



Turning Tragedy Into Advocacy

WORTH

Turning Tragedy Into Advocacy

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



Will You Be A Part of the Solution To STOP UNDERRIDES?

Capitol Hill Underride Briefing

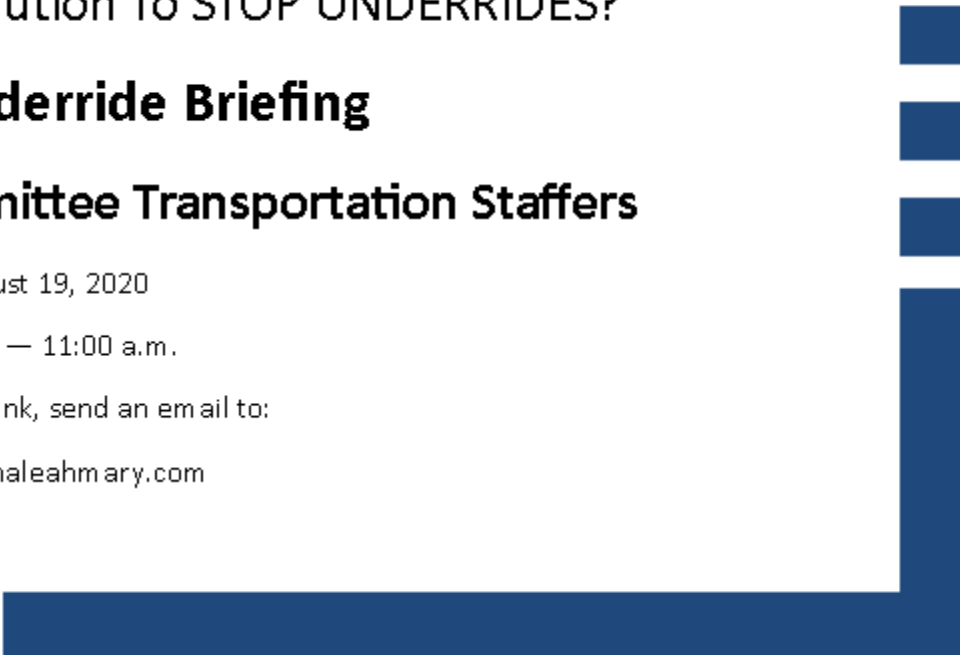
For Senate Commerce Committee Transportation Staffers

Date: August 19, 2020

Time: 10:00 — 11:00 a.m.

For Zoom meeting link, send an email to:

marianne@annaleahmary.com





Would **YOUR** car fit under a truck?
STOPunderrides.org

Underride Staff Briefing

Be there, or be square!

[Trailer to the Virtual Underride Staff Briefing, August 2020](#)

Housekeeping Details

- Please stay on Mute unless you are called on.
- Please Raise Your Hand or put your question in the CHAT box.
- We will be monitoring the CHAT box and try to answer questions as we go along.
- If your question does not get answered at the time you ask it, we will be having a Q&A period at the end of the presentation.
- PowerPoint pdf will be mailed out to participants after mtg.

