

Underride Engineering Subcommittee Discussion of Side Guards for Specialty Trucks
Monday, March 29, 3:00 p.m. EST

AGENDA

1. **Introductions**
2. **Purpose of the Meeting** is to discuss [industry concerns](#) about “one size fits all” underride legislation - dispel that myth because it is based on a performance standard and engineers have the opportunity to design underride protective devices to fit the vehicle & attain the performance goal: STOP a car from going under the CMV with deadly PCI
3. **Reminder:** Process for [application for exemption](#) at US DOT
4. **Underride protection for specialty trucks**, including side dumps, belly dumps, end dumps, grain trailer/hopper bottoms, pneumatic trailers, intermodal, frameless dump trailers, flat beds, low boys, drop decks, aluminum flat beds, tankers, livestock, auto transporters, etc.
5. If there is time, we will also discuss:
 - Off road concerns
 - Other operational issues, including loading docks, railroad crossings, high curbs
 - Impact of added weight on trailer structure
 - Impact of added weight on payload
 - **Single Unit Trucks**

Post-Meeting Summary Takeaway By Jared Bryson, Virginia Tech,
Division of Technology Development & Deployment, *Senior Research Associate*

1. Design – industry is ready.

1. Vulnerable road user guard up-fitters have designs down to a routine, even with the variation seen between vehicles.
2. Trailer manufacturers have patents relating to side and rear guards. Working on solutions.
3. 3rd party underride guards are available.
4. Some specialized trailers have existing low structures or geometries that address underride.
5. Specialized trailers often have robust frames that facilitate, or simplify, a solution.

2. Change – slow pace.

1. Corporations are increasingly aware and requesting these improvements at purchase.
2. Industry is disinclined at the uneven playing field. No requirement puts all the risk on the first one out of the gate.

3. Hurdles – nothing show stopping.

1. Specific application limitations. e.g. off-road, reconfigurable lengths.
2. Exemption process – well established process.
3. Weight and cost – two criteria for good designs.

Today's DISCUSSION regarding the installation of side guards (lateral protection devices) on "Specialty Trucks" included these thoughts from participants:

- **Vicky Bilodeau, [Fortier PHSS](#)** -- Our lateral protection device is flexible, not a problem.
- **Doug Strauss, [Walker Blocker](#)** - always something lower on the truck than side guards. Low-riding area.
- **Aaron Kiefer, [TrailerGuard](#), SafetySkirt & RIG Retrofit.** -- specialty trailers, expectation that when law is passed, mfr would anticipate and build it into structure of new trailers;
- **Robert Martineau, [Airflow Deflector](#).** - OEMs have worked with kits to install on the assembly line; incorporate as much as they can into their build, no lag time; their warranty; once more mainstream, demanded by client, or mandated. Easier entry into the market, meeting standards; serviceability.
- **Doug Strauss** - would rather have it on when they purchase it. Don't want to have to spend more money on their trucks by retrofitting. Some are proactive and getting ahead of it.
- **Robert Martineau, Airflow.** - continued exposure and awareness, getting orders from places where there is not a mandate -- see long-term benefit vs initial cost, longevity, amortization, risk mitigation. As more and more companies put them on, building momentum. Dialogue has increased. Light at end of the tunnel. Safer trucks one truck and guard at a time.
Working with end clients asking for side guards, able to deliver kits. Hundred units, major order.
Preaching to the choir. End client - maybe not what they had in mind. Down the road, there might be - right now there is not a standard serviceable product, move it forward. Willingness of OEM to work with clients. Relationships impt.
- **Malcolm Deighton, [Hydro Aluminum Extrusions](#)** - solutions from mfrs. Of their products. A place for aftermarket -- making a way. The industry is going to react to that and make their own designs. Some mfrs. Hold their own patents. Don't want to lead the pack. Waiting for customers to ask for it. Push them to come along with it.
- **Doug Strauss** - None of the cos. want to do. Takes a tragedy. The push is working. \$\$\$ Wish they had spent the money. Keeps going forward. Final Four. COLLABORATION!!! Saving Lives!!!! We can do this!
- **Jared Bryson, [Virginia Tech](#):** A few have low enough structure so that they would not need a side guard. E.g., low boys. Belly dumps have a structure which sits low. Basic frame structure to mount off of, fairly easy to design around. Some cost involved in special designs.
- **Vicky** - 2 layouts designed, **Fortier**, end dump and dry bulk. Ideas on the drawing board. 2 customers approached. Engineering design set up. Similar design to what is on the dry van.
- **Robert Airflow** -- work trucks mostly. Panel and 2 and 3 rail system, longest 24

ft. long. Finding right attachment points. Able to modify support brackets. Can fit in same price points. Same methodology.

