August 29, 2026

NHTSA Information Quality Official
National Highway Traffic Safety Administration
U.S. Department of Transportation
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Washington, D.C. 20590

Submitted by email to InformationQuality@dot.gov
cc: Mava Lewis, Office of the General Counsel, DOT
cc: Jonathan Morrison, Administrator, NHTSA

Re: Request for Correction of Information under the Information Quality Act "Side Impact Guards for Combination Truck Trailers: Cost-Benefit Analysis"
Docket No. NHTSA-2023-0012; RIN 2127-AM54

To Whom It May Concern:

Under the US Department of Transportation's Information Quality Guidelines (DOT 2019) and the Information Quality Act, Section 515 of Public Law 106-554, I am requesting correction of information published by the National Highway Traffic Safety Administration (NHTSA). This request concerns the report titled "Side Impact Guards for Combination Truck Trailers: Cost-Benefit Analysis" (National Center for Statistics and Analysis 2023) (the CBA Report), which NHTSA published as the analytical foundation for its April 21, 2023, Advance Notice of Proposed Rulemaking (ANPRM) on side underride guards (88 FR 24535; Docket No. NHTSA-2023-0012) and for NHTSA (2024) Report to Congress submitted under Section 23011(c)(4) of the Infrastructure Investment and Jobs Act (IIJA). It remains the sole analytical basis for the pending action at RIN 2127-AM54 in the 2026 Unified Agenda, classified as economically significant and at the Prerule Stage, with NHTSA listing its status as "Analyzing Comments" over three years after the comment period closed on July 20, 2023.

Background and Prior Notice to NHTSA

I am a retired U.S. Fish and Wildlife Service policy analyst with graduate-level statistics training and extensive experience evaluating regulatory analyses under the Administrative Procedure Act. I am a board member of the Institute for Safer Trucking. In 2026, I published a peer-reviewed cost-benefit analysis of side underride guard regulation in the Journal of Progress in Safety and Security (Hein 2026). I have filed two defect petitions with NHTSA on side underride guards. My son Riley was killed in a side underride crash on November 13, 2015.

Many of the deficiencies in this request share a common root: a failure to base the analysis on the best reasonably available scientific, technical, economic, and other information on the need for, and consequences of, the intended regulation, the standard the federal government has set for regulatory analysis for decades (E.O. 12866). NHTSA says it met that standard, stating it conducted the analysis "according to Circular A-4," which requires the agency to base its

analysis on "the best reasonably obtainable scientific, technical, and economic information available" (Section E.3.a). The CBA Report does not meet this standard.
NHTSA has known about my concerns through a series of formal submissions and direct communications, summarized below.

June 22, 2022 -- Meeting with NHTSA and Federal Motor Carrier Safety Administration (FMCSA) leadership. In a formal meeting with senior NHTSA and FMCSA officials, including Jack Danielson, Ron Thaniel, and Darren Hall, underride victim family advocates (Hein, Karth, Durso) raised specific concerns about the data that would be used in NHTSA's forthcoming underride cost-benefit analysis: known underreporting of crash fatalities, inaccurate data interpretation, and the need to use the best reasonably obtainable scientific information. This meeting preceded publication of the CBA Report by ten months.

June 5, 2023. Public comment to OIRA on the proposed Circular A-4 revision (88 FR 20915; OMB-2022-0014). I submitted formal comments to Richard Revesz, Administrator of the Office of Information and Regulatory Affairs, citing the CBA Report by name as an agency regulatory analysis that was not peer reviewed and whose underlying data were not public. I recommended that the revised Circular A-4 require peer review of regulatory analyses and public availability of all underlying data and formulas.

July 20, 2023. I submitted detailed public comments on the ANPRM raising each deficiency in this IQA request: the absence of peer review, the missing No-Action baseline, the two unreleased internal studies, and the exclusion of vulnerable road user fatalities (Docket No. NHTSA-2023-0012).

April 23, 2025. Zoom call with NHTSA and FMCSA leadership. I directly asked NHTSA leadership when the agency intended to complete the ANPRM comment review and the “warranted determination” on side underride guards. Eileen Sullivan of NHTSA responded that the agency has “no schedule to complete this action.” Larry Minor of FMCSA was also present on the call.

September 9, 2025. I submitted a formal letter to Director Boris Arratia of the Regulatory Information Service Center documenting that NHTSA had missed the statutory deadline under Section 23011 of the IIJA for the Report to Congress (due October 2023, delivered June 2024, eight months late) and requesting that the Unified Agenda entry for RIN 2127-AM54 be corrected to reflect the missed deadlines and provide credible milestones. Copies were sent to OIRA, NHTSA Acting Administrator Jack Danielson, NHTSA Chief Jim Myers, and Acting DOT Inspector General Mitch Behm.

August 21, 2026. I submitted a formal comment on the DOT Regulatory (Unified) Agenda to Assistant General Counsel Daniel Cohen documenting that NHTSA had moved the "Analyzing Comments" date three times without completing the action and still had not made the Section 23011 determination and requesting that the Department

replace the "07/00/2026" placeholder with a firm completion date. Copies were sent to OIRA, NHTSA, RISC, and the DOT Inspector General.

The CBA Report Constitutes Influential Information

The CBA Report is influential scientific information under the DOT Guidelines: information that is a major factor in resolving key issues in a significant regulatory action. It was the sole quantitative basis for the April 2023 ANPRM and NHTSA (2024) Report to Congress. In that Report to Congress, NHTSA cited the CBA Report's finding that "the net benefits for a side underride guard requirement on trailers and semitrailers are estimated to be negative and in the range of -$1.038 billion to -$844 million" as its analytical basis, and then failed altogether to make the determination required by Section 23011(c)(4)(C), which directs the Secretary to include in the Report to Congress "a determination as to whether the Secretary intends to develop performance requirements for side underride guards, including any analysis that led to that determination."

That determination is the step that triggers the Secretary's obligation under Section 23011(c)(1)(D) to "if warranted, develop performance standards for side underride guards," resting on the feasibility, benefits, and costs the Secretary was directed to evaluate under Section 23011(c)(1)(B). The word "warranted" does not appear in the Report. The Report was also submitted to Congress eight months past the statutory deadline and omitted the summary of public comments required by Section 23011(c)(4)(B). Each of these failures followed from the CBA Report's flawed findings.

The CBA Report is also the sole analytical basis for the ongoing action at RIN 2127-AM54, which NHTSA continues to classify as economically significant in the 2026 Unified Agenda.

The CBA Report substantially underestimates the benefits of side underride guards. The Insurance Institute for Highway Safety (IIHS 2023) stated that "NHTSA's analysis suffered from several fundamental flaws that caused it to underestimate the benefits of side underride guards." The National Transportation Safety Board (NTSB 2023) stated that "NHTSA's cost-benefit analysis for side underride guards described in the ANPRM took a narrow focus, which led to an underestimation of the potential benefits." The National Association of Mutual Insurance Companies (NAMIC 2023) urged NHTSA to perform a more thorough analysis. Elisa Braver, an epidemiologist who has published peer-reviewed studies of truck underride incidence, submitted a comment concurring that the analysis underestimates the benefits and calling for revision by professionals independent of the staff who produced it (Braver 2023). Independent peer-reviewed work reached the opposite conclusion: Hein (2026) found net benefits positive under all modeled scenarios, marking the CBA Report as an outlier from data truncation issues (not considering VRUs, eliminating crashes with greater than 2 vehicles, ignoring demonstrated 50 mph effectiveness from multiple studies of side guards, including NHTSA's research).

NHTSA applied these restrictions together, and each one narrowed the target population further, before the underreporting factor was applied and before a single vulnerable road user was counted (IIHS 2023). Table 10 gives NHTSA's numbers: 212 annual front-to-side LPV occupant fatalities in FARS, cut to 50 by the side underride filter, then cut to 19.9 percent by the 40-mph

cutoff, then multiplied by the underreporting factor to reach 17.7 (National Center for Statistics and Analysis 2023, Table 10). Each narrowing lowered the estimated benefits, and none was disclosed or justified.

I request the correction of the following information:

1. The CBA Report Did Not Establish a No-Action Baseline

Circular A-4 requires agencies to define benefits and costs against a clearly stated No-Action baseline identifying what the world will look like if the rule is not adopted (OMB 2003, 2023). The CBA Report did not estimate a baseline identifying the current annual societal cost of side underride fatalities and serious injuries. Without it, a reader is likely to conclude wrongly that the No-Action alternative is cost-neutral.