Agenda

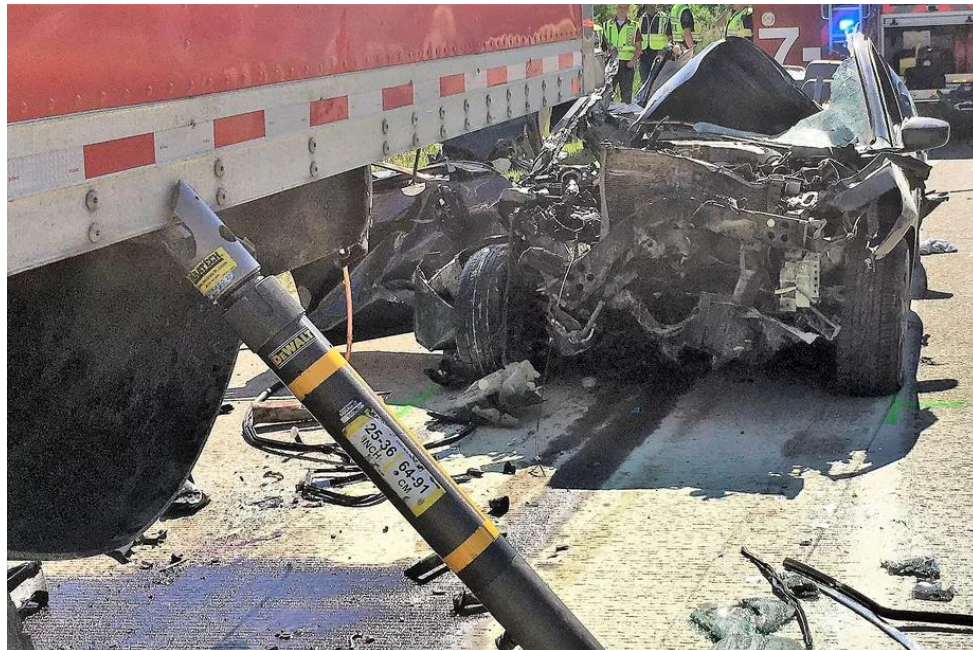
- Introductions
- Stories from Underride Victim Families & Friends
- Comparison of STOP Underrides Bill to Underride Section in HR.2 MOVING FORWARD Act
- Update on recent underride activities
- Recommendations from underride advocates
- Q & A

Underride Experts Include:

- [Lois Durso-Hawkins](#), mother of Roya Sadigh, underride victim
- [Mark Hawkins](#), brother of a truck crash survivor
- [Malcolm Deighton](#), engineer with Hydro Extrusions
- [Keith Friedman](#), Friedman Research Center
- [Eric Hein](#), father of Riley Hein, underride victim
- [Cindy Zimmerman](#), mother of Hunter Gatlin, underride victim
- [Aaron Kiefer](#), engineer & crash investigator
- [Perry Ponder](#), engineer who developed AngelWing side guards
- [Jared Bryson](#), *Smart Road Operations and Mechanical Systems Innovation Director*
Virginia Tech
- [Holden Peterson](#), peer of two Illinois high school students who died in a June 2020 rear underride crash
- [Andy Young](#), CDL holder, truck litigation attorney
- [Garrett Mattos](#), engineer , Friedman Research Center, TRB

Comments from Underride Advocates

- Holden Peterson, peer of [two Illinois high school students](#) who died in [rear underride](#) with **box truck** (**single unit truck**) this summer





<https://youtu.be/zCgx1vkkBXA>

High School Student, Holden Peterson talks about override

Allyson Davis, Kentucky side underride victim, July, 6, 2020

According to deputies, Davis was driving northbound on I-75 when she lost control of her car after driving through water. Her vehicle then spun out of control, they said, and ended up lodged under a semi-truck's trailer.

[\[RELATED: 1 dead after car, semi crash on I-75 in Boone County\]](#)

Investigators said Davis died at the scene, while the driver of the truck was not injured.

<https://www.fox19.com/2020/07/06/woman-killed-boone-co-crash-identified-nku-musical-theater-student/>





https://www.youtube.com/watch?v=GJ3grJO1Rdc&feature=emb_logo

Comments from Underride Advocates

Eric Hein, father of [Riley Hein](#), side underride victim, 2015

“By 1970, it was common knowledge in the semitrailer manufacturing industry that the mismatch in size between tractor trailers and passenger cars was a deadly problem in search of a solution.” [Jury Sends a Message](#)





[Riley Hein's Dad Speaks About Underride](#)

Who has taken action to find solutions?

Inventors outside the industry, without the benefit of the vast resources for research and development that the top trailer manufacturers have at their disposal, have come up with varying designs for side underride guards. Perry Ponder of Tallahassee, Florida and Aaron Kiefer of Cary, North Carolina have designed different concepts that have been successfully crash tested. IIHS crash testing of Mr. Ponder's Angelwing design, which uses steel and, more recently, aluminum, showed that side guards could stop a car from going underneath a trailer in crashes up to 40mph. Kiefer has done his own crash testing that has shown his design, which uses a lightweight but strong fabric, can stop underride as well. [Jury Sends a Message](#)

Who has taken action to find solutions?

