Operational Issue: High Centered Railroad Crossings

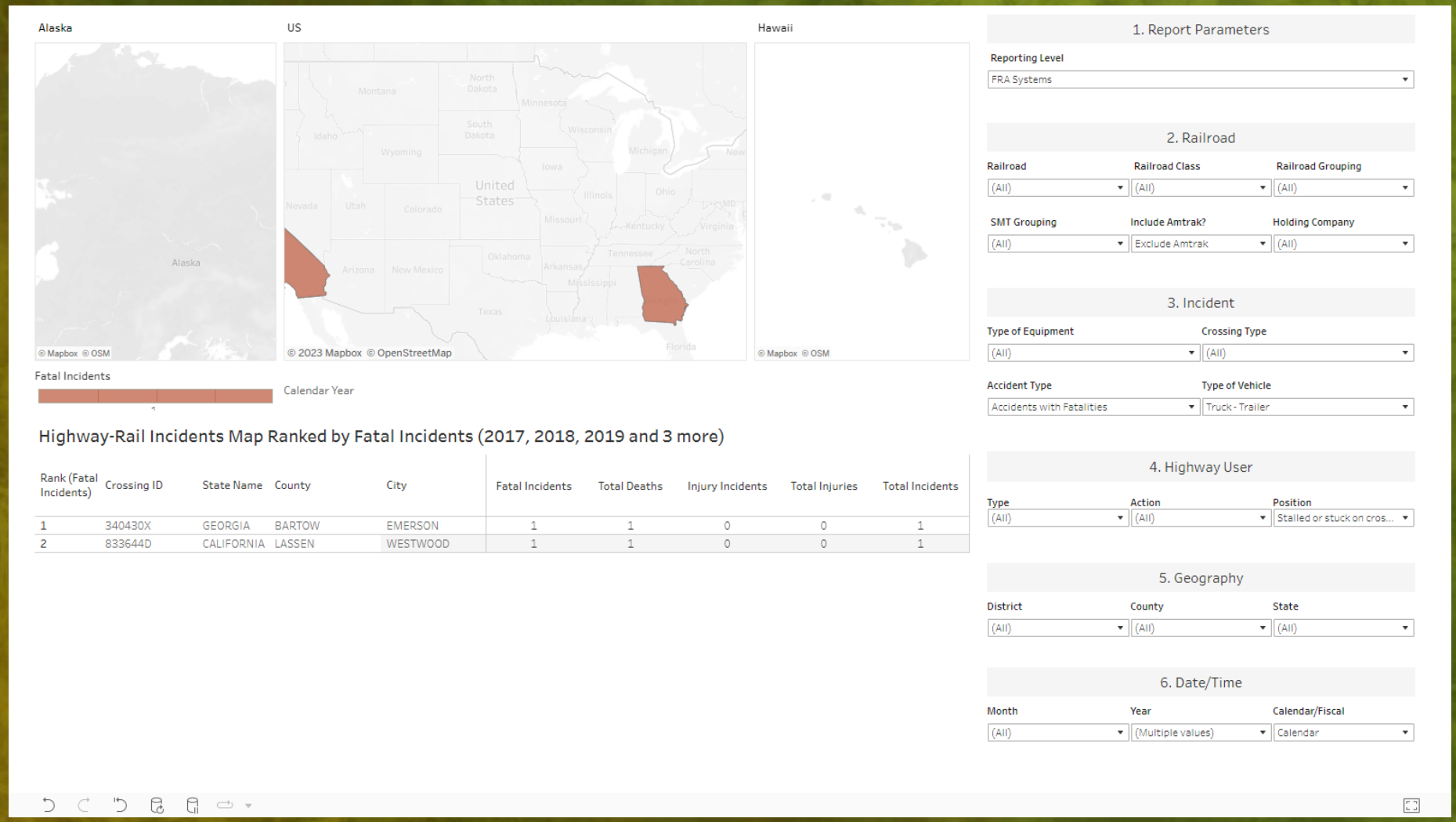
OOIDA has raised concerns about potential side guard operational issues.

Posts on Side Guard OPERATIONAL Issues

"This link provides a spreadsheet of all railroad grade crossing accidents compiled by the Federal Railroad Administration for 2014-2018. In those five years for the population of trailers we currently have, including lowboys, car haulers, cattle haulers, beverage trailers, etc., there were ZERO fatalities coded as 'truck-trailer stuck on track.'

"Even if one were to assume a side guard at 18 inches high would create more hangups and accidents - and the standards on grade crossings say they won't - it is just not a statistically frequent fatal or injurious event in comparison to side underrides."
(email from engineer, 9/2/19)
Relevant research article
Maybe this is why the NTSB, the one responsible for investigating significant rail transport accidents, still recommended side guards for trailers.