- **Doug Walker Blocker** - work trucks, have to access sides on daily basis; fit the side guards to any truck. Beyond the trailers, 10-40,000 lb, Class 3-6 range. Lot of small areas on trucks with vulnerability for pedestrians & cyclists. Can provide affordable solutions for the varied solutions to make the trucks safer. Work trucks are complicated. Used to making adaptations. Give us the specs, we give you the parts. 2-8 ft. areas can be covered. Just need measurements. NOT One size fits all. Original plan to have kits available. Still have those. But every truck is different. Want to have the gaps covered. Upfitter. Allied Body. Installer -- make it simpler for them. Keep adapting. Custom made trucks.
- **Vicky B.** - custom trailer. A company has its own specs, so they can modify to their needs.
- **Jared Bryson:** Both straight and combination trucks. Common ground we can work toward.
- **Vicky, Fortier** -- depends on structure of frame. Fitting underneath needs to be altered a bit. Manage the force - depends on whether protecting the VRU or cars
- **Martin Fleury, [Airflow](#)** - Minimize open areas. Tool boxes in a good place to act as a side tool boxes in a good place to act as a side guard. Educate cos. On placement.
- **Perry Ponder, [Seven Hills Engineering](#), AngelWing** - articulated design for dump; fitting the side guard to the situation you have; you can work with the geometry of the vehicle to install a side guard.
(Note: Perry shared an animation of a design that he developed for a dump trailer.)
- **Robert** - compliance, an out-of-the-box solution; when a mandate, adhering to a standard; there will be variation; when the standard is known, there can be a united conversation and some collaboration to creatively solve the problems. An acceleration of great ideas. Save lives economically.
- **Aaron** - dump trailers have robust frame down low to form backbone; potentially wouldn't need to be as wide as on dry van in some sections; could maybe recess a bit; definitely possibilities; ingenuity - manufacturers already used to making engineering changes
- **Aaron Kiefer** - Mentioned Friedman & Mattos - They have shown that computer simulation assessment of performance of designs is possible vs full scale crash testing.
- **Keith Friedman, [Friedman Research Center](#):** certification by analysis; virtual testing more cost effective to prove what you can expect in the real world; to minimize costs by manufacturers or suppliers
- **Garrett Mattos, [Friedman Research Center](#)** - recent paper, *Protecting Passenger Vehicles From Side Underride With Heavy Trucks*, (to be

published in April); virtual testing to demonstrate achievement of functional performance requirements; straightforward evidence-based methods; side guards. Performance requirement doesn't dictate your hardware requirement; doesn't limit design innovation. Side override research paper will be presented & published at the **SAE World Congress** which opens April 13.

- **Aaron** - concern from OOIDA - was it cost?
- **Marianne Karth** - I don't think that OOIDA thought it was technically possible. We offered to organize a meeting with engineers [TODAY] to discuss how side guards could be installed on specialty trucks. And we reminded them that if a manufacturer attempted to meet a regulation but found that it was impossible or burdensome to do so that they could submit a petition for an exemption.
- **Lois Durso-Hawkins** - OOIDA brought it up in our meeting with them after agreeing that removing the retrofit requirement was helpful. They believed that requiring side guards on specialty trucks would be burdensome and therefore was a reason for them to oppose the override legislation.
- **Robert M.** - In NY, some trucks were possible. When there's the will, there's the way. For ex., at one point an oil tanker seemed impossible. Mfr. has shown that out-of-the-box solutions are possible! Challenge met! A lot of progress in last few years.
- Input from **Iain Knight**, **Apollo Vehicle Safety Ltd**, UK NOTE: Iain could not attend due to a schedule conflict but sent these comments via email:

"Just as an initial view, the industry always has these concerns and they are of course valid concerns from an operational point of view. However, in other parts of the world solutions have been found for most situations. I show a picture of a side tipper in China with a sideguard and also an adaptable height sideguard marketed by aftermarket companies in the UK. It should be borne in mind that most places in the world use sideguards only as VRU protection so protecting car occupants will need heavier duty devices and this will complicate the innovative solutions somewhat. However, they can still be found or, as you have said in an earlier e-mail, exemptions or adaptations could be made if there are really niche applications (with low vehicle numbers or low exposure to risk) for whom it really does create a substantial problem.