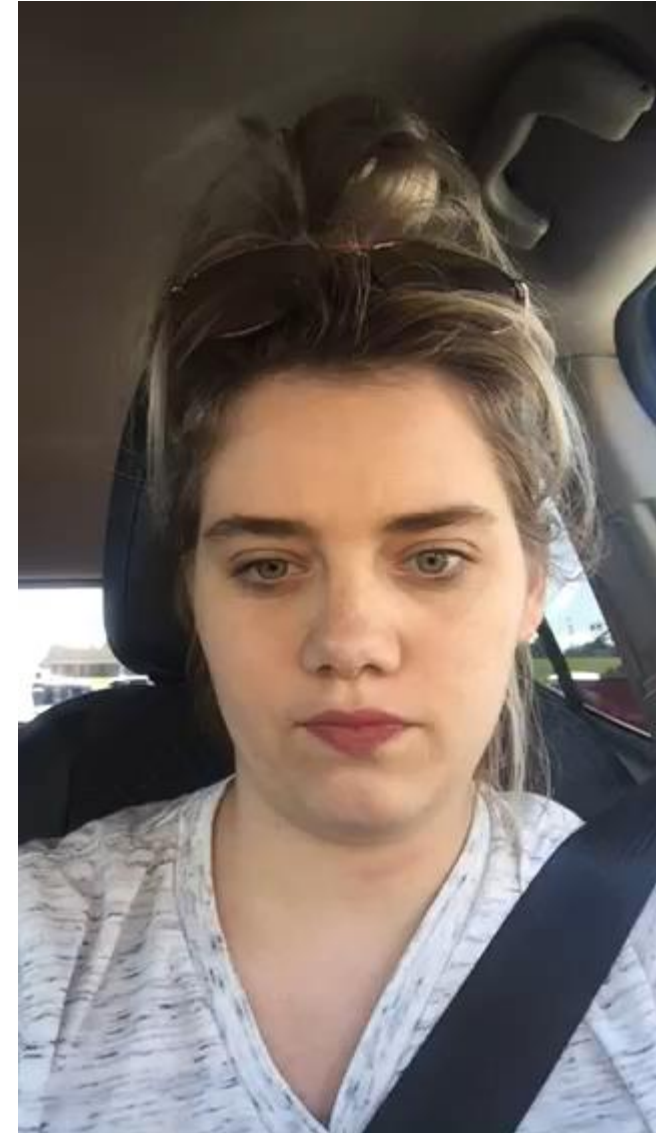
Still, trailer manufacturers have not made any move to adopt side underride guards, arguing that side guards would make their trailers too expensive and that no one will buy them, that they will reduce fuel efficiency, and that they will cause trailers to bottom out on severely raised railroad crossings, on steep loading docks, and on other sharp grade changes. Utility Trailer **never made any independent attempt to research a workable solution, to develop its own design, or to improve on the designs that it has devoted its resources to criticizing.** Jury Sends a Message

Comments from Underride Advocates

Kaylyn Hunter Gatlin, side underride victim

This video was taken by Hunter 12 hours before her fatal crash on September 1, 2017.

Cindy and Todd Zimmerman are her parents. Todd worked as a truck driver before Hunter's death. They fully support underride solutions.





Hunter served as a Page in the Oklahoma House.











Crash Tests Have Proven That Deadly Underride Can Be Prevented By Engineering Solutions:

- Stronger **Rear** Underride Guards
- **Side** Underride Guards
- **Front** Underride Protection



<https://www.youtube.com/watch?v=-VucNLZIsIU>

Rear Crash Test



<https://www.youtube.com/watch?v=jHNhh8NsFs>

Side Crash Test



<https://www.youtube.com/watch?v=iNRpiRmlBEc>

Front Crash Test



People die from underride at the Front, Side, and Rear of large trucks – both tractor trailers and Single Unit (i.e., Box or Straight) Trucks.

Engineering solutions are available to provide Front, Side, and Rear Underride Protection.

Therefore, the ***STOP Underrides Bill*** was written with all of those things in mind. It is a Comprehensive Underride Protection Bill which is [long-overdue](#).



The ***STOP Underrides Bill*** was introduced by Senator Gillibrand, Senator Rubio, Congressman Cohen, and Congressman DeSaulnier on [December 12, 2017](#), and again on [March 5, 2019](#).

The ***MOVING FORWARD Act of 2020***, HR.2, was passed on July 1, 2020 – containing an ***Underride Section***.