NHTSA inconsistently applies the requirement to develop a baseline for cost benefit analyses. I raised this deficiency in both my July 20, 2023 ANPRM comment and my June 5, 2023 Circular A-4 comment to the OIRA Administrator. The NHTSA (2024) Report to Congress, which relied on the CBA Report, did not report a No-Action baseline, so it gave Congress a misleading account of the regulatory choice. NHTSA applied a proper No-Action baseline in its concurrent AEB rulemaking (NHTSA 2023b, 2023c), making the omission here inconsistent and arbitrary under the DOT Guidelines' objectivity requirements. In that rulemaking, NHTSA stated: “In order to determine the benefits and costs of this rulemaking, NHTSA developed a baseline, which reflects how the world would look in the absence of regulation.” (NHTSA 2023b). No equivalent baseline appears anywhere in the CBA Report, the ANPRM, or NHTSA (2024) Report to Congress. The AEB rulemaking and the side underride ANPRM were published within weeks of each other by the same agency. NHTSA knew how to construct a No-Action baseline. It chose not to.

The CBA Report’s data support estimating a No-Action baseline. Table 10 shows 50 annual LPV occupant fatalities in LPV-CT side underride crashes in FARS; applying the CBA’s 78 percent underreporting factor yields approximately 89 fatalities per year, and that figure covers only crashes at or below 40 mph, the subset NHTSA chose to analyze. NHTSA acknowledged in the ANPRM that side underride occurs predominantly above 40 mph, so the corrected toll at all speeds is substantially higher. Table 11 shows 230 serious injuries annually; the same factor yields approximately 410 per year, again limited to the sub-40-mph population. NHTSA stated neither figure as a cost of inaction. It stated only what could be prevented, 17.2 fatalities and 69.1 serious injuries, which is the prevention estimate, not the baseline.

Presenting prevention without the baseline it is drawn from makes the No-Action alternative appear cost-neutral. It is not, and the CBA Report’s data contradict it. Independent peer-reviewed work reaches the same conclusion. Hein (2026) estimated the full-population No-Action baseline at 300 fatalities and 400 serious injuries annually, with an estimated baseline societal cost of $7.4 billion, an estimate consistent in order of magnitude with what the CBA Report’s Tables 10 and 11 imply when the underreporting factor is applied to the full fatality population rather than the sub-40-mph subset. Ponder (2020) also raised the issue. Still, the deficiency does not depend on other outside estimates. It is established by the data in the CBA Report.

2. The CBA Report Excluded Pedestrian, Bicyclist, and Motorcyclist Fatalities That Could be Prevented

The CBA Report excluded any benefit estimates from pedestrian, bicyclist, and motorcyclist fatalities and serious injuries in side crashes with large trucks and trailers. Neither the CBA Report nor the ANPRM disclosed the exclusion, explained it, or acknowledged that a known population was being omitted. The ANPRM mentioned lateral protection devices only in passing, and only to distinguish them from side underride guards, without counting any benefit to those road users.

It was not until the NHTSA (2024) Report to Congress, after IIHS, NTSB, the League of American Bicyclists, and others demanded inclusion of VRU fatalities, that NHTSA offered a rationale: that side underride guards have higher ground clearance than lateral protection devices and may not be effective for pedestrians and bicyclists. This rationale conflicts with published research.

NHTSA was on notice well before the CBA Report that VRUs die in these crashes and that side guards could reduce those deaths. A Volpe Center technical overview defines vulnerable road users to include pedestrians, bicyclists, and motorcyclists, and describes lateral protective devices as designed to keep all three from being run under a truck's wheels in a side impact (Volpe 2021; see also Badgley et al. 2019).

International standards were written for this purpose: Brazil imposes the highest strength requirement of any identified regulation, 5 kN, specifically to protect motorcyclists, and Peru and Mexico City mandate side guards to protect motorcyclists, pedestrians, and cyclists. The engineering principle is the same for vehicles and VRUs: a barrier along the side of semitrailer blocks the undercarriage and keeps people away from the rear wheels. The Volpe study (Badgley et al. 2019) NHTSA reviewed summarizes research directly on point: a fatal-crash analysis of more than 300 cases estimated that side guards would have prevented fatal injuries to over 15 percent of the bicyclists, motorcyclists, and pedestrians killed (Riley, et al. 1981), and a 1986 crash-test study found a mitigating effect in 35 percent of motorcyclist and bicyclist cases (Hogstrom and Swensson 1986).

NHTSA reviewed and knew all of this and excluded VRUs without a word.

A Volpe analysis found 1,746 pedestrians and bicyclists killed in impacts with large trucks over five years, 32 percent from an initial impact with the side (Epstein 2022a). As early as the 1970s the NTSB urged NHTSA to consider side underride protection, and its 2013 safety study recommended that NHTSA develop side underride performance standards (NTSB SS-13/01, recommendations H-13-13 and H-13-14). In 2014 the NTSB recommended that NHTSA require side underride protection systems on newly manufactured trailers and truck tractors (NTSB 2014, Safety Recommendations H-14-2 and H-14-3). Although the agency wrote those recommendations to prevent underride by passenger vehicles, the NTSB later stated that such systems "also have the potential to mitigate the severity of truck side impacts with pedestrians, bicyclists, or motorcycles" (NTSB 2019).

In its June 2023 comment on this docket, the NTSB reminded NHTSA that motorcyclists, cyclists, and pedestrians are victims of side underride and faulted it for not considering benefits to those road users (NTSB 2023). NHTSA recognizes the NTSB as experts, yet remained silent on their earlier recommendations that side underride protection can reduce motorcyclist and other vulnerable road user deaths.

NHTSA also reviewed the Volpe study "Truck Side Guards to Reduce Vulnerable Road User Fatalities" before publication, as the FMCSA denial of the IIHS IQA request confirmed (Badgley et al. 2019). NHTSA knew VRUs were dying in these crashes, reviewed federal studies documenting that those deaths were preventable (Volpe 2021; Badgley et al. 2019), and said nothing in either the CBA Report or the ANPRM.

FMCSA gave several reasons for the exclusion: the statutory scope, the width of U.S. roads, where VRUs are first struck, and the ground clearance of the guards. Each one fails. In its April 2025 denial of the IIHS request for correction, FMCSA defended the omission of vulnerable road user benefits on the ground that the enabling mandate in Section 23011(c) of the IIJA directed the Secretary to assess side underride guards for crashes in which a trailer intrudes into the passenger compartment of a passenger motor vehicle, and that NHTSA has no information indicating the guards it evaluated would mitigate VRU fatalities (FMCSA 2025). Neither point answers the objectivity defect.

The statutory mandate does not set the objectivity obligation. Once NHTSA published a document titled and presented as the cost-benefit analysis of side underride guards (NCSA 2023), and put it to use as the sole analytical basis for an economically significant regulatory action and a Report to Congress (NHTSA 2024), the DOT Guidelines require that the disseminated analysis be objective and not understate the benefits. The statute governing safety standards is not narrowed by the IIJA framing (49 U.S.C. 30111(b)(1)). NHTSA cannot ignore known benefits. FMCSA's second claim, that NHTSA has no information the guards would help VRUs, is the ground-clearance argument restated. The record disproves it, as shown below.

FMCSA also defended the exclusion by discounting the foreign effectiveness studies, asserting that U.S. roadways are wider than the narrow UK roads where bicyclists and trucks share the road without a shoulder (FMCSA 2025). The claim confuses two things. Width bears on exposure, how often a truck and a vulnerable road user come into conflict. It does not bear on effectiveness, whether a barrier along the lower side of a trailer keeps a body out of the wheels once a side impact occurs. The physics of the guard and skirt do not change with lane width.

The premise also compares the wrong roads. The narrow UK road FMCSA invokes is the standard single carriageway, 6 metres for two lanes, which does not carry high-speed truck traffic. The UK high-speed network is its motorways, built at 7.3 metres for two lanes, the same as U.S. Interstate travel lanes, both designed around the tractor-semitrailer that produces side underride (Highways England 2020; Federal Highway Administration 2026). FMCSA compared a U.S. Interstate against a UK rural road and called the difference a width gap.