Fatal Incidents with “Truck-Trailer Stalled or Stuck on Crossing” – 2017, 2018, 2019, + 3 more [FRA website]



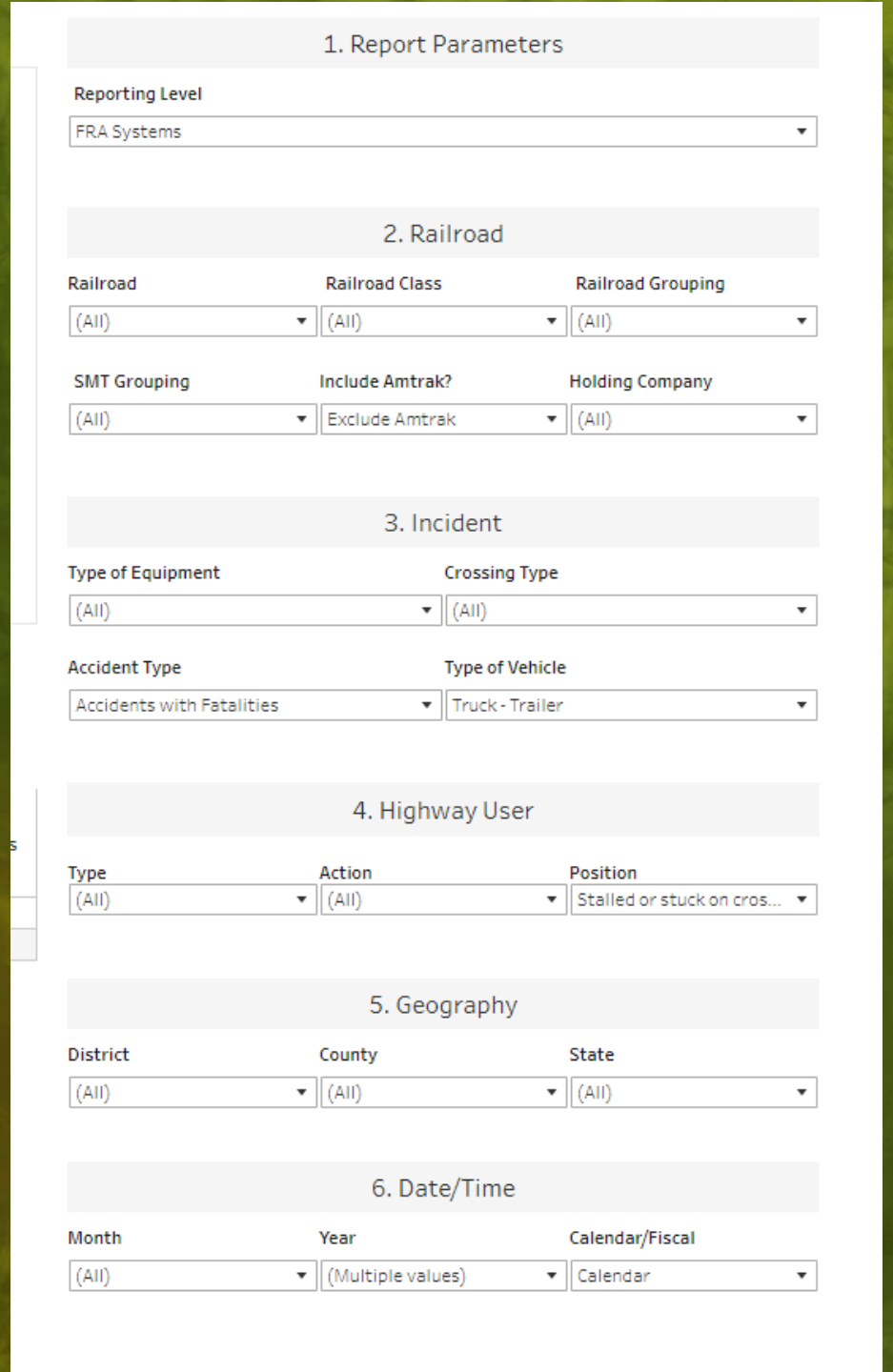
Rank (Fatal Incidents)	Crossing ID	State Name	County	City	Fatal Incidents	Total Deaths	Injury Incidents	Total Injuries	Total Incidents
1	340430X	GEORGIA	BARTOW	EMERSON	1	1	0	0	1
2	833644D	CALIFORNIA	LASSEN	WESTWOOD	1	1	0	0	1

Fatal Incidents with "Truck-Trailer Stalled or Stuck on Crossing" – 2017, 2018, 2019, + 3 more *FRA website*

Highway-Rail Incidents Map Ranked by Fatal Incidents (2017, 2018, 2019 and 3 more)

Rank (Fatal Incidents)	Crossing ID	State Name	County	City	Fatal Incidents	Total Deaths	Injury Incidents	Total Injuries	Total Incidents
1	340430X	GEORGIA	BARTOW	EMERSON	1	1	0	0	1
2	833644D	CALIFORNIA	LASSEN	WESTWOOD	1	1	0	0	1