We now eagerly await similar action from the Senate to move this life-saving legislation forward.

View this [Comparison Chart](#) of Underride Provisions in Various Bills

- **HR.2, MOVING FORWARD Act of 2020 (Infrastructure Bill) includes these provisions in an Underride Section:**
 - **Rear** – Rule for improved guard on **NEW trailers** (No Retrofit)
 - **Side** – Research, develop std. for **NEW trailers**, if warranted
 - **Front** – nothing included
 - **Single Unit Trucks** – nothing included
 - **Maintenance** – Yes, add rear underride guards to CMV Inspections
 - **Research** – for Rear
 - [Advisory Committee on Underride Protection](#) -- Yes
 - **Data Collection** – Follow [GAO recommendations](#)

HR.2 Legislative Language for Side Guards:

- (A) **complete additional research** on side underride guards to better understand the overall effectiveness of such guards;
- (B) **assess the feasibility, benefits, and costs** associated with installing side underride guards on **newly-manufactured trailers** and semitrailers with a gross vehicle weight rating of 10,000 pounds or more; and
- (C) if warranted, **develop performance standards** for such guards.

Update on recent override activities:

- A Side Guard Task Force Zoom meeting was attended by about 45 people, including two trailer manufacturers, on April 17, 2020.
- Formation of ***Override Protection Committee***
Subcommittees:
 - Engineering
 - Industry Engagement
 - Awareness & Advocacy
 - Research
- Interested people have continued to meet via Zoom about 1 - 2x/month to communicate and collaborate.

Update on recent underride activities:

A *Consensus Side Guard Standard* was developed by the **Engineering Subcommittee**:

Lateral protection devices (i.e., side underride guards) should afford the ability to fully utilize both passive and active safety systems inherent in modern light passenger vehicles without compromising the occupant survival space.

These protective devices should have sufficient strength to prevent passenger compartment intrusion during a perpendicular collision at 40 mph closing or impact speed.



Explained by Malcolm Deighton

Recommendations from underride experts:

- *Malcolm Deighton:* [Explanation of the Consensus Side Guard Standard](#)
- *Keith Friedman:* [Research Engineer Addresses Truck Underride](#)
- *Perry Ponder:* [AngelWing inventor submits Public Comment to NHTSA, August 2020](#)
- *Jared Bryson:* Speaks about [Availability of Underride Solutions & Survivability](#)
- *Aaron Kiefer:* [Forensic engineer & crash reconstructionist speaks about his underride work since 2015](#)
- *Andy Young:* [Interview by WUSA9 on industry wrong-headed thinking](#)



Keith Freidman: Research Engineer Discusses Underride



Jared Bryson: Availability of Underride Solutions



[Jared Bryson: Survivability](#)

Aaron Kiefer, crash reconstructionist & forensic engineer

Click [here](#) to hear Aaron speak about his underride work since 2015.

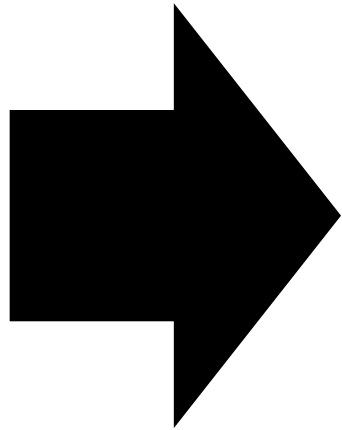


Recommendations from underride advocates:

- We are recommending that the Senate Commerce Committee draft:

Underride legislative language similar to what is in HR.2,

PLUS --



- Side Guard **Pilot Program**
- Single unit truck study (cities & VRUs)
- Front Underride Protection study (Tweet:
- “Unlatch Deer Guard Before Raising Hood”)

Update on recent underride activities:

- Industry Engagement Subcommittee: promoting a [pilot program](#)
- Aluminum [Rear Reinforcement Attachment](#) successfully crash tested at 38 mph in January 2020
- [Hybrid underride protection system](#) on a [trailer](#) being tested by a truck driver academy as a pilot project
- Canadian company has a [side guard design](#) on the road.
- Recent Industry article on [fuel savings](#) from aerodynamic side skirts. **Quick ROI.** Win/Win. Job creation.