The shoulder premise is worse. The Interstate pairs its lanes with a 10-foot paved right shoulder (Federal Highway Administration 2026), and that shoulder is the lane in which a cyclist rides directly alongside a passing semitrailer, at the exact position where a guard and skirt would

intervene. FMCSA supplied no data for its width claim, compared the wrong roads, and used it to set aside effectiveness evidence that has nothing to do with width.

FMCSA advanced a further reason to discount the VRU population, that the Volpe cost-benefit analysis overstated the benefits by counting pedestrians and bicyclists struck at the cab and front of the truck, where no side device is present (Badgley et al. 2019; FMCSA 2025). The implication is that front impacts dominate, so a side device addresses little. The record FMCSA relied on does not support that implication. A Transport Canada study prepared by NRC and posted by Volpe drew the U.S. distribution from FARS for 2005 through 2007 and reported initial point of impact for heavy truck collisions with vulnerable road users (Patten and Tabra 2010). For bicyclists, the front was the initial point of impact in 48.5 percent of fatalities, the right side in 22.5 percent, the left side in 7.7 percent, and the rear in 10.7 percent. Volpe (2021) also reported that of the 75 fatal bicyclist crashes per year with trucks, approximately 50 percent were side impacts. These are not a marginal share. This is not a negligible target population.

The deeper error is that initial point of impact does not measure the population a side guard and skirt can protect. The fatal mechanism FMCSA concedes, being run over by the rear wheels, occurs after first contact, and it does not require that first contact be on the side. A vulnerable road user knocked down or drawn in after a glancing or forward contact can still be carried into the rear wheels, the exact zone a low continuous barrier closes. The point of the barrier is to keep the body from passing under the trailer and reaching the rear tires, whatever part of the truck the person first touched. FMCSA treated a first-contact statistic as if it were an effectiveness ceiling. It is not. The same Transport Canada report records the effectiveness evidence directly: in the specific side-impact geometry the devices are built for, UK before-and-after data showed a 61 percent reduction in fatally injured bicyclists after side guards were introduced (Patten and Tabra 2010). NHTSA should not adopt the front-impact framing to shrink the VRU population, because the statistic it rests on does not describe the population a guard and skirt reach.

The ground-clearance rationale also does not address integrated configurations combining a side underride guard with an aerodynamic side skirt, which closes the very gap NHTSA cites as the reason guards may not protect VRUs. The NTSB made the same point, noting that aerodynamic side skirts can prevent vulnerable road users from being trapped along the open sides of trailers (NTSB 2023). Volpe (2021) made the same point. This is not hypothetical: Utility Trailer Manufacturing Company, a major U.S. semitrailer manufacturer, already produces a modified aerodynamic side skirt that functions as a VRU guard to meet a regulatory requirement in Mexico, and integrates its side underride guard with its aerodynamic skirt in its U.S. product offering (Advisory Committee on Underride Protection 2024; Hightman 2024). These data were available prior to the CBA Report. That manufacturer represents in its published product literature that the guard is compatible with, and fits, its aerodynamic side skirts, and that the guard prevented underride injury to an instrumented dummy in a 35 mph perpendicular crash test into a fully loaded trailer (Utility Trailer Manufacturing Company 2022a, 2022b, 2022c; NOTE: this research was conducted prior to the CBA Report).

A guard and a skirt are not mutually exclusive. Lateral protection devices have been required to protect VRUs, including motorcyclists, since the 1980s in the European Union and Japan, and more recently in China, Brazil, and Peru (Badgley et al. 2019). The CBA Report and ANPRM evaluated guards and skirts separately and analyzed their fuel economy effects in combination,

but never analyzed whether the integrated configuration would reduce the ground-clearance concern NHTSA later used to exclude VRUs.

The physical mechanism is straightforward, and it is the reason the two functions can be combined rather than traded off. A side underride guard designed to stop a passenger vehicle has a high ground clearance, on the order of 22 to 27 inches, which leaves an open gap along the lower side of the trailer through which a pedestrian, bicyclist, or motorcyclist can be swept under the wheels. An aerodynamic side skirt sits far lower, on the order of 6 inches of ground clearance, and closes that gap. Attaching a skirt to the rigid guard uses each structure for what it does. The guard supplies the strength and rigidity that stop a passenger vehicle from underriding the trailer. The skirt supplies the low, continuous surface that keeps a vulnerable road user from being swept or driven beneath it. The flexibility of the skirt (e.g., see Utility Trailer Manufacturing Company 2023) allows the low edge to deflect rather than bottom out on the road surface, on grade changes, at loading docks, and over uneven pavement, so a 6-inch clearance is workable in service where a rigid structure at that height would not be.

The result is one integrated device that answers both crash types NHTSA and FMCSA describe as distinct: a rigid barrier at height for passenger vehicle underride, and a low flexible barrier near the road for vulnerable road users. The distinction FMCSA drew, that guards to protect passenger vehicles must be strong and rigid with high ground clearance while devices to protect vulnerable road users are lighter and lower, is a description of two separate devices mounted alone. It is not a limit on what a combined guard and skirt can do.

NHTSA raised ground clearance only as a potential cost and never evaluated it. It used clearance to drop the Fortier design, and assumed clearance imposed no access limits on any other trailer. Evidence available at the time shows clearance is not a barrier (e.g., Ponder 2020, 2023). Utility Trailer Manufacturing Company sells a side impact guard with a maximum effective ground clearance of 27 inches (Utility Trailer Manufacturing Company 2023), mounted above flexible aerodynamic side skirts that absorb high-centering (Utility Trailer Manufacturing Company 2022b). NHTSA never analyzed this guard-and-skirt configuration.

The data to answer that already existed, and NHTSA had it. The Volpe overview stated that Canada had evaluated aerodynamic side skirts for VRU safety and that certain skirts "may provide comparable protection" to dedicated lateral protective devices (Badgley et al. 2019; see also Volpe 2021). The underlying 2012 National Research Council of Canada report tested three commercial side skirt designs in perpendicular bicycle impacts; all three stopped a loaded bicycle from going under the trailer (Patten et al. 2012). That report predated the CBA Report by eleven years. An agency that documented skirts may protect VRUs as effectively as dedicated guards cannot call that effectiveness too speculative to estimate.

3. The CBA Report Ignored NHTSA's Manufacturer Survey and Inflated the Semitrailer Population

In December 2021, NHTSA sent information requests to the eight semitrailer manufacturers it identified as representing nearly 100 percent of the subject vehicle population: Great Dane, Hyundai Translead, Kentucky Trailer, Stoughton, Strick Trailers, Utility Trailer Manufacturing, Vanguard, and Wabash (NHTSA 2022b). Each manufacturer responded with information on side underride guard testing and development. The CBA Report and the ANPRM do not mention the

survey or any of the responses. NHTSA gathered the best available information directly from the manufacturers and then left it out of the analysis. NHTSA used the manufacturers' responses to estimate that 2.45 million semitrailers would be subject to a side underride guard requirement, with roughly 245,000 produced each year, a figure close to the three-year industry average of about 211,000. The CBA Report did not use either estimate. It used an annual figure of 260,000, derived by applying a 70 percent in-scope share to Bureau of Transportation Statistics manufacturing data for 2015 through 2018 and growing the result to 2022, and did not use the current production data NHTSA had collected in its manufacturer survey. Annual production is the cohort the analysis spreads guard costs across, so inflating it increased total cost and drives net benefits downward. NHTSA solicited this information directly from the industry, received it, and chose to leave it out and used outdated numbers instead.

To correct this, NHTSA must use the production and fleet figures from its 2021 manufacturer survey.

4. The CBA Report Excluded Crashes Involving More Than Two Vehicles

The CBA Report restricted its entire analysis to two-vehicle crashes. Side underride fatalities are not confined to two-vehicle crashes. In the Large Truck Crash Causation Study, of the 73 cases in which the most severe injury to a passenger vehicle occupant was due to side underride, roughly one quarter (n=18) involved more than two vehicles (Brumbelow 2012). IIHS cited the same finding in urging NHTSA to abandon the two-vehicle limit (IIHS 2023). The restriction is implemented in FARS through the VE_FORMS variable, set to two. The CBA Report applied this filter but did not disclose it. NHTSA offered no rationale for removing multi-vehicle side underrides from the target population, and a reviewer working from the CBA Report cannot identify the size of the excluded population without reconstructing the filter.