Fatal Incidents with "Truck-Trailer Stalled or Stuck on Crossing" – 2017, 2018, 2019, + 3 more *FRA website*



Incident Date	Report Year	RR Code	Incident No	State	County	City	Crossing ID	Crossing Type	Highway
December 6, 2022	2022	BNSF	NW1222201	CALIFORNIA	LASSEN	WESTWOOD	833644D	Public	FEATHER LAKE HWY

2. Railroad

Railroad: (All) | Railroad Class: (All) | Railroad: (All) | Crossing ID: (All)

SMT Grouping: (All) | Include Amtrak?: Exclude Amtrak | Holding Company: (All)

3. Incident

Type of Equipment: (All) | Crossing Type: (All)

Accident Type: (All) | Type of Vehicle: Truck - Trailer

4. Highway User

Type: (All) | Action: (All) | Position: Stalled or stuck ...

5. Geography

District: (All) | County: LASSEN | State: CALIFORNIA

6. Date/Time

Month: December | Year: (Multiple values) | Calendar/Fiscal: Calendar

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

1. Name of Reporting Railroad: BNSF Railway Company [BNSF]	1a. Alphabetic Code: BNSF	1b. Railroad Accident/Incident No.: NW1222201
2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry): BNSF Railway Company [BNSF]	3a. Alphabetic Code: BNSF	3b. Railroad Accident/Incident No.: NW1222201
4. U.S. DOT Grade Crossing ID No.: 833644D	5. Date of Accident/Incident (month/day/year): 1 2 / 0 6 / 2022	6. Time of Accident/Incident: 3:44 AM ☐ PM ☑
7. Nearest Railroad Station: LODGEPOLE	8. Subdivision: GATEWAY	9. County: LASSEN — 10. State: Abbr. CA, Code 06
11. City (if in a city): WESTWOOD	12. Highway Name or No.: FEATHER LAKE HWY	Public ☑ Private ☐

Highway User Involved

13. Type — Code: C
(A. Auto, B. Truck, C. Truck-trailer, D. Pick-up truck, E. Van, F. Bus, G. School Bus, H. Motorcycle, J. Other Motor Vehicle, K. Pedestrian, M. Other (specify))

14. Vehicle Speed (est. mph at impact): 50

15. Direction (geographical) — Code: 3
(1. North 2. South 3. East 4. West)

16. Position — Code: 1
(1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing 4. Trapped on crossing by traffic 5. Blocked on crossing by gates)

20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? — Code: 2
(1. Highway User 2. Rail Equipment 3. Both 4. Neither)

Rail Equipment Involved

17. Equipment — Code: 1
(1. Train (units pulling) 2. Train (units pushing) 3. Train (standing) 4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s))

18. Position of Car Unit in Train: 1

19. Circumstance — Code: 1
(1. Rail equipment struck highway user 2. Rail equipment struck by highway user)

20b. Was there a hazardous materials release by — Code: 4
(1. Highway User 2. Rail Equipment 3. Both 4. Neither)

20c. State here the name and quantity of the hazardous material released, if any

21. Temperature (specify if minus): 30 °F

22. Visibility (single entry) — Code: 2
(1. Dawn 2. Day 3. Dusk 4. Dark)

23. Weather (single entry) — Code: 1
(1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow)

24. Type of Equipment Consist (single entry) — Code: 1
(1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing D. EMU E. DMU)

25. Track Type Used by Rail Equipment Involved — Code: 1
(1. Main 2. Yard 3. Siding 4. Industry)

26. Track Number or Name: SINGLE MAIN TRACK

27. FRA Track Class (1-9,X): 4

28. Number of Locomotive Units: 1

29. Number of Cars: 14

30. Consist Speed (Recorded speed if available) — Code: E
R. Recorded E. Estimated: 40 mph

31. Time Table Direction — Code: 1
(1. North 2. South 3. East 4. West)

32. Type of Crossing Warning — Code(s): 02, 03, 06, 07
(1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None)

33. Signaled Crossing Warning (See reverse side for instructions and codes) — Code: 1

34. Roadway Conditions — Code: D
(A. Dry B. Wet C. Snow/Slush D. Ice E. Sand,Mud,Dirt,Oil,Gravel F. Water (Standing, Moving))

35. Location of Warning — Code: 1
(1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach)

36. Crossing Warning Interconnected with Highway Signals — Code: 2
(1. Yes 2. No 3. Unknown)

37. Crossing Illuminated by Street Lights or Special Lights — Code: 2
(1. Yes 2. No 3. Unknown)

38. Highway User's Age: 64

39. Highway User's Gender — Code: 1
(1. Male 2. Female)

40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train — Code: 2
(1. Yes 2. No 3. Unknown)