Crash Test of Rear Reinforcement Attachment

<https://youtu.be/pFFXMWSDBFw>

The bottomline is that these deaths and catastrophic injuries are preventable. But no one is taking the initiative to make it a requirement across the board to level the playing field and save lives.

Update on recent override activities:

- In May 2020, FMCSA finally released 1/4 of a \$200,000 study (begun in 2017 & finished in 2019) on [impact of truck side guards on pedestrian fatalities](#). All tasks were completed, however, only the report from task #2 was released to the public.
- ***Five key tasks are included in this project: (1) study interaction of a potential side guard with other truck parts and accessories (e.g., fuel tanks, fire extinguisher, exhaust system) and the implications for a new Federal Motor Carrier Safety Regulation; (2) investigate applicable international side guard standards; (3) perform a preliminary cost-benefit analysis of truck side guard deployment; (4) propose recommendations; and (5) propose means for voluntary adoption.***
- NHTSA and FMCSA are behind schedule on responding to [GAO](#) [override recommendations](#). They are not taking leadership on this issue.

Highlights of Perry Ponder's [Public Comments](#) to NHTSA about Side Guards:

- Side guard cost calculations by Strick Trailer Manufacturers from 2000
- “Potential Benefits of Underride Guards in Large Truck Side Crashes” by Matt Brumbelow, IIHS
- IIHS test reports for side crash tests
- FMCSA cost figures & a rear underride guard cost/benefit analysis by the Upper Great Plains Transportation Institute at North Dakota State
- SAE Surface Vehicle Recommended Practice J699 & related ground surface-based analysis
- “Development of Design Vehicles & Characteristics for the Hangup Problem” & Federal Railroad Administration Data
- Krone “Safeliner” trailer plans, literature, & photographs

Perry Ponder's summary statement:

- Continuing to allow truck & trailer induced PCI in rear & side underride crashes to occur at otherwise survivable crash speeds (delta-V's of 45 mph & beyond) discards years of crashworthiness efforts & wastes the safety benefits we have come to expect & pay for in our cars.
- From an engineering perspective **the need for vehicle crash compatibility in the form of adequate heavy truck underride guarding is apparent in order to protect against the hazard of Passenger Compartment Intrusion (PCI) which exposes the vulnerable head & neck region to severe, potentially fatal or crippling injury.**

Perry Ponder concludes:

- This hazard is easily remedied by readily available materials & simple structural analysis.
- The FMVSS standards should be broadened to include guarding for the sides & rear of heavy **STRAIGHT (Single Unit or Box) trucks**, as well as **the SIDES of heavy trailers**.
- This was the original intent of NHTSA rulemakers in the 1969 NPRM, Docket No. 1-11; Notice 2.

What are the industry & the DOT's stance on underride mandates?

- FMCSA Virtual [Truck Safety Summit](#) on August 5, 2020
- [Audio clip](#) of response to an underride question posed to an industry panel, “What’s Working?”
- *Panelists:*
 - **Thomas DiSalvi, Schneider National, Inc.**
 - Steve Fields, YRCW
 - Jamie Maus, Werner
 - Dean Newell, Maverick



[Discussion of Underride Question at FMCSA Truck Safety Summit](#), Tom DiSalvi, Schneider

How many trailers have safer rear guards?

- Schneider, 30% of their fleet have *TOUGHGuard* stronger rear guards
- 33,830 trailers total
- 30% = 10,149 have safer rear guards
- 70% = 23,681 have weak, ineffective rear guards
- None have side guards.

None have side guards.

- Tom DiSalvi, VP Safety, Schneider trucking co., at FMCSA Truck Safety Summit (8/5/20): *I understand that there are two trailer manufacturer OEMS that have designed for side underride – one is in a prototype, the other is close to being released.*
- ***But I think it's going to require testing*** because when you have something of that size on the trailer. . . I think that there's still going to be a lot of questions about . . .
- *While it will enhance road safety,* ***will it create issues for the trailer –*** like going over RR crossings & things of that nature.
- ***So testing needs to be done.***

How many trailers have safer rear guards?