A side underride guard prevents a passenger vehicle from sliding beneath a trailer whether or not another vehicle is also involved in the crash. Documented cases illustrate both failures at once. In a 2016 fatal crash in Lake County, Florida, a passenger vehicle underrode the side of a combination trailer in a collision involving more than two vehicles, and FARS recorded it as no underride (FARS Case 122375; Safety Research and Strategies 2023). Ponder (2023) also provides examples. A visible underride coded as none is exactly the failure that Braver (2023), IIHS (2023), and Ponder (2023) identify when they call for photograph-based identification of underride. The two-vehicle restriction excluded the crash, and the coding would not have identified it as underride in any event. NHTSA must account for side underride fatalities involving more than two vehicles in its benefit estimates.

The two-vehicle restriction is not the only undisclosed narrowing of the population. NHTSA defined truck-side impacts using the 2, 3, 4, 8, 9, and 10 o'clock positions, and coded the 1 and 11 o'clock positions as front impacts and the 5 and 7 o'clock positions as rear impacts, excluding them. For a tractor-trailer, those positions are side impacts. IIHS and others have long noted that the clock definitions valid for passenger cars do not hold for large trucks (IIHS 2023; Brumbelow 2012; Blower et al. 2001). IIHS reports that including the 1, 11, 5, and 7 o'clock positions raises the count of passenger vehicle occupant fatalities by about 50 percent across 2017 to 2021 (IIHS 2023). NHTSA did not disclose the clock-position restriction as a limit on the target population or acknowledge that its definition understates the relevant fatalities. To

correct this, NHTSA must include side impacts coded at the 1, 11, 5, and 7 o'clock positions in the target population.

5. The CBA Report Excluded All Crashes Above 40 MPH

In the CBA Report, NHTSA also excluded from its benefit estimates all crashes occurring at impact speeds above 40 mph. NHTSA's technical review of the 184 PCR cases found only 19.9 percent of side underride fatalities at impact speeds of 40 mph or less, so NHTSA excluded roughly 80 percent of the fatality population from the benefit calculation (NHTSA 2024, footnote 8). NHTSA justified this exclusion by claiming in the CBA Report that it had no information on guard effectiveness above 40 mph and that any estimated benefits above that threshold would be "purely speculative."

The size of that exclusion is fixed by the formula in the CBA Report. NHTSA built its target population by multiplying the annual side underride fatalities (50) by the share at or below 40 mph (19.9 percent) by the underreporting factor (1.78), reaching 17.7 fatalities per year (CBA Report, Table 10). The 40-mph cutoff is the 19.9 percent term. Remove only that term, hold the fatality count and the underreporting factor as NHTSA set them, and the target population is 89 fatalities per year. The cutoff alone removes roughly 71 fatalities per year from the population the CBA Report counts. By the 4.6-to-1 ratio of serious injuries to fatalities the CBA Report uses, it removes roughly 328 serious injuries per year.

This is a statement about the population NHTSA excluded, not about effectiveness above 40 mph. Whether a guard would have prevented those fatalities is a separate question, addressed below.

The formula also shows how many of the excluded fatalities fall within the range where side guards are tested to perform. NHTSA built the 17.7 figure on the share of side underride fatalities at impact speeds of 40 mph or below (19.9 percent). The PCR review reported a second share at a higher threshold: 35 percent of side underrides occurred at travel speeds of 50 mph or below (CBA Report, page 42). Substituting that share into the same formula, the target population at a 50-mph limit is at least 31 fatalities per year, not 17.7, and at least 142 serious injuries per year, not 81. The difference, roughly 13 additional fatalities and 61 additional serious injuries each year, is the population in the 40-to-50 mph range that NHTSA excluded.

That figure understates the excluded population. The 35 percent share is measured against travel speed, and impact speed is lower than travel speed once braking and pre-impact maneuvers are accounted for. The true share of fatalities at impact speeds of 50 mph or below is therefore higher than 35 percent. Fifty mph is the relevant speed because guard protection has been repeatedly demonstrated to that point, as NHTSA knows and is described below.

The 50-mph re-anchoring uses travel speed, which is not the measure by which guard effectiveness is tested. Side guard effectiveness is a function of delta-V, the change in velocity at impact, not the speed a vehicle was traveling before the crash. The Insurance Institute for Highway Safety matched fatal side underride crashes in FARS to recorded event data recorder delta-V. It found no correlation between posted speed limit and delta-V. In 89 percent of cases the recorded delta-V was lower than the police-reported travel speed (IIHS 2023). Measured by delta-V, 63 percent of side underride fatalities occurred at or below 40 mph, not the 19.9 percent NHTSA derived from travel speed and posted speed limit. Substituting that share into the

formula, the target population is at least 56 fatalities per year, not 17.7, and at least 256 serious injuries per year, not 81.

The 63 percent share is also conservative. It stops at a 40-mph delta-V, below the 50-mph range to which guard protection is demonstrated, and IIHS notes the true share is likely higher because the matched crashes carry more energy than a typical angled side underride (see also Ponder 2023). Correcting only the measure of crash severity, and changing nothing else, more than triples the population NHTSA counted.

The NTSB said the same. In its June 2023 comment on this docket, it noted that because side underride guards were nearly 100 percent effective at 40 mph, they would likely be at least partially effective at higher speeds, and it faulted the CBA Report for assuming no effectiveness above that threshold (NTSB 2023). Ponder (2023) also identified that “The assumption of complete side guard failure beginning at 41 mph does not reflect the results of the IIHS testing which showed dummy injury criteria well below the serious injury thresholds.”

NHTSA's 2018 computer modeling report concluded that the simulated side underride protection device "successfully prevented" a vehicle from wedging under a tractor-trailer at 50 mph. The same report found that at oblique impact angles higher speeds are more survivable, because energy is redirected rather than absorbed, so a flat 40 mph cutoff understates protection in the most commonly observed crash geometry.

The CBA Report's PCR review of all 184 fatal crashes in the 2017 FARS data coded impact angle for each case, alongside impact speed, pre-collision maneuver, and whether a side guard would have prevented the fatality. The CBA Report collected the angle data and made no use of it, applying a binary 40 mph cutoff with no angle variable and no acknowledgment that the oblique-angle physics in the NHTSA (2018) modeling would extend the protective range above that threshold for most observed geometries.

Perry Ponder of Seven Hills Engineering conducted a crash test on April 20, 2018, documenting guard effectiveness at 47.2 mph; that test was publicly available (Ponder 2018, 2023). Independent finite-element simulations modeled passenger-car side underride at 50 mph and found that guards reduced compartment intrusion and occupant injury at that speed, including at oblique impact angles (Moradi 2011, 2012; Bodapati 2006), consistent with the protective effect documented up to 50 mph in other work (Galipeau-Belair 2014; Mattos et al. 2021).

This body of evidence was not newly available in April 2023. Bodapati (2006) and Mattos et al. (2021) were both cited in my September 14, 2021 defect petition to NHTSA, placed in the federal record nearly two years before the ANPRM was published. Mattos et al. (2021) in turn cited Moradi (2011) on side underride guard effectiveness at higher speeds, placing that work in the federal record through the petition as well. Galipeau-Belair (2014) was cited by name on page 1 of NHTSA (2018), the report NHTSA commissioned, published, and cited in the CBA Report.

The CBA Report ignored these studies and did not discuss guard effectiveness above 40 mph, acknowledging only in general terms that benefits could increase if side guards had protective effect above that threshold. Yet NHTSA acknowledged in the ANPRM that "side underride occurs predominantly at impact speeds above 40 mph" and that "protective effects above 40 mph could generate a large incremental improvement above the safety benefits estimated in this

analysis." It then excluded precisely that population by claiming an absence of data it had possessed for years and collected in its PCR review.

This is not an oversight or a gap in the record. NHTSA had the data, collected the data, and chose not to use it. The CBA Report cited NHTSA (2018) in its introduction as one of the studies NHTSA and other agencies had conducted on underride crashes (CBA Report, page 17). NHTSA (2018) states on its first page of research: "Past studies have looked at designing SUPDs for 90-degree impacts with passenger cars at speeds up to 50 mph (Bodapati 2006; Galipeau-Belair 2014)."

The CBA Report then set a 40-mph benefit cutoff and claimed no data existed on guard effectiveness above that threshold, a statement directly contradicted by the opening paragraph of NHTSA's commissioned research. NHTSA knew. It said otherwise.