41. Highway User — Code: 3
(1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide)

42. Driver Passed Standing Highway Vehicle — Code: 2
(1. Yes 2. No 3. Unknown)

43. View of Track Obscured by (primary obstruction) — Code: 8
(1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed)

Casualties to:	Killed	Injured
46. Highway-Rail Crossing Users	1	0
49. Railroad Employees	0	0
52. Passengers on Train	0	0

44. Driver was — Code: 1
(1. Killed 2. Injured 3. Uninjured)

45. Was Driver in the Vehicle? — Code: 1
(1. Yes 2. No)

47. Highway Vehicle Property Damage (est. dollar damage): $5,000

48. Total Number of Vehicle Occupants (including driver): 1

50. Total Number of People on Train (include passengers and train crew): 3

51. Is a Rail Equipment Accident / Incident Report Being Filed — Code: 1
(1. Yes 2. No)

53a. Special Study Block — Video Taken? ☑ Yes ☐ No — Video Used? ☑ Yes ☐ No

53b. Special Study Block

54. Narrative Description (Be specific, and continue on separate sheet if necessary)
1. NWE3921 06 ON SINGLE MAIN TRACK FATALLY STRUCK A SEMI THAT FAILED TO STOP AT A HGX NOT EQUIPPED WITH GATES. NO HAZMAT RELEASED.

55. Typed Name and Title | 56. Signature | 57. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

FORM FRA F 6180.57 (Rev. 08/10)

* NOTE THAT ALL CASUALTIES MUST BE REPORTED ON FORM FRA F 6180.55A

OMB Approval expires 7/31/2023

RAILROAD INJURY AND ILLNESS SUMMARY

DEPARMENT OF TRANSPORTATION (Continuation Sheet) SHEET 1 OF 1

FEDERAL RAILROAD ADMINISTRATION (FRA) OMB Approval No:

1. Name of Reporting Railroad	2. Alphabetic Code	3. Report Month	4. Report Year
BNSF RAILWAY COMPANY	BNSF	12	22

5a. Accident/Injury Number	5b. Day	5c. Time of Day	5d. County	5e. State	5f. Type Person/ Job Code	5g. Age
NW1222201	06	3:44 PM	LASSEN	06	D	64

5h. Drug/ Alcohol Test A	5h. Drug/ Alcohol Test D	5i. Injury Illness Code	5j. Physical Act	5k. Location	5l. Event	5m. Tools	5n. Cause	5o. Number of Days Away From Work	5p. Number of Days Restricted	5q. Exposure to Hazmat	5r. Special Case Codes
		908	21	A 03B4	32	18	09	0	0	N	

5s. Latitude	40.525902	5t. Longitude	-121.031913

5u. Narrative (Up to 250 Characters)

TRAIN STRUCK SEMI-TRUCK ON CROSSING AND DRIVER WAS FATALLY INJURED.

U.S. Department of Transportation
Federal Railroad Administration

Search

ut | Railroad Safety | Rail Network Development | Research & Development | Legislation & Regulations | Grants & Loans | FRA eLibrary

Incident Date	Report Year	RR Code	Incident No	State	County	City	Crossing ID	Crossing Type	Highway
June 24, 2020	2020	CSX	000191005	GEORGIA	BARTOW	EMERSON	340430X	Public	GASTON WESTBROOK

2. Railroad

Railroad: (All) | Railroad Class: (All) | Railroad: (All) | Crossing ID: (All)

SMT Grouping: (All) | Include Amtrak?: Exclude Amtrak | Holding Company: (All)

3. Incident

Type of Equipment: (All) | Crossing Type: (All)

Accident Type: (All) | Type of Vehicle: Truck - Trailer

4. Highway User

Type: (All) | Action: (All) | Position: Stalled or stuck ...

5. Geography

District: (All) | County: BARTOW | State: GEORGIA

6. Date/Time

Month: June | Year: (Multiple values) | Calendar/Fiscal: Calendar

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

1. Name of Reporting Railroad: CSX Transportation [CSX]	1a. Alphabetic Code: CSX	1b. Railroad Accident/Incident No.: 000191005
2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry): CSX Transportation [CSX]	3a. Alphabetic Code: CSX	3b. Railroad Accident/Incident No.: 000191005
4. U.S. DOT Grade Crossing ID No.: 340430X	5. Date of Accident/Incident: month 06 day 24 year 2020	6. Time of Accident/Incident: 9:17 AM ☑ PM ☐
7. Nearest Railroad Station: EMERSON	8. Subdivision: W AND A	9. County: BARTOW
		10. State: Abbr. GA Code 13
11. City (if in a city): EMERSON	12. Highway Name or No.: GASTON WESTBROOK AV	Public ☑ Private ☐