- **LANDSTAR trucking co.**
- 15,000 trailers on the road
- 39% with TOUGHGuard rear underride guards = 5,850
- 61% with weak & ineffective rear underride guards = 9,150
- By 2024, four years from now, they plan to have 75% of the fleet with strong rear guards = 11,250 trailers
- There will, however, still be 25% of the fleet with weak & ineffective rear guards = 3,750 trailers
- **None have side guards.**

Q&A Response to Underride Question at FMCSA Truck Safety Summit

- My question to the panel:

*Why is it that **underride protection** is not included in discussions of truck safety? It is a passive safety countermeasure. Would we stop using seat belts, air bags, and vehicle crush zones because collision avoidance technology is improving? It is not dependent on driver behavior to make it work.*

FMCSA TRUCK SAFETY SUMMIT



AUGUST 5, 2020



U.S. Department of Transportation
Federal Motor Carrier Safety Administration

[Discussion of Underride at FMCSA Truck Safety Summit, Jim Mullen, FMCSA](#)

Comments from FMCSA Truck Safety Summit

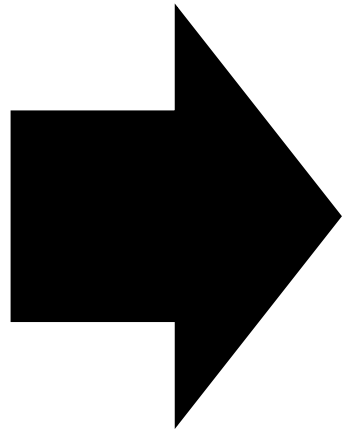
- Jim Mullen, FMCSA Dep. Administrator:
 1. NPRM for Rear Guard Inspections is on the Regulatory Agenda.
 2. *Still in the development stage on the side underrides.*
 3. *I know that **there's been a lot of dialogue & discussion at FMCSA & NHTSA on this issue.***
 4. *I know that **there's been a lot of discussion on The Hill.***
 5. *So the points are well taken. So **it is on the table for discussion & will continue to be on the table for discussion.***
- Discussion has been going on since March 19, 1969! And where has that gotten us?

Recommendations from underride advocates:

- People continue to be killed daily from underride and Passenger Compartment Intrusion due to collisions at the **sides, front, and rear** of large trucks.
- At the same time, there are other occupants of the passenger vehicles in those crashes, who survive because their part of the car doesn't go under the truck. **It's not the crash that kills; it's the underride.**
- **Somebody needs to put their foot down and require comprehensive underride protection.**

Recommendations from override advocates:

- That's why we are recommending that the Senate Commerce Committee draft:
- **Under**ride legislative language similar to what is in HR.2, **PLUS** --