6. The CBA Report Applied an Outdated Value of a Statistical Life

The CBA Report also applied an outdated Value of a Statistical Life. Published in March 2023, it used the 2020 VSL of $11.6 million, though DOT guidance requires the VSL for the analysis base year. DOT publishes the schedule annually, and by March 2023 it already listed higher values for 2021 ($11.8 million) and 2022 ($12.5 million). NHTSA did not disclose or justify the choice to use an outdated VSL (U.S. Department of Transportation 2025). The gap has only widened since the current 2025 base-year VSL is $14.2 million, so every year the CBA Report remains uncorrected the figure it used falls further below the value DOT guidance requires. This choice, like the VRU exclusion and the speed cutoff, contributed to the finding that costs outweigh benefits.

7. The CBA Report Was Not Subjected to Peer Review

Under OMB's Final Information Quality Bulletin for Peer Review (70 FR 2664, January 14, 2005), influential scientific information disseminated in support of regulatory action is subject to independent peer review before dissemination, by qualified experts outside the agency who have no stake in its conclusions. The obligation attaches to the information and its impact, not to the stage of the regulatory action. An advance notice is not exempt. Review by an agency's own staff, managers, or executives is not peer review, no matter what it is called.

NHTSA knows this obligation applies at the proposal stage, because it has met it there. For the crash data study supporting the electronic stability control standard, FMVSS No. 126, NHTSA determined the analysis was highly influential scientific information under the Bulletin and had it peer reviewed under Sections II and III before relying on it (NHTSA 2007, DOT HS 810 794). Two outside experts reviewed the draft, their comments went into the docket, and their recommendations changed the analysis. That study came from the same office as the CBA Report, the National Center for Statistics and Analysis, and estimated a target population and effectiveness rate from the same crash databases. The CBA Report carried a larger annual impact, between $970 million and $1.2 billion, and received no external peer review.

NHTSA relied on the CBA Report in the ANPRM, the Report to Congress, and RIN 2127-AM54 without independent peer review, describing it only as having undergone internal "rigorous review and vetting." Having administered peer review for regulatory documents at the U.S. Fish and Wildlife Service, I can say the distinction between that and independent external review is well established in federal practice. FMCSA blurred the same line in April 2025, denying an

IQA request from the Insurance Institute for Highway Safety on the ground that the underlying Volpe Report had been "peer reviewed by multiple Agency subject-matter-experts, managers and executives" (FMCSA 2025). That is agency vetting, not the independent review the Bulletin requires. Labeling it peer review does not make it so.

Neither the CBA Report, the ANPRM, nor the public docket contains a peer review plan, reviewer identities, reviewer comments, or agency responses to reviewer comments, the four things the Bulletin requires for influential scientific information. NHTSA did neither the review nor the certification explaining why one was not required.

8. The Underlying Data Were Not Made Publicly Available

The DOT Guidelines require that influential information be transparent, with the data and methods underlying a regulatory analysis available for independent verification. The CBA Report references an internal NHTSA study that formed part of its analytical foundation but was never released to the public or placed in the docket:

> (1) A February 2020 NHTSA State Data Reporting System Division special review of FARS cases identified as possible underride or override cases, conducted as part of an evaluation of vehicle underride and associated fatalities in light vehicle crashes into the side of truck trailers (CBA Report, page B-2).

I requested this report before submitting my July 2023 ANPRM comment and had not received it. The continued absence from the docket prevents independent review and verification of the CBA Report's core analytical assumptions, including the underreporting multiplication factor of 1.78. This failure is inconsistent with NHTSA's 2015 DOT Public Access Plan, which requires that underlying data be publicly available. I also raised data availability as a specific recommended requirement in my June 5, 2023 Circular A-4 comment to the OIRA Administrator.

The transparency defect extends beyond these this study to the analysis itself. The CBA Report states that its selection of side underride crashes was drawn from 2017 FARS data, but it does not publish the operational definition used to produce that selection: the specific data elements, value codes, and query logic, or the SAS or R code that generated the case counts. The CBA Report is not sufficient to reproduce the reported figures. A reviewer working from the public FARS file and the published methodology cannot arrive at the case counts the CBA reports without guessing among many plausible filter definitions, and cannot confirm which definition the agency actually applied. Circular A-4 (OMB 2023) requires that results be reproducible by a qualified third party (Section E.3.a), and the peer review bulletin and DOT Guidelines require that the methods underlying an influential analysis be disclosed.

A related problem concerns the version of FARS the CBA Report relied upon. The FARS 2017 underride coding was publicly corrected in December 2020, based on the February 2020 review the CBA Report describes in Appendix B, which states that the review served as the final guidance for a 2017 FARS file correction. That correction has been in the public FARS file for more than two years before the CBA Report was published in March 2023. The underride figures the CBA Report attributes to FARS cannot be reconciled against the corrected public file, which codes substantially more side underrides in the relevant crash population than the figures the

CBA reports. Under Circular A-4 (OMB 2023), the corrected file was the best reasonably obtainable version of the primary data source, and it was the version NHTSA had published.

The undercount is not limited to that single correction. I audited the FARS coding against ground truth for a set of independently verified fatal side underride crashes and submitted the study with my July 20, 2023 ANPRM comment (Hein 2023a). Of 40 verified fatal side underride crashes, a FARS record was located for 39, and the underride data element was miscoded or the record was missing for 17 of the 40 crashes and 28 of the 61 associated fatalities. On the passenger vehicle record, 16 of 39 crashes (41 percent) were coded as no underride. Padmanaban (2013) similarly found side underride crashes underreported and developed a correction factor. The verified records the CBA Report relied on therefore undercount side underride at a measured rate, not as a matter of estimate.

NHTSA also departed from its established practice for correcting known FARS undercounts. Missing blood alcohol concentration is a known gap in FARS, and NHTSA corrects it with multiple imputation, estimating ten values for each missing case and revising historical estimates back to 1982 (NHTSA 2002, DOT HS 809 403). Underride is also a known undercount, but for it NHTSA applied a single multiplier of 1.78, drawn from a review of police crash reports that had no photographs, the documentation the record shows is necessary to identify underride. A factor derived from reports that cannot reliably identify underride is itself an undercount. It is the single most consequential parameter in the benefit estimate, and NHTSA built it from the weakest available method while using a rigorous one for a comparable gap in the same database.

The undercount had a documented cause in the FARS coding manual at the time. Under the 2020 FARS/CRSS Coding and Validation Manual, the manual governing the 2017 data the CBA Report used, two vehicles could not be coded as underride and override in the same collision, and the truck or trailer record was coded as no underride by rule (NHTSA 2022a). In the audit, the truck or trailer record was coded as no underride in 37 of 39 crashes (95 percent). NHTSA has since replaced that element. The 2021 FARS/CRSS Coding and Validation Manual retired the old data element and introduced a per-vehicle VEHICLE UNDERRIDE/OVERRIDE element, assessed for each vehicle in every vehicle-to-vehicle collision and coding the underriding vehicle as underride and the other as override, an element NHTSA states is intended to support rulemaking activities (NHTSA 2023a). The MMUCC Sixth Edition carries a matching element aligned to FARS. That change is prospective. It does not correct the 2017 records, and NHTSA's retention schedule does not provide for correcting them. The CBA Report was published in March 2023, after NHTSA had recognized the defect and revised the manual to support rulemaking, and it relied on data collected under the rule that guaranteed the undercount, without adjusting for it.

9. The CBA Report Misrepresented the Side Underride Guards Available and Crash Testing

NHTSA’s representation that “only one third-party-tested side underride guard system is known to be available” (National Center for Statistics and Analysis 2023) is false. NHTSA cannot blame a lack of information. On January 10, 2022, Utility Trailer Manufacturing Company (2022a) responded to a NHTSA Information Request in a side underride guard defect petition (Docket DP21-004). That response described a side-impact guard Utility had crash-tested at 35 mph in both center and 30-percent overlap configurations on fully loaded trailers, in each case without passenger-compartment intrusion. Utility offered NHTSA the test data. Utility was

selling the guard as an orderable option no later than 2021 (Utility Trailer Manufacturing Company 2022b, 2022c). Yet when the April 2023 CBA Report was published, NHTSA said nothing about the Utility guard, its crash tests, or its availability. In fact, NHTSA was provided these data prior to the CBA Report and then chose to ignore them (Utility Trailer Manufacturing Company 2022a).