Highway User Involved

13. Type (A. Auto, B. Truck, C. Truck-trailer, D. Pickup truck, E. Van, F. Bus, G. School Bus, H. Motorcycle, J. Other Motor Vehicle, K. Pedestrian, M. Other (specify)): Code C

14. Vehicle Speed (est. mph at impact): 0

15. Direction (geographical) (1. North, 2. South, 3. East, 4. West): Code 3

16. Position (1. Stalled or stuck on crossing, 2. Stopped on Crossing, 3. Moving over crossing, 4. Trapped on crossing by traffic, 5. Blocked on crossing by gates): Code 1

20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? (1. Highway User, 2. Rail Equipment, 3. Both, 4. Neither): Code 2

20c. State here the name and quantity of the hazardous material released, if any

21. Temperature (specify if minus): 75 °F

22. Visibility (single entry) (1. Dawn, 2. Day, 3. Dusk, 4. Dark): Code 2

34. Type of Equipment Consist (single entry) (1. Freight Train, 2. Passenger Train-Pulling, 3. Commuter Train-Pulling, 4. Work Train, 5. Single Car, 6. Cut of cars, 7. Yard/Switching, 8. Light loco(s), 9. Main/inspect. car, A. Spec. Mobil Equip., B. Passenger Train-Pushing, C. Commuter Train-Pushing, D. EMU, E. DMU): Code 1

35. Track Type Used by Rail Equipment Involved (1. Main, 2. Yard, 3. Siding, 4. Industry): Code 1

36. Track Number or Name: SINGLE MAIN TRACK

27. FRA Track Class (1-9,X): 4

28. Number of Locomotive Units: 3

29. Number of Cars: 69

30. Consist Speed (Recorded speed if available) (R. Recorded, E. Estimated): 41 mph Code R

31. Time Table Direction (1. North, 2. South, 3. East, 4. West): Code 1

32. Type of Crossing Warning (1. Gates, 2. Cantilever FLS, 3. Standard FLS, 4. Wig wags, 5. Hwy. traffic signals, 6. Audible, 7. Crossbucks, 8. Stop signs, 9. Watchman, 10. Flagged by crew, 11. Other (specify), 12. None)

Code(s)							
	01	03	06	07	11		

33. Signaled Crossing Warning (See reverse side for instructions and codes): Code 1

34. Roadway Conditions (A. Dry, B. Wet, C. Snow/Slush, D. Ice, E. Sand, Mud, Dirt, Oil, Gravel, F. Water (Standing, Moving)): Code A

35. Location of Warning (1. Both Sides, 2. Side of Vehicle Approach, 3. Opposite Side of Vehicle Approach): Code 1

36. Crossing Warning Interconnected with Highway Signals (1. Yes, 2. No, 3. Unknown): Code 2

37. Crossing Illuminated by Street Lights or Special Lights (1. Yes, 2. No, 3. Unknown): Code 2

38. Highway User's Age: 58

39. Highway User's Gender (1. Male, 2. Female): Code 2

40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train (1. Yes, 2. No, 3. Unknown): Code 2

41. Highway User (1. Went around the gate, 2. Stopped and then proceeded, 3. Did not stop, 4. Stopped on crossing, 5. Other (specify), 6. Went around/thru temporary barricade (if yes, see instructions), 7. Went thru the gate, 8. Suicide/Attempted suicide): Code 5

42. Driver Passed Standing Highway Vehicle (1. Yes, 2. No, 3. Unknown): Code 2

43. View of Track Obscured by (primary obstruction) (1. Permanent Structure, 2. Standing railroad equipment, 3. Passing Train, 4. Topography, 5. Vegetation, 6. Highway Vehicles, 7. Other (specify), 8. Not Obstructed): Code 8

Casualties to:	Killed	Injured
48. Highway-Rail Crossing Users	1	0
49. Railroad Employees	0	0
52. Passengers on Train	0	0

44. Driver was (1. Killed, 2. Injured, 3. Uninjured): 1

45. Was Driver in the Vehicle? (1. Yes, 2. No): Code 2

47. Highway Vehicle Property Damage (est. dollar damage): 527,500

48. Total Number of Vehicle Occupants (including driver): 1

50. Total Number of People on Train (include passengers and train crew): 2

51. Is a Rail Equipment Accident / Incident Report Being Filed (1. Yes, 2. No): Code 1

53a. Special Study Block — Video Taken? ☑ Yes ☐ No — Video Used? ☑ Yes ☐ No

53b. Special Study Block

54. Narrative Description (Be specific, and continue on separate sheet if necessary)

GRADED STRUCK UNOCCUPIED TRACTOR TRAILER THAT PREEMPTED THE GATES THAT WAS STUCK ON THE TRACKS. WHEN IMPACT OCCURRED, THE SEMI-TRUCK WAS PUSHED INTO THE DRIVER WHO WAS WALKING NEAR THE CROSSING. PROTECTION: ALREADY CROSSING, ADVANCE WARNING AND PAVEMENT MARKINGS (STOP LINES & RR SPECIFICS).