"Note that bulk carriers like tipping vehicles are often the fiercest opponents. This is often presented as practical difficulties and they are valid. However, behind this is another economic factor. Box, curtain and refrigerated trucks often carry lighter weight goods that fill the available volume before reaching the mass limits. Thus, they are not too affected by an increase of 100-200kg in the unladen weight. Same for other goods that are heavy but 'lumpy' e.g. steel coils weighing 5 tonnes each. They are dense and don't fill volume but depending on unit mass and exact limits, they might be a couple of tonnes under the limit because the next 1 coil takes them over.

"Tippers carry things like grain and aggregates that are both dense and with a very low unit weight. So they can be filled right up to the limit. So every kg more unladen weight is another kg less on their payload and income per trip. Also a valid concern even if you take the view that you can't put a financial price on a life because if it is assumed the economy will still require the same amount of aggregate to be shipped, then it will increase the number of this type of truck on the road, which increases the exposure to risk of all types of collision.


[Note from mwk: But at least any truck crashes, which would occur, would be with comprehensive underride protection & therefore **MORE SURVIVABLE**.]

Iain Knight shared this research paper: "[Conceptual design and development of movable rear underrun protection](#)". On one hand RUP is a safety feature but on the other hand it poses a challenge to the operational capacity of certain trucks such as tipper trucks. The current FOSL (Foldable and Slidable) RUP does not fit on the shortest overhang chassis and interferes with surrounding parts on the chassis. Hence this project is an attempt to design a movable RUP which will fit on the shortest overhang chassis and importantly which will satisfy the legal requirements according to the amendments to regulation 58."

Please note the valuable resources available from previous meetings of the Underride Engineering Subcommittee: [Engineers, Trucking Industry, & Victim Advocates Collaborate at Side Guard Task Force](#). On a Friday afternoon — February 26, 2021 — over 50 people met via Zoom to discuss comprehensive underride protection. The purpose of the meeting was to report on progress which has been made by several subcommittees since an earlier meeting in 2020 — including Industry Engagement, Research, and Engineering Subcommittees.

Type of Truck	Truck details
Input from Iain Knight, Apollo Vehicle Safety Ltd , UK	<div>  </div> <p>Company marketing the above is Dawes Guard – clearly not strong enough for vehicle impacts but it shows what can be done if there is a willingness to accept the cost and mass penalties</p> <p><i>I show a picture of a side tipper in China with a sideguard and also an adaptable height sideguard marketed by aftermarket companies in the UK. Iain Knight</i></p>
Side dumps	<p> https://www.youtube.com/watch?v=hiCJG_9u-v8 https://www.vanderhaags.com/Search-Unit.php?inventorytype=trailer https://www.auctiontime.com/listings/trailers/auction-results/33834669/2003-side-dump-industries-sdr325 Hippo Equipment </p>

	Waverly, Nebraska 68462 Phone: (402) 257-6022
Belly dumps	https://www.vanderhaags.com/detailview.php?part=24990970 https://www.vanderhaags.com/detailview.php?part=24131848
End dumps	https://autoline.info/-/sale/dump-trailers/SLP-3-8200-KS--21032416333157811700 Berkelmans Welding
Grain trailer/hopper bottoms	https://youtu.be/ArTh2HIq-9g Berkelmans Welding
Dry bulk	
Pneumatic trailers	https://www.bulkequipment.com/for-sale/2018-mac-trailer-dry-bulk-pneumatic-tank-trailer-10664814 https://www.saferack.com/glossary/pneumatic-trailer/#:~:text=Not%20only%20are%20Pneumatic%20Trailers,it%20is%20no%20simple%20matter. <i>Pneumatic Trailers used for transporting pellets, but also used for grains, sugar, cement aggregate... essentially any dry substance that needs to be transported.</i> https://tinyurl.com/e8ur45zj https://tinyurl.com/55y5hvbs
Intermodal	https://tinyurl.com/c87m4zr2
Frameless dump trailers	
Flat beds	MARCH 2021: 17-year-old seriously injured after crash involving tractor trailer in Bradford County Perry Ponder's crash test into the AngelWing: Side Underride Guard 47.2 MPH Test Speed Fortier believes that their lateral protection device could be installed. Wavy in middle.
Low boys	
Drop decks	https://reitnouer-trailers.com/trailers/#drop-decks https://tinyurl.com/8p4prxr <i>The Reitnouer CK Series trailer line features precision pre-drilled holes to easily add</i>