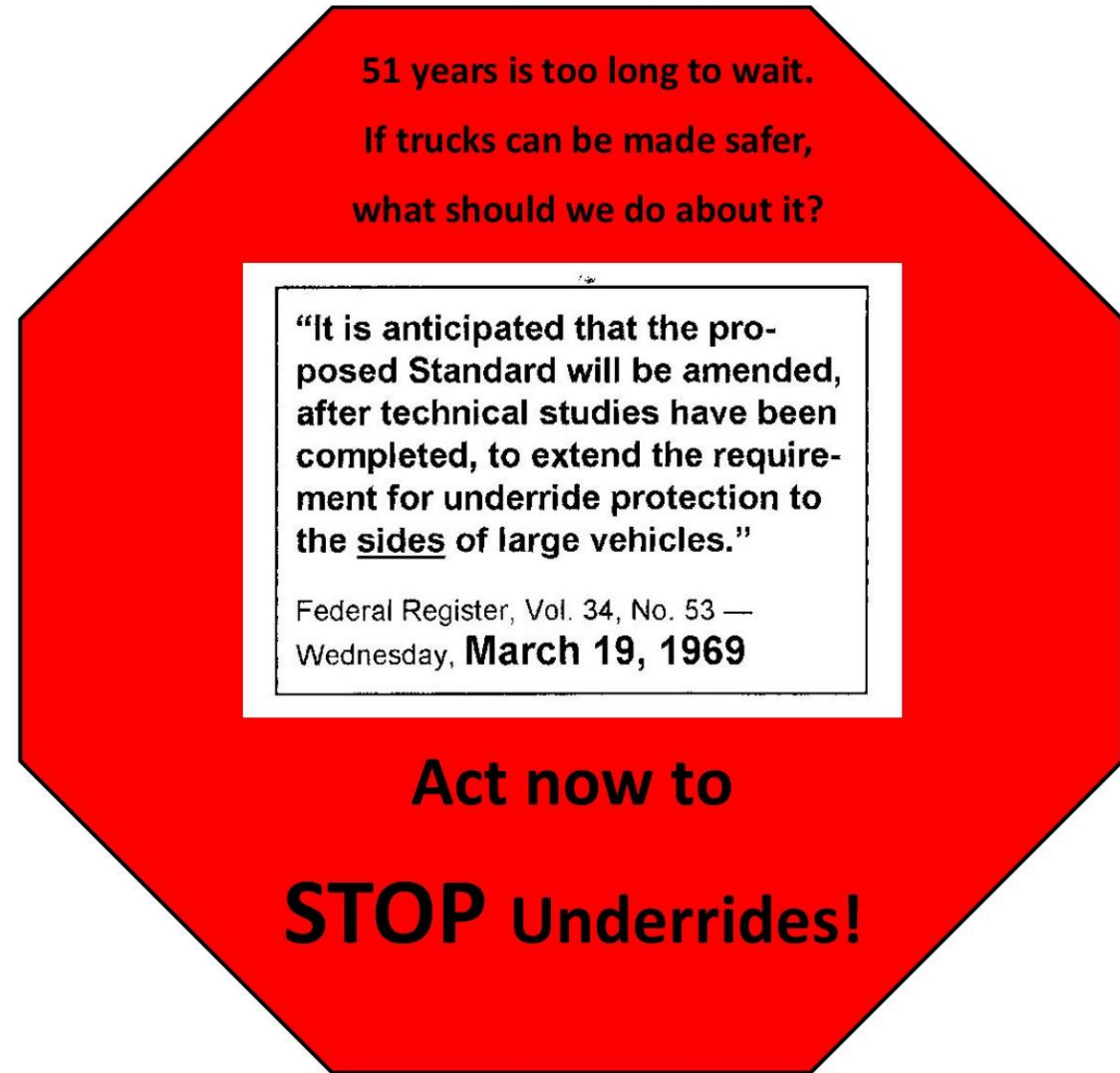
- **Side Guard Pilot Program**
- **Single unit truck study** (cities & VRUs)
- **Front Underride Protection study** (Tweet: “Unlatch Deer Guard Before Raising Hood”)

Questions & Answers

- Andy Young will facilitate this process.
- Please Raise Your Hand or put your question in the CHAT box.

Deb Hersman, former President of NTSB and of the National Safety Council, currently Safety Consultant at Waymo, says this:

**Safety
Delayed
is
Safety
Denied.**



Countless people have lost their lives due to preventable underride. It can happen to anyone at any time anywhere.

And it will continue to happen until we get serious and install comprehensive underride protection on every large truck. Unfortunately, this is not likely to happen unless we make it a requirement. In the end, that will create a Win/Win situation for everyone.

What are we waiting for? Every day we delay means that more precious lives will be senselessly snuffed out.



[Lois Durso-Hawkins & Marianne Karth](#)
[talk about a few of the thousands of underride victims.](#)