55. Typed Name and Title

56. Signature

57. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

FORM FRA F 6180.57 (Rev. 08/10)

* NOTE THAT ALL CASUALTIES MUST BE REPORTED ON FORM FRA F 6180.55A

OMB Approval expires 6/30/2021

STRUCK UNOCCUPIED TRACTOR TRAILER THAT PREEMPTED THE GATES THAT WAS STUCK ON THE TRACKS. WHEN IMPACT OCCURED, THE SEMI-TRUCK WAS PUSHED INTO THE DRIVER WHO WAS WALKING NEAR THE CROSSING. PROTECTION ALSO AT CROSSING: ADVANCE WARNING AND PAVEMENT MARKINGS (STOP LINES & RR XING SYMBOL

U.S. Department of Transportation
Federal Railroad Administration

RESEARCH RESULTS
FRA OFFICE OF RAILROAD POLICY & DEVELOPMENT

RR 15-18 | June 2015

LOW GROUND CLEARANCE VEHICLE DETECTION AND WARNING

SUMMARY

A Low Ground Clearance Vehicle Detection System (LGCVDS) determines if a commercial motor vehicle can successfully clear a highway-rail grade crossing and notifies the driver when his or her vehicle cannot safely traverse the crossing. That is, differences in elevation between the roadway and track at some locations are such that certain vehicles are more likely to become immobilized with the attendant risk of being struck by an oncoming train.

To create such a detection system, FRA's Office of Research and Development awarded a Small Business Innovation Research (SBIR) Phase I contract to Advanced Technology and Research (ATR) of Columbia, MD to assess whether an LGCVDS is feasible and, if it is possible to develop a conceptual design for such a system.

Specifically, ATR was asked to develop a reliable automated active system which would be installed at approaches to identified high-profile grade crossings. The LGCVDS should be self-powered so it can operate off the grid for multiple years with minimal maintenance. It should also function regardless of extreme temperature, severe weather, or visibility conditions, including heavy snow, rain, fog, or darkness.

This Research Results Report will describe the results from ATR's SBIR Phase I study, which included:

- Developing a requirement analysis for its LGCVDS
- Performing a survey of crossing scenarios using satellite imagery of 40 grade crossings in Florida which have a high risk of vehicle hang-up,
- Evaluating potential sensor technologies for use in the LGCVDS
- Investigating LGCVDS feasibility by collecting preliminary data from a moving vehicle with an appropriate sensor.
- Defining keep-clear regions under vehicle based on inter-axle distances and the specific geometry of the grade crossing via an interference boundary.
- Building an algorithm that can predict vehicle hang-ups by scanning the vehicle's underbody and comparing it with the interference boundary
- Developing a complete system concept design with installation recommendations
- Creating a preliminary integrated system to demonstrate the feasibility of the LGCVDS

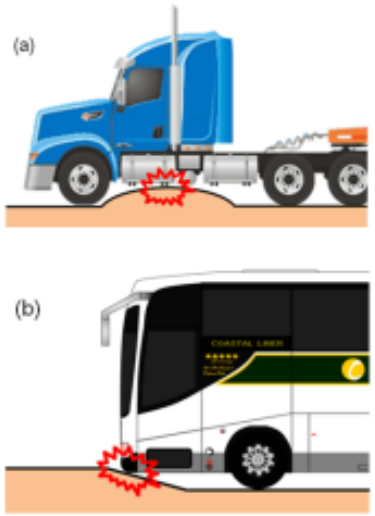


Figure 1. (a) A truck could hang up when its wheels straddle a road hump (b) The front overhang of a bus could hang up on a sudden steep incline

[PDF] LOW GROUND CLEARANCE VEHICLE DETECTION AND WARNING

railroads.dot.gov/sites/fra.dot.gov/files/fra_net/14564/ATR%20SBIR_Phase%20I_%20Research%20Results_final.pdf

specified an ideal highway-rail grade **crossing** profile in its Manual for Railway Engineering (1993). This exemplar profile has a limited road grade ...