Stoughton also responded to a NHTSA Information Request in a side underride guard defect petition and included side impact guard test documentation, among it a 35 mph dynamic crash test conducted at an accredited laboratory and evaluated against passenger-compartment intrusion (Stoughton 2022). The Stoughton crash-test document was reported to NHTSA in the DP21-004 response and states the test was conducted and evaluated against passenger-compartment intrusion; the pass or fail result is redacted in the public copy, so this request does not assert the outcome, only that the test was performed and disclosed to the agency.

The CBA Report discussed a Wabash National prototype and even drew on Wabash weight data in the analysis, but left out that Wabash had crash-tested the prototype successfully at 35 mph, a result reported in the trade press and cited to NHTSA in the September 14, 2021 defect petition that opened DP21-004 (Wilson 2017).

Another surveyed manufacturer, Hyundai Translead, disclosed in its January 7, 2022 DP21-004 response that it was developing a prototype side underride guard scheduled for completion in the second quarter of 2022, supported by engineering calculations, Finite Element Analysis reports, and a concept bill of materials, with static and possibly dynamic testing scheduled for later that year (Hyundai Translead 2022).

Leaving out these guards omits relevant data from the analysis. It makes side underride protection look less ready than it is. The Utility and Wabash guards are not the only omissions. SafetySkirt, a side underride guard developed by Aaron Kiefer of Collision Safety Consulting, was crash-tested against passenger-compartment intrusion years before the CBA Report. In a June 2, 2018 test it stopped a passenger vehicle with no passenger-compartment intrusion at a 35 mph delta-V, with the event data recorder report published (AnnaLeah & Mary 2018). It was crash-tested again in 2019, and that test was covered by independent news media (WUSA9 2019). The product predated the March 2023 CBA Report by nearly five years and was marketed as an available side underride guard. NHTSA was on notice of it: the agency named SafetySkirt in the DP21-004 manufacturer survey, directing a responding manufacturer to the product website for assessment (Hyundai Translead 2022).

10. The CBA Report Omitted a Draft TTMA Recommended Practice NHTSA Solicited and Received

NHTSA solicited technical information from trailer manufacturers through its information request for the side underride guard defect petition (Docket DP21-004). In response, manufacturers submitted a draft Truck Trailer Manufacturers Association Recommended Practice for side impact guards, titled "Side Impact Guard," a 15-page document (Stoughton 2022, DP21-004). TTMA developed the draft, using Insurance Institute for Highway Safety crash test data, to set guidelines for the design, testing, and performance of side guards (Strick Trailers 2022, DP21-004; TTMA 2024). Neither the CBA Report nor the ANPRM mentions this

draft Recommended Practice. The IIJA directs NHTSA to assess whether side guards are feasible. Industry had drafted a standard for them.

11. The CBA Report Relied on a 1991 Finding NHTSA Cannot Support

The CBA Report recycled a 1991 assertion the agency cannot document. In a 1991 regulatory evaluation of rear underride guards, NHTSA inserted a single sentence: “Combination truck side underride countermeasures have been determined not to be cost-effective.” No data supported it. No analysis justified it. No cost estimates accompanied it. In June 2021, I requested the 1991 evaluation and its underlying data and analysis under the Freedom of Information Act. NHTSA confirmed it holds no records supporting the claim (NHTSA 2022c). The CBA Report repeated that unsupported sentence as established fact, an unsupported claim that became a recycled justification across three decades. Disseminating a finding with no basis in the record fails the objectivity and reproducibility the DOT Guidelines require. To correct this, NHTSA must remove the 1991 “not cost-effective” claim from the CBA Report.

12. The CBA Report Fails the Analytical Standard NHTSA Represents It Met

The deficiencies identified above are not only information quality violations. They are departures from the standard NHTSA represents it met. The agency has publicly stated that it conducted the analysis "according to Circular A-4," the federal guidance on how to conduct cost-benefit analyses. It cannot claim that standard while disregarding it. A-4 requires that results be reproducible by "a qualified third party" (OMB 2003, Transparency and Reproducibility of Results), which is impossible here because two internal studies were withheld, and a reviewer cannot reproduce what the agency will not disclose.

A-4 further requires that the analysis rest on "the best reasonably obtainable" information and "rely on peer-reviewed literature, where available" (OMB 2003, Transparency and Reproducibility of Results). An analysis that excludes a category of fatalities and failed to address available peer-reviewed research reaching the opposite result does neither. A-4 also requires a "no action" baseline (OMB 2003, Developing a Baseline), which the analysis omits. These same defects violate the Information Quality Act and the DOT Information Quality Guidelines, which require that disseminated influential information be objective, useful, and reproducible. Circular A-4 does not override that obligation. Its terms direct the agency to "assure compliance with the Information Quality Guidelines" (OMB 2003, Transparency and Reproducibility of Results), so a failure to meet A-4 is a failure to meet the standard the agency was required to satisfy. NHTSA invoked A-4 as its demonstration of quality. That demonstration fails, and NHTSA cannot avoid the information quality obligation by calling A-4 mere guidance.

NHTSA has in fact already conceded one defect, stating in a written statement to WTSP (10 Investigates) on June 25, 2026, that it is "updating its cost-benefit analysis ... to also include pedestrian and bicyclist fatalities and injuries" it originally omitted. That ongoing update does not cure the defect. The flawed analysis remains disseminated and in active use, including in materials before Congress, and correction is required now, not whenever a revision may appear. These requirements are substantially the same in the 2003 Circular A-4 that governed when the analysis was prepared and the 2023 revision, so it does not matter which version applies.

13. The Deficiencies Also Reflect a Failure of the Agency's Statutory Duty to Consider All Relevant Safety Information

When NHTSA prescribes a motor vehicle safety standard, Congress requires the agency to "consider all relevant, available motor vehicle safety information" (49 U.S.C. 30111(b)(1)). That statute does not permit the agency to weigh some of the relevant evidence and ignore the rest. An analysis that excludes a category of fatalities, withholds internal studies, and does not use the best available research cannot satisfy that duty, because the agency has not weighed the information. It has removed it. The courts have enforced this obligation, faulting an agency that failed to consider an important aspect of the problem in *Motor Vehicle Manufacturers Association* v. *State Farm*, 463 U.S. 29, 43 (1983), and faulting the agency for acting without adequate study in *H & H Tire Co.* v. *DOT*, 471 F.2d 350 (7th Cir. 1972). A benefits estimate built on omitted deaths and withheld studies is the kind of analysis courts have overruled.

This Request Is Not Stale

The DOT Guidelines permit dismissal as stale only if the information has no continuing significant impact on DOT projects or policy decisions. That condition is not met. The CBA Report has three ongoing uses: it is the analytical foundation for the pending regulatory action at RIN 2127-AM54, economically significant in the 2026 Unified Agenda with comment analysis still ongoing nearly three years after the comment period closed on July 20, 2023; it was the direct basis for the NHTSA (2024) Report to Congress; and it remains the only published federal quantitative analysis of whether a side underride guard standard is cost-effective. NHTSA has stated it has no schedule to complete the action, so no corrected analysis is coming through the future rulemaking. So long as the regulatory action is open and the Report to Congress stands unrectified, the CBA Report has direct and continuing impact on agency action and congressional oversight. The request is not stale.

DOT's IQA guidelines provide that for information in an open regulatory action, the correction response will "normally be incorporated in the next document we issue in the matter," but that DOT "would consider making an earlier response" if doing so would not delay final agency action and either the delay before final action is unusually lengthy or the requestor faces a reasonable likelihood of actual harm if correction waits (DOT 2019). Both conditions are met. The delay is not ordinary lag; a correction that waits for final agency action will wait indefinitely. The No-Action baseline Circular A-4 (OMB 2023) required is Ground 1: the deaths and serious injuries the CBA Report's data clearly demonstrate, which NHTSA never stated as a cost of inaction. The harm from deferral is that this accounting of what inaction costs remains absent from the federal record, invisible to the agency, to Congress, to the public, and to the industry, while side underride crashes continue to inflict it each year. The industry has no regulatory obligation and no accurate public accounting of the cost of inaction. That is an information quality failure with a documented annual price and societal impact, and it is independent of what any corrected CBA Report would ultimately conclude about guard cost-effectiveness.