	<p>toolboxes between axle spread and dunnage racks on the driver's side and curb side, complete with bolts and nuts fillers. Learn more at reitnouer-trailers.com/trailers/ck-trailers</p> <p>Features + Innovations: Suspension hanger boxes feature a Reitnouer patented clamp-mount design and are boxed in from side-to-side to minimize the stresses that are transferred to the main rails. https://tinyurl.com/vs7vzrjr</p> <p>Features + Innovations:</p> <ul style="list-style-type: none"> • Snap-in pockets offer superior strength in the pocket-to-side rail connection. • Two-piece load levelers for the DropMiser offer lighter weight handling and placement anywhere along the trailer deck. • Reitnouer's unique two-piece bolted and bonded main beam is joined in the center, where stresses are minimal. Three-piece floating outriggers minimize the stress on the main beam. • Innovative snap-in floor enables the floor to become part of the main beam (patent pending). In addition, the extruded inner flange allows cross member stress to be distributed over a much larger area
Aluminum Flat beds	<p>The rear bumper design exceeds DOT standards. Its three-piece design is bolted, allowing easy repair or replacement – an extremely important feature since owners are now required to maintain these bumpers in the original condition and design to ensure long-term DOT strength requirements. https://reitnouer-trailers.com/features-innovations/</p>  <p>The rear end of Reitnouer trailers incorporates suggestions made by the people who use our trailers every day. The corners have been made stronger, the light panels are protected top and bottom, the rear bumper is one piece and fully enclosed, and horizontal bumpers were added for those dock plates pushed up by the rear of the trailer.</p> <p>When Reitnouer introduced its first totally bolted aluminum flatbed trailer in 1982, it revolutionized the industry. With its innovative two- piece main beam construction and a whole host of breakthrough features, including a tapered beam design to optimize strength and weight and safety tread deck, the Reitnouer Aluminum Flatbed quickly</p>

	<p><i>became the standard against which all other flatbeds were measured. Today, Reitnouer continues its tradition of leadership and innovation — the design of choice for drivers everywhere and the standard by which all other trailers are measured.</i></p> <p><i>Our goal is to serve the needs of our customers. Every Reitnouer trailer is completely customizable with industry-standard and specialized options to meet your specific needs. Your Authorized Reitnouer Dealer can answer your questions and help you spec a Reitnouer trailer that meets your needs.</i></p>
Tankers	<p>https://www.norgren.com/se/en/expertise/mobile-pneumatics/trailers</p> <p><i>"Our engineers work closely with our customers' engineers developing solutions that meet your needs."</i></p> <p>We understand the market trends, environmental challenges, emissions standards and specifications that matter to truck manufacturers and Tier 1 suppliers. Our application specialists and dedicated program teams support our customers from initial enquiry throughout program life-time.</p> <p><u>AUGMENTED REALITY</u></p>
Livestock	
Auto transporters	
Logging Trucks	<p>https://www.norgren.com/se/en/expertise/mobile-pneumatics/trailers</p> <p>The trailer length can be adjusted using a pneumatic system comprising cylinders and valves. Dependent on customer requirements, once the new trailer length has been achieved, it is locked into position either mechanically or pneumatically.</p> <p>Our products help improve performance and reduce downtime and energy consumption on production lines across the world.</p>
Single Unit Trucks	<p><u>Crashes Involving Single-Unit Trucks that Resulted in Injuries and Deaths (NTSB)</u></p> <p><u>U.S. Department of Transportation Issues Advance Notice of Proposed Rulemaking on Single Unit Truck Crash Protection</u></p> <p><u>Unified Agenda And Regulatory Plan Search Results</u></p> <p><u>Retroreflective Tape and Underride Guards for Single Unit Trucks</u></p>

Other Operational Issues and Concerns:

Potential Concern	Information Available
Off Road Deliveries	
Feedback from trucking companies	<p>Transport Companies Provide Feedback on Side Guard Operational Issues: We know that the trucking industry has expressed concern about potential operational issues which could occur when side guards are installed on large trucks. In order to address those concerns, we asked several trucking companies to give us feedback about their experience after installing side guards on their tractor-trailers.</p> <p>This is what they told us:</p> <p>Letter from Glenn Berry, Thomas Transport</p> <p>Letter from Ferdinand Heres, Heres Transport</p> <p>Letter from Richard Camden, Prest XsPress</p> <p>Audio interview of Chris Brock, leasing a fully guarded trailer</p>
Railroad crossing hang-ups	<p>https://annaleahmary.com/2021/03/should-we-be-concerned-about-side-guards-getting-hung-up-on-railroad-tracks/</p>
Loading docks	<p>Operational Issues with AngelWing Side Guard</p> <p>Transport Companies Provide Feedback on Side Guard Operational Issues</p> <p>Perry Ponder's August 12, 2020 Public Comment to NHTSA related to operational & cost issues of underride protection.</p> <p><i>Remember the WVU study about length of trailer, wheelbase length and the height of trailer's lower edge. It showed that a trailer would have to be much lower than the AW makes it to hang up on in-spec RR crossings and driveway transitions (see diagram below from that study).</i></p> <p><i>But the RR crossing argument is another red herring. Google "semi trailer hits overpass" and you'll see more instances of the height of a trailer causing problems than low trailers at RR crossings...is anyone in the industry arguing for lowered trailer roofs? (Perry Ponder, email, 10/16/18)</i></p> <p>See this truck stuck under a Low Clearance Bridge on March 25, 2021: https://whdh.com/news/motorists-urged-to-stay-away-after-tractor-trailer-gets-stuck-under-bridge-in-worcester/</p>

Added Weight	<p>Comments on cubing out before weighing out: https://www.facebook.com/permalink.php?story_fbid=674904696315303&id=618762185262888</p> <p>https://blog.nelsoncompany.com/home/what-does-cubing-out-mean</p>
Fuel efficiency	<p><i>The driver that drove the AngelWing from Tallahassee up to IIHS with our skirt reported an extra half mile per gallon on his truck computer. That's about an 8.3% improvement in fuel economy and is in line with some of the best skirt-only EPA test results.</i></p> <p><i>An extra 1000 lbs is said to decrease fuel economy 1/2%, so while AngelWing weighs a bit, with aerodynamics, that decrease is more than offset, and our driver's computer corroborates this.</i></p> <p><i>80% of trailers are said to run under max load, so there is room to carry any displace cargo on other trailers.</i></p> <p><i>Perry</i></p>
High Curbs	<p>Backing a trailer with the SafetySkirt side guard across a raised median:https://vimeo.com/323245121</p>
Cost	<p>Retrofit Requirement has been taken out of STOP Underrides Bill. S.605/HR.1622</p> <p><i>Strick Trailers was motivated briefly to design side guards for their trailers after the Maravilla verdict back in '00. Anyway this 700ish pound side guard was estimated to cost them \$328 materials and labor to make at that time. A straight inflation conversion takes that to \$450 in 2019 dollars... (Perry Ponder, email, 9/18/2019)</i></p> <p>Get a quote</p>
Operation at -20 degrees F	<p>Brittle Fracture Hazards in Carbon Steel AMSE-Rated Equipment</p> <p>Coldest Places in United States - Current Results</p>
General Operational Issue Observations	<p><u>Thoughts from Garrett Mattos from the June 15 Engineering Subcommittee meeting which I think are relevant (mwk):</u></p> <p>“I want to separate the two fields of research needed going forward.</p> <ul style="list-style-type: none"> • First, the research to define the performance of the system which can be done now with crash data. I think there is enough information existing that this can be done in a relatively short time period. • Secondarily, there is a developmental series of research that meets that pre-defined performance standard. Once that performance standard is out there --whomever will be putting them on their trailers will need to evaluate their trailers. Hardware designs by trailer manufacturer is left up to the OEM, similar to a seatbelt, versus waiting for NHTSA to tell them how to do it.”

	<p>June 2016, Observations from Jared Bryson (in preparing to mentor a Virginia Tech Senior Rear Guard Design Team) on</p> <p><i>Three Accident Outcomes:</i></p> <ol style="list-style-type: none"> 1. <i>Passenger vehicle realizes its safety features;</i> 2. <i>Passenger vehicle is not allowed to realize its safety features; or</i> 3. <i>The scenario is beyond the capabilities of said PV safety features.</i> <p><i>The auto industry has addressed #1.</i></p> <p><i>Side guards have been proven to address the second category by allowing passenger vehicle crashworthy features to realize their potential in protecting vulnerable car occupants from death or debilitating injuries.</i></p> <p><i>#3 is not the goal of (or requirement of) underride protection.</i></p>
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Jerry Karth posed these questions to the trucking industry and Questions for the Record to Secretary of Transportation nominee, Pete Buttigieg:

- Are you aware of a **side underride guard** called the **AngelWing**? Would you be willing to **familiarize** yourself with this **safety device**?
- Are you aware that AngelWing was successfully tested when a mid-size car was crashed into the side of a tractor trailer at both 35 and 40 MPH at the Insurance Institute for Highway Safety with no Passenger Compartment Intrusion?
- Are you aware that DOT administrators were invited to view crash testing of side guards less than a mile from the D.C. DOT Offices on **March 26, 2019**? (at least one FMCSA official attended)
- Are you aware that AngelWing has been in commercial use for over 8 years?
- Are you aware that AngelWing has over 800,000 miles in commercial use on the U.S. highways?
- Are you aware that AngelWing has been durability tested?
- Are you aware that AngelWing has shown no operational issues (such as loading docks and railroad crossings)?
- Are you aware that AngelWing has shown no stress or damage on the trailer frame?
- Are you aware that AngelWing is being commercially used and one route is from Cleveland, Ohio to San Antonio, Texas round trip every week over 3,000 miles per week without any issues — since **August 2017**?
- Are you aware that AngelWing and a side skirt increase MPG for a tractor trailer?

Industry gets quoted in [articles](#) about wanting real-world testing:

More specifically, ATA points to a GAO study from 2019 that called for additional research “to better understand the overall effectiveness and cost associated with these guards.” And until such research is undertaken, any legislation would be “premature.”

ATA also calls for “real-world” testing—with both vehicles moving at highway speeds, and with impacts at different angles—rather than the closed-course, stationary truck tests done by IIHS. ATA discounts the notion its support of stronger rear impact guards means the

industry should welcome side guards: Comparing the 8-foot rear guard developed over 70 years to a 40-foot side guards is “apples and oranges.”

Nor does the legislation account for “engineering tradeoffs,” such as the impact of heavy guards on the long-term structural integrity of the trailer, and related issues with ground clearance and moveable trailer axles, ATA continues. Likewise, **rigid side guards would not work well with tank and bulk trailers, while flatbed trailers are designed with a curve to support heavy weights, and intermodal trailers are designed to be shipped as multiple units stacked together when unloaded.**

The Truck Trailer Manufacturers Association has initially declined to respond to the introduction of the latest underride bill, pending the official posting of the text. But TTMA President Jeff Sims opposed previous versions, noting that the **significant additional weight from side underride guards would reduce payloads, in turn leading to more truck trips—and, statistically, additional safety risk.** TTMA also has voiced **operational concerns, such as high-centering at rail grades.**

However, “TTMA stands ready to work with DOT/NHTSA when a rule is published,” Sims said.

[Congress takes third swing at side underride bill](#), FleetOwner, The third try for the mandate removes the retrofit requirement, a prohibitively expensive sticking point in previous legislation—but trucking still has concerns over lack of data, 'unintended' results. Kevin Jones, March 23, 2021

And, also, from 2017. . .

For months, WUSA9's Special Assignment Unit had been requesting for an on-camera interview with Jeff Simms, President of the [Truck Trailer Manufacturers Association](#). Simms spoke at the summit.

“There’s a lot of operational issues you have to consider,” Simms said. “There’s all kind stuff you have to consider. The different configurations of the trailers, the way the trailers are used. High centering, these guards are pretty low so when you’re going over train tracks they might get caught.”

Simms also said the \$3,900, 800-pound “Angel Wing” side guards would force trucking companies to remove payload and add even more tractor trailers on the road to make up the financial loss.

Simms said that will lead to a rise in tractor trailer related deaths of all types, erasing any overall safety benefit.

David Zuby, Chief Research Officer for IIHS, disagrees.

“It’s far from clear that requiring this level of protection will lead to such a large increase in truck travel that you wash out the benefits of carrying the protection,” Zuby said.

<https://www.wusa9.com/article/news/investigations/underrides/grieving-parents-break-down-after-crash-test-shows-life-saving-technology/65-469019354>

[Big Rigs, Big Risks WUSA9](#) video of the above interviews



Note from September 23, 2016: "AnnaLeah & Mary for Truck Safety intends to organize additional Underride Roundtables and to advocate for an **International Underride Task Force** to convene and cooperate with the Department of Transportation." [Clarification of the Comprehensive Underride Consensus Petition](#) [Comprehensive Underride Petition 9/23/16](#)