Low-Clearance Vehicle Detection and Warning System

HIGHWAY PROJECTS

Fulcrum Corporation was tasked to design, fabricate and lab test a prototype system to demonstrate the feasibility of detecting low-clearance vehicles (LCV's), measuring their clearance and warning drivers if there is a danger of hang up on a a high-vertical-profile ("humped") railroad crossing in their path. High-profile (or "hump") crossings present potential safety challenges for motor carriers, buses and automobiles with trailers. These crossings have vertical alignment profiles that could cause vehicles with long wheelbases and/or low-hanging equipment on the underside of the trailer to hang up on the crossing. This could lead to a catastrophic crash involving a stuck vehicle and train could cause millions of dollars of damage to property as well as loss of human life. Although the traffic data gathered by researchers indicate the percentage of low-clearance vehicles

Syntek low clearance vehicle detection & warning system

trailer to hang up on the crossing. This could lead to a catastrophic crash involving a stuck vehicle and train could cause millions of dollars of damage to property as well as loss of human life. Although the traffic data gathered by researchers indicate the percentage of low-clearance vehicles is very small, the fact remains that these vehicles get "hung up" at some crossings, particularly at high profile or "humped" crossings. Hence, there is a need for a detection and warning system for these vehicles that could be installed in the highway a significant distance before the crossing.

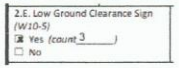
June 6, 2023

Robin Hutcheson, Administrator
Federal Motor Carrier Safety Administration
U.S. Department of Transportation
1200 New Jersey Ave., S.E.
Washington, DC 20590

Dear Administrator Hutcheson:

We are writing to you to petition that the FMCSA take appropriate action to reduce the possibility that tractor-trailers will get stuck on high centered railway crossings.

As the parents of two daughters who died due to a truck underride crash on May 4, 2013, we have been advocating for comprehensive underride protection on large trucks in order to make truck crashes more survivable. In the process, we have been told repeatedly that side underride guards would cause more tractor-trailers to get hung up on high-centered crossings. So we decided to do some investigation. This is what we have learned:

1. From a FRA spreadsheet, during 2014-2018, there were ZERO fatalities coded as "Truck Stuck on Tracks." I learned that in 2019.
2. We searched a more recent FRA website and found that from 2017-2022 there were two fatalities in the U.S. coded as "Truck-Trailer Stalled or Stuck on Crossing." Note: Both of these involved truck driver error.
3. While this is minimal compared to the hundreds of deaths which could be prevented by side underride guards each year, nonetheless it is a safety problem. *Low-Clearance Vehicles at Rail-Highway Grade Crossings: An Overview of the Problem and Potential Solutions ; How 'low ground clearance' railroad crossings can be made safer*
4. Doug Smith, a member of the NHTSA Advisory Committee on Underride Protection, stated at the first meeting on May 25: "There are 162,827 public railroad crossings," he said. "There are 1,160 low-clearance railroad crossings, according to the Federal Railroad Administration. I'm pretty sure there is no one else on this committee who has experienced the sheer terror of being grounded on a railroad crossing." Underride committee must remain objective, trucker says
5. Doug Smith also stated that some of these hazardous crossings do not have proper signage to alert truck drivers to this hazard.
6. The FRA previously funded research to study and develop Low Clearance Vehicle Detection & Warning Systems. I am aware that Phase I was completed but I do not know if Phase II has been funded and completed. LOW GROUND CLEARANCE VEHICLE DETECTION AND WARNING, 2015, FRA Office of Railway Policy & Development https://www.syntek.org/portfolio-2/low-clearance-vehicle-detection-and-warning-system/
7. Signs are already available to meet crossing safety requirements. Grade Crossing Safety Requirements; MUTCD Compliant Railroad Crossing Sign: Railroad Low Ground Clearance (X-W10-5)
8. This FRA database identifies low grade clearance railway crossings (columns DH & DI): Crossing Inventory Data. FRA Office of Safety Analysis Detailed crossing information, such as how signage, can be found at this link by inputting the crossing number: https://railroads.dot.gov/safety-data/crossing-and-inventory-data/crossing-inventory-lookup e.g., Crossing Inventory # 722812A (Burlington, NC), 

We do not know the extent of your authority in this matter. But we are hereby petitioning the Federal Motor Carrier Safety Administration,in accordance with the Department's National Roadway Safety Strategy, to foster interagency collaboration with the National Highway Traffic Safety Administration and the Federal Railroad Administration, to look into this matter and address this railway safety issue to ensure that:

1. Hazardous crossings are properly marked as soon as possible.
2. Low Ground Clearance Vehicle Detection and Warning System research and development are completed as soon as possible, if it has not already been completed.
3. Rulemaking is issued to require that LGCVDS technology is installed as appropriate to improve railway and roadway safety.
4. Discuss this roadway hazard with appropriate agency advisory committees.
5. Revise CDL driver training requirements to include information on how to identify and avoid low grade clearance railway crossings.
6. Publish information and resources on your website about this safety problem and available solutions, such as route planning software. Inform the trucking industry of the availability of this digital resource.

This safe system approach to a roadway hazard will also address one of the operational concerns which has deterred timely action on a side guard regulation. If safety is truly the mission of this agency, then you will welcome this collaborative strategy as much as we do.

