which will save fuel
but not lives?**



Wabash National debuts eco-friendly Super Truck

A more rigid fully-guarded trailer can improve aerodynamic benefits as well as prevent underride.

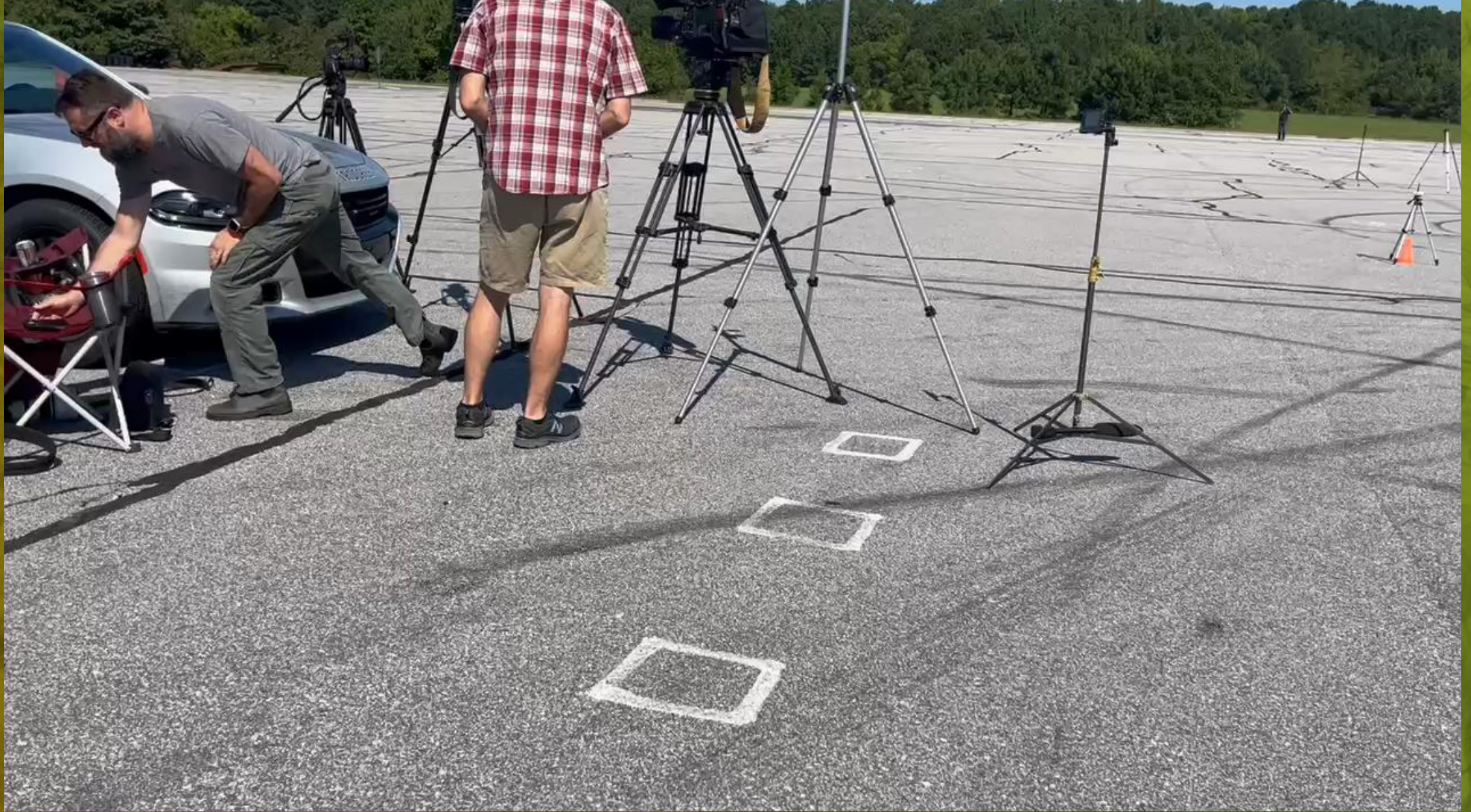




A fully-guarded trailer hits the road ready to STOP underrides



Raleigh Side Guard Crash Test, September 13, 2022



Successful Raleigh Side Guard Crash Test

This design is also conceived to carry a range extension battery patent pending product that is built into and protected by the side guard.

TEAM Underride

**Let's work together
to reduce GHG and
end underride!**