The determination under Section 23011(c)(4)(C) cannot be made on the basis of a CBA Report that this request identifies as materially deficient and that omits the No-Action baseline the underlying assessment under Section 23011(c)(1)(B) requires. Even accepting NHTSA's narrowest estimate of 17.2 preventable fatalities annually, produced by NHTSA's methodology

and published in the CBA Report, that harm continues to accrue each year the CBA Report stands uncorrected and the regulatory action remains without a schedule.

The harm from deferral is also not speculative. The CBA Report remains the only federal quantitative analysis of side underride guard cost-effectiveness, and while uncorrected it keeps shaping agency inaction: its negative net benefit conclusion informed the Report to Congress, which in turn failed to make the determination required by Section 23011(c)(4)(C). NHTSA cannot rely on an uncorrected CBA Report to avoid a statutory determination, then rely on the unresolved action to postpone correcting that CBA Report. The result is a closed loop. The analysis stays uncorrected, the congressional response stays incomplete, and preventable deaths continue each year the regulatory action stays open.

How I Am Affected by the Error

I am an affected person under the DOT Guidelines on three independent grounds. The Guidelines treat a person as affected who uses, benefits from, or is harmed by the information, and provide that information is not stale as to a requester who shows he is affected by it (DOT 2019).

First, I use NHTSA's CBA Report in my work. I authored a peer-reviewed cost-benefit analysis of side underride guard regulation (Hein 2026) that decides the same question and reaches the opposite result: net benefits positive under every scenario modeled. NHTSA's CBA Report is the only federal quantitative analysis of side underride guard cost-effectiveness. Its deficiencies reach every forum that cites the federal position. In my research, in submissions to NHTSA, FMCSA, and OIRA, and in public writing, I work against an analysis that understates the benefits and rebuild from the data what it should have stated. I also submitted a detailed ANPRM comment (Docket No. NHTSA-2023-0012) raising each deficiency in this request, so I have engaged this information in the public record.

Second, I am a board member of the Institute for Safer Trucking, a nonprofit vehicle safety organization in Washington, D.C. The organization's work depends on accurate federal analysis of side underride crashes, and the uncorrected CBA Report impairs it.

Third, I am harmed by the errors. My son Riley was killed in a side underride crash on November 13, 2015, at the age of sixteen. I use the roads as a driver, motorcyclist, pedestrian, and bicyclist, along with my family, friends, and colleagues. The risk is ongoing. Side underride crashes kills hundreds of people every year. Correcting the CBA Report would put an accurate accounting of what these crashes cost, and what protection is worth, before the agency, Congress, and the public.

Requested Corrections

I request that NHTSA:

> (1) Subject the CBA Report to independent peer review by qualified experts outside NHTSA before relying on it further, reports to Congress, or other agency actions;

(2) Release and place in the public docket the two internal NHTSA studies referenced in the CBA Report but not publicly available, to permit independent verification of the analytical assumptions;

(3) Revise the CBA Report to establish a proper No-Action baseline consistent with Circular A-4 (OMB 2023), identifying the current annual societal cost of side underride crashes;

(4) Revise the benefit estimates in the CBA Report to address (a) pedestrian, bicyclist, and motorcyclist fatalities and serious injuries consistent with available data; (b) crashes occurring at impact speeds above 40 mph consistent with NHTSA's (2018) computer modeling, independent research (Bodapati 2006, Galipeau-Belair 2014, Mattos et al. 2021, Moradi 2011, Moradi 2012, Ponder 2018, 2023) demonstrating effectiveness at speeds up to 50 mph, and the impact angle data the agency coded in its PCR review of the 184 fatal crashes in the 2017 FARS data but did not use in the effectiveness analysis; (c) side impacts coded at the 1, 11, 5, and 7 o'clock positions, which are side impacts for a tractor-trailer; (d) crashes involving more than two vehicles; and (e) the Value of a Statistical Life corresponding to the base year of any revised analysis, consistent with DOT guidance, in place of the 2020 VSL applied in the March 2023 CBA Report. The current base-year VSL is $14.2 million (2025), $2.6 million per life above the figure the CBA Report used.

(5) Revise the CBA Report to use the annual production and in-service fleet figures from NHTSA’s 2021 manufacturer survey.

(6) Remove the 1991 “not cost-effective” finding from the CBA Report.

(7) Correct the CBA Report's statement that only one third-party-tested side underride guard is available, and account for the tested guards from Utility, Stoughton, Wabash, Hyundai Translead, and SafetySkirt disclosed to NHTSA before publication.

(8) Acknowledge and address in the CBA Report the draft TTMA Recommended Practice for side impact guards that NHTSA solicited and received in Docket DP21-004.

The Department recently stated that its "rulemaking activities are based on sound economic principles and analysis supported by rigorous cost-benefit requirements and data-driven decisions. Safety will continue to be the Department's top priority" (91 FR 53028). The March 2023 side underride CBA Report excluded vulnerable road users, omitted multi-vehicle crashes, applied a 40 mph cutoff, relied on a stale value of statistical life, and never underwent peer review. It does not meet that standard.

I urge you to address each ground for correction and that this submission and NHTSA's response be placed in a public docket. If NHTSA denies this request, in whole or in part, I will submit a Request for Reconsideration to the DOT Information Quality Official under the DOT Guidelines.

Sincerely,
Eric Hein
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Literature Cited

Advisory Committee on Underride Protection. June 18, 2024. Biennial Report to Congress and the Secretary of the Advisory Committee on Underride Protection. 410 pp.

AnnaLeah & Mary. June 3, 2018. Another successful TrailerGuard System Safety Skirt crash test: No passenger compartment intrusion.

Badgley, J., Breck, A., Dawes, M., Epstein, A. K., Welty, K., McNally, A., and S. Peirce. 2019. Truck side guards and skirts to reduce vulnerable road user fatalities: Final report on net benefits and recommendations. John A. Volpe National Transportation Systems Center.

Blower, D., Krishnaswami, V., Putcha, D., and A. Svenson. 2001. Analysis of truck-light vehicle crash data for truck aggressivity reduction (SAE Technical Paper 2001-01-2726). SAE International.

Braver, E. R. July 20, 2023. Comment on Side Underride Guards; Advance Notice of Proposed Rulemaking. Docket No. NHTSA-2023-0012. National Highway Traffic Safety Administration.

Bodapati, V. K. K. 2006. Evaluation of energy absorbing pliers underride guard for rear and side of large trucks (master's degree thesis). Kansas: Wichita State University.

Brumbelow, M. 2012. Potential benefits of underride guards in large truck side crashes. Traffic Injury Prevention, 13:6, 592-599.

Epstein, A. K. 2022a. Lateral protective devices (side guards) and vulnerable road user safety [Slides]. U.S. Department of Transportation, John A. Volpe National Transportation Systems Center.

Federal Highway Administration. July 22, 2026. Interstate System. U.S. Department of Transportation.

Federal Motor Carrier Safety Administration. April 17, 2025. Response to IIHS Request for Correction under the Information Quality Act. Docket No. DOT-OST-2025-0033.

Galipeau-Belair, P. April 2014. Design and development of side underride protection devices (SUPD) for heavy vehicles. A Thesis Submitted in Partial Fulfillment of the Requirements for

the Degree of Master of Applied Science In The Faculty of Engineering and Applied Science University of Ontario Institute of Technology.

Hein, E. 2026. Cost-benefit analysis of side underride guards for new semitrailers in the United States. Journal of Progress in Safety and Security, 2.

Hein, E. August 21, 2026. Letter to Daniel Cohen, NHTSA, Assistant General Counsel for Regulation and Legislation, Re: Comment on the DOT Regulatory Agenda: the Side Underride Guard placeholder date (RIN 2127-AM54). (attached)

Hein, E. September 9, 2025. Letter to Director Boris Arratia, Regulatory Information Service Center, General Services Administration, Re: Accountability and corrective steps for NHTSA's Side Underride Guard rulemaking entry (RIN 2127-AM54, Spring 2025 Unified Agenda). (attached)

Hein, E.W. April 2023a. An Evaluation of NHTSA Side Underride Crash Reporting Accuracy in Fatality Analysis Reporting System (FARS) Case Listings. 21 pp. *Enclosure 5.*

Hein, E. 2023b. Comments on Docket No. NHTSA-2023-0012. National Highway Traffic Safety Administration.

Hein, E. June 5, 2023c. Public comment to the Office of Information and Regulatory Affairs on proposed revision of Circular A-4, Regulatory Analysis. (88 FR 20915; OMB-2022-0014). Office of Management and Budget.