> *"This National Roadway Strategy represents a collective effort across the Department, and under the leadership of Secretary Buttigieg, to embrace the Safe System approach, and to recognize that no loss of life on our nation's roadways is acceptable. As we move towards swift implementation, we look forward to partnering with every level of government, industry, advocacy, and all who will come together to address this crisis," said Robin Hutcheson, former U.S. DOT Deputy Assistant Secretary for Safety Policy, and Acting Administrator for FMCSA. U.S. Transportation Secretary Pete Buttigieg Announces Comprehensive National Roadway Safety Strategy*

We look forward to hearing from you soon.

Respectfully,

Jerry and Marianne Karth

We do not know the extent of your authority in this matter. But we are hereby petitioning the Federal Motor Carrier Safety Administration,in accordance with the Department's National Roadway Safety Strategy, to foster interagency collaboration with the National Highway Traffic Safety Administration and the Federal Railroad Administration, to look into this matter and address this railway safety issue to ensure that:

1. Hazardous crossings are properly marked as soon as possible.
2. Low Ground Clearance Vehicle Detection and Warning System research and development are completed as soon as possible, if it has not already been completed.
3. Rulemaking is issued to require that LGCVDS technology is installed as appropriate to improve railway and roadway safety.
4. Discuss this roadway hazard with appropriate agency advisory committees.
5. Revise CDL driver training requirements to include information on how to identify and avoid low grade clearance railway crossings.
6. Publish information and resources on your website about this safety problem and available solutions, such as route planning software. Inform the trucking industry of the availability of this digital resource.

This safe system approach to a roadway hazard will also address one of the operational concerns which has deterred timely action on a side guard regulation. If safety is truly the mission of this agency, then you will welcome this collaborative strategy as much as we do.

May 28, 2023

Amit Bose, Administrator
Federal Railroad Administration
U.S. Department of Transportation
1200 New Jersey Ave., S.E.
Washington, DC 20590

Dear Administrator Bose:

I am writing to you to petition that the Federal Railroad Administration take appropriate action to reduce the possibility that tractor-trailers will get stuck on high centered railway crossings.

As a survivor of a major truck crash and mother of two daughters who died due to a truck underride crash on May 4, 2023, I have been advocating for comprehensive underride protection on large trucks in order to make truck crashes more survivable. In the process, I have been told repeatedly that side underride guards would cause more tractor-trailers to get hung up on high-centered crossings. So I decided to do some investigation. This is what I have learned:

1. From a FRA spreadsheet, during 2014-2018, there were ZERO fatalities coded as "Truck Stuck on Tracks." I learned that in 2019.
2. Yesterday, I searched a more recent FRA website and found that from 2017-2022 there were two fatalities in the U.S. coded as "Truck-Trailer Stalled or Stuck on Crossing."
3. While this is minimal compared to the hundreds of deaths which could be prevented by side underride guards each year, nonetheless it is a safety problem. *Low-Clearance Vehicles at Rail-Highway Grade Crossings: An Overview of the Problem and Potential Solutions ; How 'low ground clearance' railroad crossings can be made safer*
4. Doug Smith, a member of the NHTSA Advisory Committee on Underride Protection, stated at our first meeting on May 25: "There are 162,827 public railroad crossings," he said. "There are 1,160 low-clearance railroad crossings, according to the Federal Railroad Administration. I'm pretty sure there is no one else on this committee who has experienced the sheer terror of being grounded on a railroad crossing." Underride committee must remain objective, trucker says
5. Doug Smith also stated that some of these hazardous crossings do not have proper signage to alert truck drivers to this hazard.
6. The FRA previously funded research to study and develop Low Clearance Vehicle Detection & Warning Systems. I am aware that Phase I was completed but I do not know if Phase II has been funded and completed. LOW GROUND CLEARANCE VEHICLE DETECTION AND WARNING, 2015, FRA Office of Railway Policy & Development https://www.syntek.org/portfolio-2/low-clearance-vehicle-detection-and-warning-system/
7. Signs are already available to meet crossing safety requirements. Grade Crossing Safety Requirements; MUTCD Compliant Railroad Crossing Sign: Railroad Low Ground Clearance (X-W10-5)

I do not know the extent of your authority in this matter. But I am hereby petitioning the Federal Railroad Administration, in collaboration with the National Highway Traffic Safety Administration and the Federal Motor Carrier Safety Administration, to look into this matter and address this railway safety issue to ensure that:

1. Hazardous crossings are properly marked as soon as possible.
2. Low Ground Clearance Vehicle Detection and Warning System research and development are completed as soon as possible, if it has not already been completed.
3. Rulemaking is issued to require that LGCVDS technology is installed as appropriate to improve railway and roadway safety.

The Department's National Roadway Safety Strategy should be followed in this matter, with a sense of urgency, if safety is truly the mission. I look forward to hearing from you soon.

Respectfully,

Marianne Karth

Jerry Karth
Father of AnnaLeah & Mary Karth
annaleahmary.com