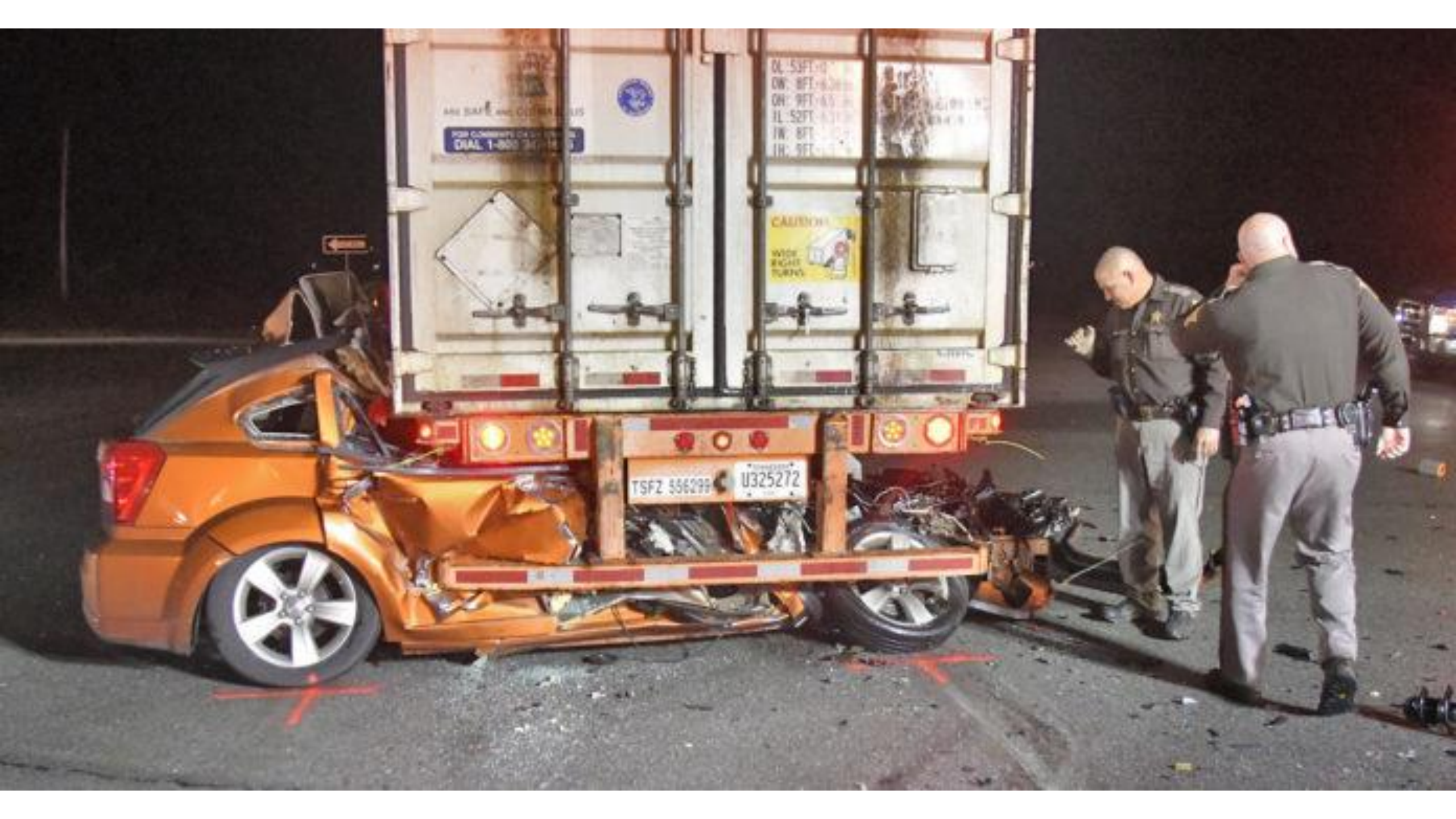


Thomas Toth was a huge Grateful Dead fan and a live-music connoisseur. His wife, Christina, was a successful lawyer with stints as a Wayne County prosecutor and attorney for Ford Motor Co.

Christina Toth, 48, just recently had partnered with a longtime friend to start their own firm. Thomas Toth, also 48, was a packaging engineer for Chrysler.

The Grosse Pointe couple and their two children perished Saturday in an accident in Colorado on a snowy night with low visibility and black ice. Authorities and one witness say the family van hit a semi and went underneath, shearing off the roof. The family was on vacation, traveling just after midnight on Interstate 76 near Sterling, Colorado.





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8-year-old child killed in crash on FM 41:

- Officials say the driver of the pickup, 35-year-old Rhett Green of Lubbock, did not realize the semi was stopped. He tried to veer to the left to avoid crashing into the back of the semi, but was unable to avoid the collision. The front right side of the pickup crashed into the left rear of the semi.
- Officials say Green's 8-year-old son was a passenger in the pickup truck and died at the scene.









Procession For Berwyn Police Officer Killed In Will County Crash

An illustration of a green semi-truck on the left and a blue car on the right, both on a grey road. The background is a light blue sky with white clouds. The text is centered on the white trailer of the truck.

**BETTER GUARDS ON BIG TRUCKS CAN
PREVENT UNDERRIDE CRASHES.**

**TELL YOUR LEGISLATORS TO SUPPORT
THE #STOPUNDERRIDES BILL.**

stopunderrides.org



Team Underride: Underride Basics