Hein, E., Karth, M., Durso, L., and A. Young June 22, 2022. Meeting with NHTSA and FMCSA leadership on underride cost-benefit analysis, data integrity, and the Advisory Committee on Underride Protection. Participants from NHTSA included Jack Danielson, Ron Thaniel, and Darren Hall.

Hightman, J. April 30, 2024. NHTSA ACUP Meeting - Motions and Discussion, the Advisory Committee on Underride Protection (ACUP). [Video].

Highways England. 2020. Design Manual for Roads and Bridges, CD 109, Highway link design (Revision 1).

Hogstrom, K and L. Swensson. 1986. Accident analysis: front, side, and rear protection of trucks. International Journal of Vehicle Design, Special Issue on Vehicle Safety. As cited in Badgley et al. (2019).

Hyundai Translead. January 7, 2022. Response to December 9, 2021 request for information about Defect Petition (DP21-004). Office of Defects Investigation, National Highway Traffic Safety Administration. Docket No. DP21-004.

Insurance Institute for Highway Safety. December 19, 2024. Request for Correction of Information under the Information Quality Act. Docket No. DOT-OST-2025-0033.

Insurance Institute for Highway Safety. 2023. Comments on Side Underride Guards; Advance Notice of Proposed Rulemaking. Docket No. NHTSA-2023-0012.

Mattos, G., Friedman, K., Kiefer, A., and P. Ponder. 2021. Protecting Passenger Vehicles from Side Underride with Heavy Trucks. SAE Technical Paper 2021-01-0288, 2021.

Moradi, R.R. 2012. Impact dynamics of mechanical systems and structures, and applications in crash energy management, impulse mitigation, and impact injury biomechanics. PhD. Dissertation. Department of Mechanical Engineering, Wichita State University.

Moradi, R. R. Setpally, and H. M. Lankarani. 2011. Influence of a truck side underride guard height on cabin intrusion and occupant injury potential of a small car in car/large-truck side crashes--a preliminary study. 7th Annual Symposium on Graduate Research and Scholarly Projects. Wichita State University. pp. 35-36.

National Association of Mutual Insurance Companies. 2023. Side underride guards; Docket No. NHTSA-2023-0012.

National Center for Statistics and Analysis. March 2023. Side impact guards for combination truck-trailers: Cost-benefit analysis (Report No. DOT HS 813 404). National Highway Traffic Safety Administration.

National Highway Traffic Safety Administration. June 2024. Side Underride Protection: Report to Congress. U.S. Department of Transportation.

National Highway Traffic Safety Administration. April 21, 2023. Advance notice of proposed rulemaking; side underride guards. 88 FR 24535-24543. Docket No. NHTSA-2023-0012 RIN 2127-AM54.

National Highway Traffic Safety Administration. 2023a. 2021 FARS/CRSS coding and validation manual (Report No. DOT HS 813 426).

National Highway Traffic Safety Administration. June 13, 2023 (2023b). Automatic Emergency Braking Systems for Light Vehicles. Docket No. NHTSA-2023-0021.

National Highway Traffic Safety Administration. May 2023 (2023c). Preliminary Regulatory Impact Analysis: Federal Motor Vehicle Safety Standard No. 127; Light Vehicle Automatic Emergency Braking (AEB); AEB Test Devices.

National Highway Traffic Safety Administration. 2022a. 2020 FARS/CRSS coding and validation manual (Report No. DOT HS 813 251).

National Highway Traffic Safety Administration. 2022b. Denial of motor vehicle defect petition, DP21-004. 87 FR 39899-39901.

National Highway Traffic Safety Administration. 2022c. Response to Freedom of Information Act Request, ES21-000489.

National Highway Traffic Safety Administration. April 2018. Computer modeling and evaluation of side underride protective device designs (Report No. DOT HS 812 522).

National Highway Traffic Safety Administration. July 2007. Statistical analysis of the effectiveness of electronic stability control (ESC) systems: Final report (Report No. DOT HS 810 794).

National Highway Traffic Safety Administration. 2002. Transitioning to multiple imputation: A new method to estimate missing blood alcohol concentration (BAC) values in FARS (Report No. DOT HS 809 403).

National Highway Traffic Safety Administration. 1991. Preliminary regulatory evaluation, combination truck and rear underride guards.

National Transportation Safety Board. 2023. Comment on NHTSA's ANPRM side underride guards. Docket No. NHTSA-2023-0012.

National Transportation Safety Board. 2019. Bicyclist Safety on US Roadways: Crash Risks and Countermeasures. Safety Research Report NTSB/SS-19/01.

National Transportation Safety Board. April 3, 2014. Safety recommendations: mitigation of blind spots; protection of passenger vehicles from underriding the sides of tractor-trailers; and improving traffic safety data (H-14-001 through-007).

National Transportation Safety Board. 2013. Crashes Involving Single Unit Trucks that Resulted in Injuries and Deaths. Safety Study, NTSB/SS 13/01, PB2013-106637.

Office of Management and Budget. 2023. Circular A-4, Regulatory Analysis.

Office of Management and Budget. January 14, 2005. Final Information Quality Bulletin for Peer Review. 70 FR 2664.

Office of Management and Budget. September 17, 2003. Circular A-4, Regulatory Analysis.

Padmanaban, J. 2013. Estimating Side Underride Fatalities Using Field Data. Annals of Advances in Automotive Medicine.

Patten, J., Lalonde, C., Mayda, W., and G. Poole. 2012. Effects of side skirts and wheel covers on heavy trailers (Technical Report No. CSTT-HVC-TR-187). National Research Council Canada, Centre for Surface Transportation Technology.

Patten, J. D., and C.V. Tabra. 2010. Side guards for trucks and trailers, Phase 1: Background investigation (Technical Report No. CSTT-HVC-TR-158). National Research Council Canada, Centre for Surface Transportation Technology.

Ponder, P. 2023. Comments on Docket No. NHTSA-2023-0012. Seven Hills Engineering, Tallahassee, Florida.

Ponder, P. 2020. Comments on Docket Number NHTSA-2015-0118. Seven Hills Engineering, Tallahassee, Florida.

Ponder, P. April 20, 2018. Side underride guard 47.2 mph test speed. Seven Hills Engineering, Tallahassee, Florida.

Riley, B. S., Chinn, B. P., and H. Bates. 1981. An analysis of fatalities in heavy goods vehicle accidents. As cited in Badgley et al. 2019.

Safety Research and Strategies. July 19, 2023. Comment on Side Underride Guards; Advance Notice of Proposed Rulemaking. Docket No. NHTSA-2023-0012.

SafetySkirt. 2019. Crash testing side underride guard using SafetySkirt. Collision Safety Consulting.

Stoughton. January 10, 2022. NHTSA Attachments REDACTED_Redacted.pdf. 33 pp.

Strick. January 10, 2022. NHTSA Side Underride Guard Technical Investigation DP21-004_Strick Trailers LLC. 7 pp.

Truck Trailer Manufacturers Association. February 15, 2024. Advanced Notice of Proposed Rulemaking; Side Underride Guards [Docket No. NHTSA-2023-0012]; potential Recommended Practice for optional side guards. 2 pp.

Truck Trailer Manufacturers Association. 2021. Draft recommended practice: Side impact guard. [Included in Stoughton Trailers, LLC, Side Impact Guard Test].

U.S. Department of Transportation. 2024. Scientific Integrity Policy of the United States Department of Transportation.

Volpe National Transportation Systems Center. April 2021. Truck lateral protective device technical overview. U.S. Department of Transportation

U.S. Department of Transportation. October 31, 2019. Secretary's Policy Statement on Information Quality. DOT-OST-2019-0135.

Utility Trailer Manufacturing Company. July 4, 2023. Side underride guards; Patent No.: US 11691583 B1. City of Industry, CA.

Utility Trailer Manufacturing Company. 2022a. Response to DP21-004; PUBLIC SUBMISSION - UTMC Response to NHTSA Information Requests - Final.pdf. 105 pp.

Utility Trailer Manufacturing Company. 2022b. Dry van features and options; side impact guard.

Utility Trailer Manufacturing Company. 2022c. Side underride guard makes an impact on safety.

Wilson, C. September 29, 2017. Wabash prototype: Side underride guard with aero skirt. Trailer Body Builders.

WUSA9. 2019. Side underride guard crash test [Video].